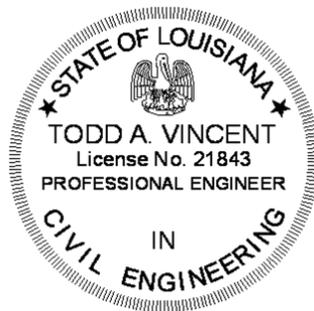


**BID DOCUMENTS
FOR
CIAP FRESHWATER BAYOU BANK STABILIZATION PROJECT
STATE PROJECT NO. TV-11b(EB)
VERMILION PARISH, LOUISIANA**



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

JANUARY 2013



Todd A. Vincent
5/21/13

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ADVERTISEMENT FOR BIDS

Sealed bids will be received for the State of Louisiana by the Division of Administration, Office of Facility Planning and Control, Claiborne Office Building, 1201 North Third Street, Conference Room 1-145, P. O. Box 94095, Baton Rouge, LA 70804-9095, until 2:00 P.M., Tuesday, August 20th, 2013.

ANY PERSON REQUIRING SPECIAL ACCOMMODATIONS SHALL NOTIFY FACILITY PLANNING AND CONTROL OF THE TYPE(S) OF ACCOMMODATION REQUIRED NOT LESS THAN SEVEN (7) DAYS BEFORE THE BID OPENING.

FOR: CIAP FRESHWATER BAYOU BANK STABILIZATION PROJECT

PROJECT NUMBER: TV-11b (EB)

Complete Bid Documents for this project are available in electronic form. They may be obtained without charge and without deposit from:

<http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=432>.

Printed copies can also be obtained from:

COASTAL PROTECTION AND RESTORATION AUTHORITY (CPRA)

450 Laurel Street, Suite 1501
Baton Rouge, Louisiana 70801
Attn: Renee McKee

Email: cpra.bidding@la.gov

Phone: (225) 342-0811 Fax: (225) 342-4674

All bids shall be accompanied by bid security in an amount of five percent (5.0%) of the sum of the base bid and all alternates. The form of this security shall be as stated in the Instructions to Bidders included in the Bid Documents for this project. The successful Bidder shall be required to furnish a Performance and Payment Bond written as described in the Instructions to Bidders included in the Bid Documents for this project.

A MANDATORY PRE-BID CONFERENCE WILL BE HELD

at 9:00 am, on Tuesday, August 6th, at CPRA Lafayette Field Office, 635 Cajundome Boulevard, Room 102, Lafayette, LA 70506.

Bids shall be accepted only from those Bidders who attend the Mandatory Pre-Bid Conference in its entirety.

A JOBSITE VISIT IS RECOMMENDED

The job site is located along Freshwater Bayou near the confluence with Little Vermilion Bay (North Project Site) and near the Freshwater Bayou lock (South Project Site), and can be accessed via the Abbeville Harbor & Terminal Boat Launch, 25197 Pintail Avenue, Abbeville, LA 70510. It is the responsibility of all potential bidders to visit the job site to assess the location and conditions prior to bidding. Contractors shall be responsible for providing their own boat and any rental and boat launching fees.

Bids shall be accepted from Contractors who are licensed under LA. R.S. 37:2150-2192 for the classification of HEAVY CONSTRUCTION. In accordance with LA. R.S. 37:2163(D), anyone objecting to the classification must send a certified letter to both the Louisiana State Licensing Board for Contractors and the CPRA at the address listed above. The letter must be received no later than ten (10) working days prior to the day on which bids are to be opened.

Bidder is required to comply with provisions and requirements of LA R.S. 38:2212 (A)(1)(c). No bid may be withdrawn for a period of thirty (30) days after receipt of bids, except under the provisions of LA. R.S. 38:2214.

The Owner reserves the right to reject any and all bids for just cause. In accordance with LA R.S. 38:2212(A)(1)(b), the provisions and requirements of this Section, those stated in the advertisement bids, and those required on the bid form shall not be considered as informalities and shall not be waived by any public entity.

When this project is financed either partially or entirely with State Bonds or federal funds, the award of this Contract is contingent upon the granting of lines of credit, the sale of bonds by the Bond Commission or the commitment of federal funds. The State shall incur no obligation to the Contractor until the Contract between Owner and Contractor is fully executed.

Coastal Protection and Restoration Authority is a participant in the Small Entrepreneurship (SE) Program (the Hudson Initiative) and the Veteran-Owned and Service-Connected Disabled Veteran-Owned (LaVet) Small Entrepreneurships Program. Bidders are encouraged to consider participation. Information is available from Coastal Protection and Restoration Authority or on its website at <http://www.coastal.la.gov/>.

STATE OF LOUISIANA
DIVISION OF ADMINISTRATION
FACILITY PLANNING AND CONTROL
JOHN L. DAVIS - DIRECTOR

INSTRUCTIONS TO BIDDERS

COMPLETION TIME:

The Bidder shall agree to fully complete the contract within **Two Hundred Forty (240) consecutive calendar days for the Base Bid, an additional Forty (40) consecutive calendar days for Additive Alternate No. 1, an additional Twenty (20) consecutive calendar days for Additive Alternate No. 2, and an additional Twenty (20) consecutive calendar days for Additive Alternate No. 3**, subject to such extensions as may be granted under Section GP-44 of the General Provisions and acknowledges that this construction time will start on or before the date specified in the written "Notice to Proceed" from the Owner.

LIQUIDATED DAMAGES:

The Bidder shall agree to pay as Liquidated Damages the amount of **One Thousand Four Hundred Fifty Dollars (\$1,450.00)** for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the contract completion date stated on the "Notice to Proceed" or as amended by change order.

ARTICLE 1

DEFINITIONS

1.1 The Bid Documents include the following:

- Advertisement for Bids
- Instructions to Bidders
- Bid Form
- Bid Bond
- General Provisions
- Special Provisions
- Technical Specifications
- Construction Drawings
- Contract Between Owner and Contractor and Performance and Payment Bond
- Affidavit
- User Agency Documents (if applicable)
- Change Order Form
- Recommendation of Acceptance
- Other Documents (if applicable)
- Addenda issued during the bid period and acknowledged in the Bid Form

1.2 All definitions set forth in the General Provisions and the Special Provisions are applicable to the Bid Documents, unless otherwise specifically stated or written.

1.3 Addenda are written and/or graphic instruments issued by the Engineer prior to the opening of bids which modify or interpret the Bid Documents by additions, deletions, clarifications, corrections and prior approvals.

1.4 A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bid Documents.

1.5 Base bid is the sum stated in the bid for which the Bidder offers to perform the work described as the base, to which work may be added, or deleted for sums stated in alternate bids.

1.6 An alternate bid (or alternate) is an amount stated in the bid to be added to the amount of the base bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents is accepted.

1.7 A Bidder is one who submits a bid for a prime Contract with the Owner for the work described in the Bid Documents.

1.8 A Sub-bidder is one who submits a bid to a Bidder for materials and/or labor for a portion of the work.

1.9 Where the word "Engineer" is used in any of the documents, it shall refer to the Prime Designer of the project, regardless of discipline.

ARTICLE 2

PRE-BID CONFERENCE

2.1 A MANDATORY Pre-Bid Conference shall be held at the time and location described in the Advertisement for Bids. The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements of the Project and the intent of the Bid Documents, and to receive comments and information from interested Bidders. If the Pre-Bid Conference is stated in the Advertisement for Bids to be a Mandatory Pre-Bid Conference, bids shall be accepted only from those bidders who attend the Pre-Bid Conference. Contractors who are not in attendance for the entire Pre-Bid Conference will be considered to have not attended.

2.2 Any revision of the Bid Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

ARTICLE 3

BIDDER'S REPRESENTATION

3.1 Each Bidder by making his bid represents that:

3.1.1 He has read and understands the Bid Documents and his bid is made in accordance therewith.

3.1.2 He has visited the site and has familiarized himself with the local conditions under which the work is to be performed.

3.1.3 His bid is based solely upon the materials, systems and equipment described in the Bid Documents as advertised and as modified by addenda.

3.1.4 His bid is not based on any verbal instructions contrary to the Bid Documents and addenda.

3.1.5 He is familiar with the Code of Governmental Ethics requirement that prohibits public servants and/or their immediate family members from bidding on or entering into contracts; he is aware that the Designer and its principal owners are considered Public Servants under the Code of Governmental Ethics for the limited purposes and scope of the Design Contract with the State on this Project (see Ethics Board Advisory Opinion, No. 2009-378 and 2010-128); and neither he nor any principal of the Bidder with a controlling interest therein has an immediate family relationship with the Designer or any principal within the Designer's firm. (see La. R.S. 42:1113). Any Bidder submitting a bid in violation of this clause shall be disqualified and any contract entered into in violation of this clause shall be null and void.

3.2 The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. In the State of Louisiana, Revised Statutes 37:2150, et seq. will be considered, if applicable.

The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

ARTICLE 4

BID DOCUMENTS

4.1 Copies

4.1.1 Bid Documents may be obtained from the Coastal Protection and Restoration Authority as stated in the Advertisement for Bids.

4.1.1.2 In addition to the availability of printed Bid Documents, the Coastal Protection and Restoration Authority will provide the Bid Documents in electronic format. They may be obtained without charge and without deposit as stated in the Advertisement for Bids.

4.1.1.2.2 Where electronic distribution is provided, all other plan holders are responsible for their own reproduction costs.

4.1.2 Complete sets of Bid Documents shall be used in preparing bids; neither the Owner nor the Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.

4.1.3 The Owner or Engineer in making copies of the Bid Documents available on the above terms, do so only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

4.2 Interpretation or Correction of Bid Documents

4.2.1 Bidders shall promptly notify the Coastal Protection and Restoration Authority contact person listed in the Advertisement for Bids of any ambiguity, inconsistency or error which they may discover upon examination of the Bid Documents or of the site and local conditions.

4.2.2 Bidders requiring clarification or interpretation of the Bid Documents shall make a written request to the Coastal Protection and Restoration Authority contact person listed in the Advertisement for Bids, to reach him at least seven days prior to the date for receipt of bids.

4.2.3 Any interpretation, correction or change of the Bid Documents will be made by addendum. Interpretations, corrections or changes of the Bid Documents made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections and changes.

4.3 Substitutions

4.3.1 The materials, products and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitutions shall be allowed after bids are received.

4.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Engineer at least seven (7) working days prior to the opening of bids. (RS38:2295C) Each such request shall include the name of the material or equipment for which it is to be substituted and a

complete description of the proposed substitute including model numbers, drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included. It shall be the responsibility of the proposer to include in his proposal all changes required of the Bid Documents if the proposed product is used. Prior approval is given contingent upon supplier being responsible for any costs which may be necessary to modify the space or facilities needed to accommodate the materials and equipment approved.

4.3.3 If the Engineer approves any proposed substitution, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

4.4 Addenda

4.4.1 Addenda will be mailed or delivered to all who are known by the Coastal Protection and Restoration Authority to have received a complete set of Bid Documents.

4.4.2 Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose.

4.4.3 Except as described herein, addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays. If the necessity arises of issuing an addendum modifying plans and specifications within the seventy-two (72) hour period prior to the advertised time for the opening of bids, then the opening of bids shall be extended at least seven but no more than twenty-one (21) working days, without the requirement of re-advertising. Facility Planning shall be consulted prior to issuance of such an addendum and shall approve such issuance. The revised time and date for the opening of bids shall be stated in the addendum.

4.4.4 Each Bidder shall ascertain from the Coastal Protection and Restoration Authority prior to submitting his bid that he has received all addenda issued, and he shall acknowledge their receipt on the Bid Form.

4.4.5 The Owner shall have the right to extend the bid date by up to (30) thirty days without the requirement of re-advertising. Any such extension shall be made by addendum issued by the Coastal Protection and Restoration Authority.

ARTICLE 5

BID PROCEDURE

5.1 Form and Style of Bids

5.1.1 Bids shall be submitted on the Louisiana Uniform Public Work Bid Form provided by the Engineer.

5.1.2 All blanks on the Bid Form shall be filled in manually in ink or typewritten.

5.1.3 Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.

5.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the bid or his authorized representative.

5.1.5 Bidders are cautioned to complete all alternates should such be required in the Bid Form. Failure to submit alternate prices will render the bid non responsive and shall cause its rejection.

5.1.6 Bidders are cautioned to complete all unit prices should such be required in the Bid Form. Unit prices represent a price proposal to do a specified quantity and quality of work.

5.1.7 Bidders are strongly cautioned to ensure that all blanks on the bid form are completely and accurately filled in.

5.1.8 Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

5.1.9 The bid shall include the legal name of Bidder and shall be signed by the person or persons legally authorized to bind the Bidder to a Contract.

The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable under any of the following conditions:

(a) Signature on bid is that of any corporate officer or member of a partnership or partnership in commendam listed on most current annual report on file with Secretary of State.

(b) Signature on bid is that of authorized representative of corporation, partnership, or other legal entity and bid is accompanied by corporate resolution, certification as to the corporate principal, or other documents indicating authority.

(c) Corporation, partnership, or other legal entity has filed in the records of the Secretary of State, an affidavit, resolution or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. A bid submitted by an agency shall have a current Power of Attorney attached certifying agent's authority to bind Bidder. The name and license number on the envelope shall be the same as the entity identified on the Bid Form.

5.1.10 On any bid in excess of fifty thousand dollars (\$50,000.00), the Contractor shall certify that he is licensed under R.S. 37: 2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

5.2 Bid Security

5.2.1 No bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of five percent (5.0%) of the base bid and all alternates.

The bid security shall be in the form of a certified check or cashier's check drawn on a bank insured by the Federal Deposit Insurance Corporation, or a Bid Bond written by a surety company licensed to do business in Louisiana and signed by the surety's agent or attorney-in-fact. The Bid Bond shall be written on the Coastal

Protection and Restoration Authority Bid Bond Form, and the surety for the bond must meet the qualifications stated thereon. The Bid Bond shall include the legal name of the bidder be in favor of the State of Louisiana, Coastal Protection and Restoration Authority, and shall be accompanied by appropriate power of attorney. The Bid Bond must be signed by both the bidder/principal and the surety in the space provided on the Coastal Protection and Restoration Authority Bid Bond Form. Failure by the bidder/principal or the surety to sign the bid bond shall result in the rejection of the bid.

Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Bid Documents, within ten (10) days after written notice that the instrument is ready for his signature.

Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

5.2.2 The Owner will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

5.3 Submission of Bids

5.3.1 The Bid shall be sealed in an opaque envelope. The bid envelope shall be identified on the outside with the name of the project, and the name, address, and license number of the Bidder. The envelope shall contain **only one bid form** and will be received until the time specified and at the place specified in the Advertisement for Bids. It shall be the specific responsibility of the Bidder to deliver his sealed bid to Facility Planning and Control Department at the appointed place and prior to the announced time for the opening of bids. Late delivery of a bid for any reason, including late delivery by United States Mail, or express delivery, shall disqualify the bid.

If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "Bid Enclosed" on the face thereof. Such bids shall be sent by Registered or Certified Mail, Return Receipt Requested, addressed to:

Facility Planning and Control,
P. O. Box 94095
Baton Rouge, Louisiana, 70804-9095.

Bids sent by express delivery shall be delivered to:

Facility Planning and Control
Suite 7-160
Claiborne Office Building
1201 North Third Street
Baton Rouge, Louisiana 70802

5.3.2 Bids shall be deposited at the designated location prior to the time on the date for receipt of bids indicated in the Advertisement for Bids, or any extension thereof made by addendum. Bids received after the time and date for receipt of bids will be returned unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.

5.3.4 Oral, telephonic or telegraphic bids are invalid and shall not receive consideration. Owner shall not consider notations written on outside of bid envelope which have the effect of amending the bid. Written modifications enclosed in the bid envelope, and signed or initialed by the Contractor or his representative, shall be accepted.

5.4 Modification or Withdrawal of Bid

5.4.1 A bid may not be modified, withdrawn or canceled by the Bidder during the time stipulated in the Advertisement for Bids, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 38:2214 which states, in part, "Bids containing patently obvious mechanical, clerical or mathematical errors may be withdrawn by the Contractor if clear and convincing sworn, written evidence of such errors is furnished to the public entity within forty

eight hours of the Bid Opening excluding Saturdays, Sundays and legal holidays".

5.4.2 Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.

5.4.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

5.4.4 Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

ARTICLE 6

CONSIDERATION OF BIDS

6.1 Opening of Bids

6.1.1 The properly identified Bids received on time will be opened publicly and will be read aloud, and a tabulation abstract of the amounts of the base bids and alternates, if any, will be made available to Bidders.

6.2 Rejection of Bids

6.2.1 The Owner shall have the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bid Documents or a bid in any way incomplete or irregular.

6.3 Acceptance of Bid

6.3.2 It is the intent of the Owner, if he accepts any alternates, to accept them in the order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Owner shall reserve the right to accept alternates in any order which does not affect determination of the Low Bidder.

ARTICLE 7

POST-BID INFORMATION

7.1 Submissions

7.1.1 The Contractor shall submit all required deliverables in conformance with Section SP-4 of the Special Provisions.

It is the preference of the Owner that, to the greatest extent possible or practical, the Contractor utilize Louisiana Subcontractors, manufacturers, suppliers and labor.

7.1.2 The Contractor will be required to establish to the satisfaction of the Engineer the reliability and responsibility of the proposed Subcontractors to furnish and perform the work described in the sections of the Specifications pertaining to such proposed Subcontractor's respective trades. The General Contractor shall be responsible for actions or inactions of Subcontractors and/or material suppliers.

The General Contractor is totally responsible for any lost time or extra expense incurred due to a Subcontractor's/or Material Supplier's failure to perform. Failure to perform includes, but is not limited to, a Subcontractor's financial failure, abandonment of the project, failure to make prompt delivery, or failure to do work up to standard. Under no circumstances shall the Owner mitigate the General Contractor's losses or reimburse the General Contractor for losses caused by these events.

7.1.3 Subcontractors and other persons and organizations selected by the Bidder must be used on the work for which they were proposed and shall not be changed except with the written approval of the Owner and the Engineer.

In accordance with La. R.S. 38:2227, LA. R.S. 38:2212.10 and LA. R.S. 23:1726(B) each bidder on this project must submit the completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package.

The Attestations Affidavit form shall be submitted to Facility Planning and Control within 10 days after the opening of bids.

ARTICLE 8

PERFORMANCE AND PAYMENT BOND

8.1 Bond Required

8.1.1 The Contractor shall furnish and pay for a Performance and Payment Bond written by a company licensed to do business in Louisiana, which shall be signed by the surety's agent or attorney-in-fact, in an amount equal to 100% of the Contract amount. Surety must be listed currently on the U. S. Department of Treasury Financial Management Service List (Treasury List) as approved for an amount equal to or greater than the contract amount, or must be an insurance company domiciled in Louisiana or owned by Louisiana residents. If surety is qualified other than by listing on the Treasury list, the contract amount may not exceed fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance and may not exceed the amount of \$500,000. However, a Louisiana domiciled insurance company with at least an A-rating in the latest printing of the A. M. Best's Key Rating Guide shall not be subject to the \$500,000 limitation, provided that the contract amount does not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide nor fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance. The Bond shall be signed by the surety's agent or attorney-in-fact. The Bond shall be in favor of the Coastal Protection and Restoration Authority.

8.2 Time of Delivery and Form of Bond

8.2.1 The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the Contract.

8.2.2 Bond shall be in the form furnished by the Coastal Protection and Restoration Authority, entitled CONTRACT BETWEEN OWNER AND CONTRACTOR AND PERFORMANCE AND

PAYMENT BOND, a copy of which is included in the Bid Documents.

8.2.3 The Bidder shall require the Attorney-in-Fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of his power of Attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 Form to be Used

9.1.1 Form of the Contract to be used shall be furnished by the Coastal Protection and Restoration Authority, an example of which is bound in the Bid Documents.

9.2 Award

9.2.1 Before award of the Contract, the successful Bidder shall furnish to the Owner a copy of a Disclosure of Ownership Affidavit stamped by the Secretary of State, a certified copy of the minutes of the corporation or partnership meeting which authorized the party executing the bid to sign on behalf of the Contractor.

9.2.2 In accordance with Louisiana Law, when the Contract is awarded, the successful Bidder shall, at the time of the signing of the Contract, execute the Non-Collusion Affidavit included in the Contract Documents

9.2.3 When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract between Owner and Contractor is duly executed.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: Facility Planning and Control
P. O. Box 94095
Claiborne Office Building
Baton Rouge, LA 70804
(Owner to provide name and address of owner)

BID FOR: CIAP Freshwater Bayou Bank
Stabilization Project
(TV-11b(EB))
(Owner to provide name of project and other identifying information)

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: **Sellers & Associates, Inc.**, and dated: **January 2013**. *(Owner to provide name of entity preparing bidding documents.)*

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____.

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:
_____ Dollars (\$ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 *(ADD: Additional Linear Footage of Rock Dike)* for the sum of:
_____ Dollars (\$ _____)

Alternate No. 2 *(ADD: Raise Crown Elevation in Specified Reaches)* for the sum of:
_____ Dollars (\$ _____)

Alternate No. 3 *(ADD: Flatten Protected Side Slope in Specified Reaches)* for the sum of:
_____ Dollars (\$ _____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** If someone other than a corporate officer signs for the Bidder/Contractor, a copy of a corporate resolution or other signature authorization shall be required for submission of bid. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the bid unless bidder has complied with La. R.S. 38:2212(A)(1)(c) or RS 38:2212(O).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA RS 38:2218.A is attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: Facility Planning and Control _____
P. O. Box 94095 _____
Claiborne Office Building _____
Baton Rouge, LA 70804 _____
(Owner to provide name and address of owner)

BID FOR: CIAP Freshwater Bayou Bank _____
Stabilization Project _____
(TV-11b(EB)) _____

(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

| | | | | |
|--------------|---|------------------|---------------------------------|---|
| DESCRIPTION: | <input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ | | Mobilization and Demobilization | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 101 | 1 | Lump Sum | | |

| | | | | |
|--------------|---|------------------|----------------------------|---|
| DESCRIPTION: | <input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ | | Bank Stabilization Surveys | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 201 | 1 | Lump Sum | | |

| | | | | |
|--------------|---|------------------|--------------------|---|
| DESCRIPTION: | <input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ | | Flotation Channels | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 301 | 1 | Lump Sum | | |

| | | | | |
|--------------|---|------------------|------------------------|---|
| DESCRIPTION: | <input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ | | Rock Settlement Plates | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 510 | 4 | Each | | |

| | | | | |
|--------------|---|------------------|-------------------------|---|
| DESCRIPTION: | <input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ | | Woven Geotextile Fabric | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 610 | 122,483 | Square Yard | | |

| | | | | |
|--------------|---|------------------|----------------------|---|
| DESCRIPTION: | <input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ | | 440-Pound Class Rock | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 702 | 174,105 | Ton | | |

| | | | | |
|--------------|--|------------------|--|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 | | Additional Mobilization and Demobilization | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 101 | 1 | Lump Sum | | |

| | | | | |
|--------------|--|------------------|---------------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 | | Additional Bank Stabilization Surveys | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION <i>(Quantity times Unit Price)</i> |
| 201 | 1 | Lump Sum | | |

Wording for "DESCRIPTION" is to be provided by the Owner.

All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: Facility Planning and Control
 P. O. Box 94095
 Claiborne Office Building
 Baton Rouge, LA 70804
 (Owner to provide name and address of owner)

BID FOR: CIAP Freshwater Bayou Bank
 Stabilization Project
 (TV-11b(EB))
 (Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

| | | | | |
|--------------|--|------------------|-------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 | | Additional Flotation Channels | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 301 | 1 | Lump Sum | | |

| | | | | |
|--------------|--|------------------|-----------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 | | Additional Rock Settlement Plates | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 510 | 1 | Each | | |

| | | | | |
|--------------|--|------------------|------------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 | | Additional Woven Geotextile Fabric | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 610 | 42,071 | Square Yard | | |

| | | | | |
|--------------|--|------------------|---------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 | | Additional 440-Pound Class Rock | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 702 | 47,496 | Ton | | |

| | | | | |
|--------------|--|------------------|------------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 | | Additional Woven Geotextile Fabric | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 610 | 9,456 | Square Yard | | |

| | | | | |
|--------------|--|------------------|---------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 | | Additional 440-Pound Class Rock | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 702 | 26,018 | Ton | | |

| | | | | |
|--------------|--|------------------|------------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 | | Additional Woven Geotextile Fabric | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 610 | 20,985 | Square Yard | | |

| | | | | |
|--------------|--|------------------|---------------------------------|---|
| DESCRIPTION: | <input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 | | Additional 440-Pound Class Rock | |
| REF. NO. | QUANTITY: | UNIT OF MEASURE: | UNIT PRICE | UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>) |
| 702 | 30,302 | Ton | | |

Wording for "DESCRIPTION" is to be provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner

**BID BOND
FOR
COASTAL PROTECTION AND RESTORATION AUTHORITY**

Date: _____

KNOW ALL MEN BY THESE PRESENTS:

That _____ of _____, as Principal, and _____, as Surety, are held and firmly bound unto the State of Louisiana, Division of Administration, Coastal Protection and Restoration Authority (Obligee), in the full and just sum of five (5%) percent of the total amount of this proposal, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater than the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A - rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

PRINCIPAL (BIDDER)

SURETY

BY: _____
AUTHORIZED OFFICER-OWNER-PARTNER

BY: _____
AGENT OR ATTORNEY-IN-FACT(SEAL)

**CIAP FRESHWATER BAYOU
BANK STABILIZATION PROJECT**
Name of Project

TV-11b(EB)
Project No.

STATE OF _____

PARISH OF _____

ATTESTATIONS AFFIDAVIT

Before me, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

LA. R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

- | | |
|---------------------------------------|-----------------------------------|
| (a) Public bribery (R.S. 14:118) | (c) Extortion (R.S. 14:66) |
| (b) Corrupt influencing (R.S. 14:120) | (d) Money laundering (R.S. 14:23) |

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

- | | |
|---|--|
| (a) Theft (R.S. 14:67) | (f) Bank Fraud (R.S. 14:71.1) |
| (b) Identity Theft (R.S. 14:67.16) | (g) Forgery (R.S. 14:72) |
| (c) Theft of a Business Record (R.S. 14:67.20) | (h) Contractors; Misapplication of Payments (R.S. 14:202) |
| (d) False Accounting (R.S. 14:70) | (i) Malfeasance in Office (R.S. 14:134) |
| (e) Issuing Worthless Checks (R.S. 14:71) | |

**CIAP FRESHWATER BAYOU
BANK STABILIZATION PROJECT**
Name of Project

TV-11b(EB)
Project No.

LA. R.S. 38:2212.10 Verification of Employees

- A. At the time of bidding, Appearer is registered and participates in a status verification system to verify that all new hires in the state of Louisiana are legal citizens of the United States or are legal aliens.
- B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.
- C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

LA. R.S. 23:1726(B) Certification Regarding Unpaid Workers Compensation Insurance

- A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.
- B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the bidding/proposing entity.

NAME OF BIDDER

NAME OF AUTHORIZED SIGNATORY
OF BIDDER

DATE

TITLE OF AUTHORIZED SIGNATORY
OF BIDDER

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER/AFFIANT

Sworn to and subscribed before me by Affiant on the ____ day of _____, 20__.

Notary Public

FOR INFORMATION ONLY

This document will be prepared by the Coastal Protection and Restoration Authority in the form appropriate for the project.

**CONTRACT BETWEEN OWNER AND CONTRACTOR
AND PERFORMANCE AND PAYMENT BOND**

This agreement entered into this _____ day of _____, 2013, by _____ hereinafter called the "Contractor", whose business address is _____ and the State of Louisiana Coastal Protection and Restoration Authority, herein represented by the contracting officer executing this contract, hereinafter called the "Owner".

Witnesseth that the Contractor and the Owner, in consideration of premises and the mutual covenants; consideration and agreement herein contained, agree as follows:

Statement of Work: The contractor shall furnish all labor and materials and perform all of the work required to build, construct and complete in a thorough and workmanlike manner:

Project No. _____

State ID No. _____ Site Code _____

in strict accordance with Contract Documents prepared by the Owner.

It is recognized by the parties herein that said Contract Documents including by way of example and not of limitation, the Plans, Specifications (including General Provisions, Special Provisions, and Technical Specifications), Any Addenda thereto, Instruction to Bidders, this Contract, Advertisement for Bids, Affidavit, Bid Form, Bonds (Bid, Performance, and Payment), any Submitted Post-Bid Documentation, Notice of Award, Notice to Proceed, Change Orders, and Claims, if any, impose duties and obligations upon the parties herein, and said parties thereby agree that they shall be bound by said duties and obligations. For these purposes, all of the provisions contained in the aforementioned Contract Documents are incorporated herein by reference with the same force and effect as though said Contract Documents were herein set out in full.

Time for Completion: The work shall be commenced on a date to be specified in a written order of the Owner and shall be completed within _____ consecutive calendar days from and after the said date.

Liquidated Damages: Contractor shall be assessed Liquidated Damages in the amount of _____ per day for each consecutive calendar day which work is not complete beginning with the first day beyond the completion time.

Compensation to be paid to the Contractor: The Owner will pay and the Contractor will accept in full consideration for the performance of the contract the sum of _____ Dollars (\$_____) which sum represents the Contract Price.

Performance and Payment Bond: To these presents personally came and intervened _____, herein acting for _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business in the State of Louisiana, as surety, who declared that having taken cognizance of this contract and of the Contract Documents mentioned herein, he hereby in his capacity as its Attorney in Fact obligates his said company, as Surety for the said Contractor, unto the said Owner, up to the sum of _____ Dollars (\$_____). By issuance of this bond, the surety acknowledges they are in compliance with R.S. 38:2219.

The condition of this performance and payment bond shall be that should the Contractor herein not perform the contract in accordance with the terms and conditions hereof, or should said Contractor not fully indemnify and save harmless the Owner, from all cost and damages which he may suffer by said Contractor's non-performance or should said Contractor not pay all persons who have and fulfill obligations to perform labor and/or furnish materials in the prosecution of the work provided for herein, including by way of example workmen, laborers, mechanics, and furnishers of materials, machinery, equipment and fixtures, then said Surety agrees and is bound to so perform the contract and make said payment(s).

Provided, that any alterations which may be made in the terms of the contract or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the contract, or any other forbearance on the part of either the Owner or the Contractor to the other shall not in any way release the Contractor or the Surety from their liability hereunder, notice to the Surety of any such alterations, extensions or other forbearance being hereby waived.

The Contractor agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, the Age Act of 1972, and contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

Contractor agrees not to discriminate in its employment practices, and will render services under this contract without regard to race, color, sex, religion, national origin, genetic information, age or disabilities. Any act of discrimination committed by Contractor or failure to comply with these statutory obligations when applicable shall be grounds for termination of this contract.

In Witness whereof, the parties hereto on the day and year first above written have executed this agreement in Seven (7) counterparts, each of which shall, without proof or accountancy for the other counterparts, be deemed an original thereof.

WITNESSES:

WITNESSES:

WITNESSES:

STATE OF LOUISIANA
COASTAL PROTECTION AND
RESTORATION AUTHORITY

BY:

Jerome Zeringue, Executive Director

CONTRACTOR:

BY:

SURETY:

BY:

STATE OF LOUISIANA
PARISH OF _____

PROJECT NO. _____ NAME _____
LOCATION _____

AFFIDAVIT

Before me, the undersigned authority, duly commissioned and qualified within and for the State and Parish aforesaid, personally came and appeared _____ representing _____ who, being by me first duly sworn deposed and said that he has read this affidavit and does hereby agree under oath to comply with all provisions herein as follows:

PART I.

Section 2224 of Part II of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as amended.

(1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

(2) That no part of the Contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the Contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for affiant.

PART II.

Section 2190 of Part I of Chapter 10 of Title 38 of the Louisiana Revised Statutes, as amended.

That affiant, if an architect or engineer, or representative thereof, does not own a substantial financial interest, either directly or indirectly, in any corporation, firm, partnership, or other organization which supplies materials for the construction of a public work when the architect or engineer has performed architectural or engineering services, either directly or indirectly, in connection with the public work for which the materials are being supplied.

For the purposes of this Section, a "substantial financial interest" shall exclude any interest in stock being traded on the American Stock Exchange or the New York Stock Exchange.

That affiant, if subject to the provisions of this section, does hereby agree to be subject to the penalties involved for the violation of this section.

AFFIANT

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 2013.

NOTARY

PART I GENERAL PROVISIONS

GP-1 DEFINITION OF TERMS

Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs and the titles of other documents or forms.

Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

- a. Acceptance: A written approval from the Engineer which certifies that specific items of work in the Contract have been completed and/or obligations have been fulfilled by the Contractor.
- b. Addenda: Those written or graphic documents which are issued prior to opening of Bids in accordance with the Bidding Requirements and clarify or change the bidding requirements or the proposed Contract Documents.
- c. Application of Payment: That form which is used by the Contractor to request partial and final payment and is deemed acceptable to the Owner. It shall be accompanied by any supporting documentation required by the Contract Documents.
- d. A.S.T.M.: American Society for Testing and Materials.
- e. Bid: An offer or proposal submitted on the prescribed form setting forth the prices for the Work.
- f. Bidder: The person, association of persons, firm, or corporation submitting a proposal for the Work.
- g. Bidding Requirements: The Advertisement for Bids, Instructions to Bidders, Form of Bid Security, if any, and Bid Form with any supplements.
- h. Change Order: A written order which is submitted to the Contractor, signed by the Owner, and authorizes an addition, deletion, or revision in the Work, or an adjustment in the contract price or the contract time issued after the effective date of the Contract.
- i. Claim: A written demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both or other relief with respect to the terms of the Contract.
- j. Contract: The written agreement between the Owner and the Contractor which defines the work to be completed and shall be understood to include the Plans, Specifications, Instructions To Bidders, Agreement, Advertisement For Bids, Affidavit, Bid Form, Bid Bond, Performance and Payment Bond, Notice of Award, Notice to Proceed, and Change Orders, and Claims.

- k. Contract Documents: The Contract, all addenda which pertains to the Contract Documents, Bid Documents and specified Attachments accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award, Contractor's Bid when attached as an exhibit to the Agreement, the Bonds (Bid and Performance/Payment), General Provisions, Special Provisions, Technical Specifications, Plans, and all Field or Change Orders issued after the execution of the Agreement. Shop Drawings and other submittals by the Contractor are not Contract Documents.
- l. Contract Price: The moneys payable by the Owner to the Contractor for the Work in accordance with the Contract Documents as stated in the Contract.
- m. Contract Time: The number of calendar days specified in the Contract for completion of the Work, together with any extensions authorized through change orders.
- n. Contractor: The person, association of persons, firm, or corporation entering into the duly awarded Contract.
- o. Contracting Agency: The State of Louisiana, Coastal Protection and Restoration Authority (CPRA).
- p. Day: When any period of time is referred to in the Contract Documents using days, it will be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday, or a legal holiday, that day will be omitted from the computation. A calendar day is measured as twenty-four (24) hour period starting at midnight and ending the following midnight.
- q. Design Report: A written report by the Engineer which provides the design methodology for the Work.
- r. Effective Date of the Contract: The date indicated in the Contract on which it becomes effective.
- s. Engineer: The State of Louisiana, Coastal Protection and Restoration Authority, or its designee.
- t. Equipment: All machinery, implements, and power-tools, in conjunction with the necessary supplies for the operation, upkeep, maintenance, and all other tools and apparatuses necessary for the proper construction and acceptable completion of the Work.
- u. Extension of Contract: Any extension of time for completion of Work beyond the Contract Time which is granted by the Owner, recommended by the Engineer and approved by the Coastal Protection and Restoration Authority in the form of a Change Order.
- v. Federal Sponsor: The federal agency which has been tasked, if applicable, to manage the implementation of the project.
- w. Field Order: A written order issued by the Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or Contract Time.

- x. Laboratory: The firm, company, or corporation which is used to test materials and is approved for use by the Engineer.
- y. Laws and Regulations; Laws or Regulations: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- z. Materials: Any substance used in the Work to build structures, but does not include material used in false work or other temporary structures not incorporated in the Work.
- aa. Milestone: A principal event specified in the Contract Documents relating to an intermediated completion date or time prior to the Contract Times.
- bb. Notice of Award: A written notice to the successful Bidder stating that the Bid has been accepted by the Owner and that the successful Bidder is required to execute the Contract and furnish the Payment and Performance Bond and Non-Collusion Affidavit.
- cc. Notice to Proceed: The written notice to the Contractor by the Owner which provides the starting date for the Contract Time.
- dd. Owner: The Owner is the State of Louisiana (State) which acts through the Contracting Agency.
- ee. Performance and Payment Bond: The approved form of security furnished by the Contractor and Surety for the faithful performance of the Work, and the payment for all labor, materials, and/or obligations incurred by the Contractor in the prosecution thereof.
- ff. Plans: That part of the Contract Documents prepared or approved by the Engineer which graphically shows the scope, intent, and character of the Work to be completed by the Contractor.
- gg. Project Site: The location where the Work is to be performed as stated in the Contract Documents.
- hh. Resident Project Representative: An authorized representative of the Engineer who is responsible to inspect the Work and materials furnished by the Contractor.
- ii. Right-of-way: That entire area reserved for constructing, maintaining, and protecting the proposed improvement, structures, and appurtenances of the Work.
- jj. Samples: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portions of the Work will be judged.
- kk. Shop Drawings: All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the Work to be performed.

- ll. Specifications: That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the work to be performed and certain administrative details applicable thereto.
- mm. State: The State of Louisiana.
- nn. Structures: Bridges, plugs, weirs, bulkheads, berms, dams, levees, and other miscellaneous construction encountered during the Work and not otherwise classified herein.
- oo. Subcontractor: Any person, association of persons, firm, or corporation who contracts with the Contractor to perform any part of the project covered by the Contract.
- pp. Submittals: Certificates, samples, shop drawings, and all other project data which are submitted to the Engineer in order to verify that the correct products will be installed on the project.
- qq. Successful Bidder: The lowest responsible Bidder whom the Owner makes an award.
- rr. Special Provisions: That part of the Contract Documents which amends or supplements these General Provisions.
- ss. Surety: The corporate body, licensed to do business in Louisiana, bound with and for the Contractor's primary liability, and engages to be responsible for payment of all obligations pertaining to acceptable performance of the Work contracted.
- tt. Temporary Structures: Any non-permanent structure required while engaged in the prosecution of the Contract.
- uu. Work: All work specified herein or indicated on the Plans.
- vv. Work Plan: A written plan by the Contractor that details how the Work will be provided including layout drawings, projected schedule (Initial Progress Schedule), and a list of labor hours, materials, and equipment.

GP-2 BID REQUIREMENTS

The Contract and Bonds which govern the Work shall be performed in accordance with the Plans, Specifications, and the Louisiana Standard Specifications for Roads and Bridges, 2006 edition. The Bidder understands that all quantities for performing the Work have been estimated by the Engineer, and that the Bid shall be the sum of the quantities multiplied by their respective unit rates. The Contract shall be awarded by the Owner through a comparison of all bids. It is the responsibility of each Bidder before submitting a Bid to:

- a. Examine the Bidding Documents including the Plans and Specifications and any Addenda or related data identified in the Bidding Documents;
- b. Visit the Project Site to become familiar with the local conditions if they are believed to affect cost, progress, or the completion of the Work;

- c. Become familiar and satisfied with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of the Work;
- d. Study and correlate all information known to the Bidder including observations obtained from Bidder's visits, if any, to the Project Site, with the Bidding Documents;
- e. Submit a written notice to the Engineer within three (3) days regarding any conflicts, errors, ambiguities, or discrepancies discovered in the Bidding Documents and confirm that the written resolution thereof by the Engineer is acceptable to the Bidder; and
- f. Determine that the Bidding Documents are generally sufficient to convey an understanding of all terms and conditions for completing the required Work.

The submission of a Bid will constitute an incontrovertible representation that the Bidder has complied with every requirement of these Specifications. The Bidder shall comply with all other requirements specified in the Advertisement For Bids and the Instruction To Bidders.

GP-3 AVAILABILITY OF PLANS AND SPECIFICATIONS

One (1) set of Plans and Specifications shall be furnished to each Bidder. Three (3) sets of the Plans and Specifications shall be furnished to the Contractor upon award of the Contract. Additional sets may be furnished to the Contractor upon request from the Engineering Division of the Coastal Protection and Restoration Authority, 450 Laurel Street, 11th Floor, Baton Rouge, Louisiana 70801.

GP-4 LAWS, REGULATIONS, STANDARDS, SPECIFICATIONS, AND CODES

Bidders are required to become familiar and remain in compliance with all Federal, State, and local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority which may affect those employed for the execution of the Work or which may affect the conduct of the Work. The Contractor shall indemnify the Owner and its representatives against any claim or liability arising from all violations of any laws, bylaws, ordinances, codes, regulations, orders, or decrees, whether by the Contractor or by the Contractor's employees. The filing of a bid will be presumptive evidence that the Bidder has complied with this requirement. The Owner will not be responsible for any inaccurate interpretations or conclusions drawn by the Contractor from information and documentation provided by the Owner.

References to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, may not be in effect at the time of opening the Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. No provision of any such standard, specification, manual, or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of the Owner or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Bid Documents. No such provision shall be effective to assign to the Owner or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of the Contractor's obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

The obligations imposed by these specifications are in addition to and are not to be construed in any way as a limitation of any rights available to the Engineer or Owner which are otherwise imposed by any laws or regulations or other provisions within the Contract Documents.

The Contractor shall abide by laws set forth in the Davis-Bacon Act of 1931 which states that all laborers and mechanics employed by recipients, the recipient's contractors, or subcontractors on this project shall be paid wages at rates no less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with Subchapter IV of Chapter 31 of Title 40 United States Code. Additionally, with respect to the labor standards specified in this section, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Number 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and The Copeland Act of Title 40 (40 U.S.C. § 3145). Prevailing Wage Determination Schedules, as determined by the United States Department of Labor, are provided in the Appendix. Prevailing Wage Determination Schedules are subject to modification by the United States Department of Labor. The Contractor is responsible for utilizing the most current Prevailing Wage Determination Schedule. These documents can be downloaded from the following link: <http://www.wdol.gov/dba.aspx#3>. Modifications to Prevailing Wage Determination Schedules shall be effective if received (or posted) no less than 10 days prior to bid opening.

GP-5 PRE-BID CONFERENCE AND SITE VISIT

A Pre-Bid Conference will be held at the location and on the date provided in the Advertisement For Bids. If the Pre-Bid Conference is stated in the Advertisement for Bids to be a MANDATORY Pre-Bid Conference, bids shall be accepted only from those bidders who attend the Pre-Bid Conference in its entirety. Failure to attend a mandatory Pre-Bid Conference in its entirety will result in a null or void Bid.

A site visit may also be held at the Project Site as specified in the Advertisement For Bids or at the Pre-Bid conference. If held, bidders will be required to furnish their own transportation to the Project Site. Representatives of the Owner and Engineer will attend the Pre-Bid conference and site visit, if held, to discuss the Work.

All questions shall be in writing and faxed or emailed to the Coastal Protection and Restoration contact person listed in the Advertisement For Bids after the Pre-Bid Conference and by the due date announced at the Pre-Bid conference. In order to ensure adequate response time, all questions and/or requests for clarification or interpretation of the Bid Documents should be received by the Coastal Protection and Restoration Authority at least seven days prior to the date for receipt of bids. Oral statements will not be binding or legally effective. The Coastal Protection and Restoration Authority will issue addenda in response to all questions arising at the Pre-Bid Conference and site visit to all prospective Bidders on record. All prospective Bidders on record may contact the Coastal Protection and Restoration Authority contact person for any additional information.

GP-6 NOTICE OF AWARD

The Owner, or its designated bidding agent (Division of Administration, Office of Facility Planning and Control), shall provide written notice to the Successful Bidder stating that the Owner will sign and deliver the Contract upon compliance with the conditions enumerated therein and within the time specified.

GP-7 NOTICE TO PROCEED AND CONTRACT TIME

The Contractor shall start the Work and begin the Contract Time on the dates provided in the Notice to Proceed. The Work shall be conducted using sufficient labor, materials, and equipment as necessary to ensure completion within the Contract Time. The Contract Time for completion of the Base Bid for the Work is provided in the Instructions To Bidders, unless an extension is granted to the Contract Time as specified in GP-44. If the Bid contains an Alternate Bid(s), and the Alternate Bid(s) is awarded and included in the Contract, the Contract Time associated with the Alternate Bid(s) will be as provided in the Special Provisions.

GP-8 WORK PLAN

The Contractor shall develop a written Work Plan which accounts for all of the construction activities required by the Contract Documents. The Work Plan shall include a list of the individual construction tasks to be completed and the estimated dates for beginning and completing the tasks. It shall also include all other items which are applicable to completing the Work such as, but not limited to, the following:

- a. Typical report form for the Bi-Weekly Progress Meeting;
- b. Typical form for Daily Progress Report;
- c. Hurricane and Severe Storm Plan;
- d. Site-specific Health and Safety Plan;
- e. The delivery method and source(s) of all construction materials (company or producer name, mailing and physical address, phone number, and name of contact person).
- f. The personnel, material, subcontractors, fabricators, suppliers, types of equipment, and equipment staging areas the Contractor proposes to use for construction;
- g. Shop drawings, test results, and sample submittals;
- h. Survey layout and stakeout;
- i. All supplemental items specified in the Special Provisions.

The Work Plan shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in the Special Provisions. The Engineer shall review the Work Plan and have the Contractor make any necessary revisions prior to acceptance of the plan. **No payment for mobilization will be made until the Work Plan has been accepted by the Engineer.**

GP-9 PROGRESS SCHEDULE

The Contractor shall develop a written Progress Schedule which provides for an orderly progression of the Work, submittals, tests, and deliveries in order to complete the Work within the specified Milestones and Contract Time. All of the items listed in the Work Plan shall be integrated into the Progress Schedule. The format of the schedule shall be composed using Microsoft Project®, or any other software deemed acceptable by the Engineer. It shall be updated weekly by the Contractor, at a minimum. The Progress Schedule shall also include, but not be limited to the following:

- a. All of the elements in the Work Plan, including updates;
- b. A work order issued from Louisiana One Call ordering all their subscribers in the project area to mark their utilities;
- c. A telephone log verifying that all property owners and utilities have been contacted. This log should list the time, date, and names of the personnel representing the property owners, utilities, and Contractor;

The following table defines the monthly anticipated adverse weather days that are expected to occur during the Contract Time and will constitute the baseline monthly weather time for evaluations. The schedule is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the regional geographic area.

| Monthly Anticipated Adverse Weather Calendar Days | | | | | | | | | | | |
|---|------|------|------|-----|------|------|------|------|------|------|------|
| Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| 5 | 5 | 4 | 4 | 4 | 5 | 7 | 7 | 5 | 3 | 3 | 4 |

The Progress schedule must reflect these anticipated adverse weather delays on all weather dependent activities. Adverse weather days must prevent Work for fifty percent (50%) or more of the work day and delay work critical to the timely completion of the project. The number of actual adverse weather days shall be calculated chronologically from the first to the last day of each month.

The Progress Schedule shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in the Special Provisions. The Engineer shall perform a review and have the Contractor make any necessary revisions prior to acceptance of the schedule. Acceptance will not impose responsibility on the Owner or Engineer for the sequencing, scheduling, or progression of the Work. The Contractor is fully responsible for progression of the Work in order to maintain the compliance with the Progress Schedule.

GP-10 DAILY PROGRESS REPORTS

The Contractor shall record the following daily information on Daily Progress Reports:

- a. Date and signature of the author of the report;
- b. Dollar amount of all bid items that are fabricated, installed, backfilled, pumped, constructed, damaged, replaced, etc. The amount of material shall be expressed in the units stated in the bid;
- c. Field notes of all surveys;
- d. Notes on all inspections;
- e. Details of Health and Safety meetings;
- f. A brief description of any Change Orders, Field Orders, Claims, Clarifications, or Amendments;
- g. Condition of all navigation aides (I.E., warning signs, lighted marker buoys) and any repairs performed on them;
- h. Weather conditions (adverse weather day, wind speed and direction, temperature, wave height, precipitation, etc.);
- i. The amount of time lost to severe weather or personnel injury, etc;
- j. Notes regarding compliance with the Progress Schedule;
- k. Visitor log (Instructions for format will be furnished by the Field Engineer).

The daily progress reports shall be submitted to the Engineer at the Bi-Weekly Progress Meetings specified in GP-13 in both hard copy and digital format (Adobe Acrobat® Format, or approved equal). The typical form for Daily Progress Reports shall be developed by the Contractor and incorporated into the Work Plan.

GP-11 HURRICANE AND SEVERE STORM PLAN

The Contractor shall develop and maintain a written Hurricane and Severe Storm Plan. The Plan shall include, but not be limited to, the following:

- a. What type of actions will be taken before storm strikes at the Project Site. The plan should specify what weather conditions or wave heights will require shutdown of the Work and removal of equipment, personnel, etc.
- b. Notes from continuous monitoring of NOAA marine weather broadcasts and other local commercial weather forecasts.
- c. Equipment list with details on their ability to handle adverse weather and wave conditions.

- d. List of safe harbors or ports and the distance and travel time required to transfer equipment from the Project Site.
- e. Hard copies of any written approvals or operations schedules associated with the use of the safe harbors or ports.
- f. Method of securing equipment at the safe harbors or ports.
- g. List of tug boats and work boats and their respective length, horsepower, etc. which will adequately transfer the equipment to safe harbor or port under adverse weather conditions.
- h. Methods which will be used to secure equipment left onsite during adverse weather conditions.
- i. Evacuation or immediate reaction plans to be taken by personnel for sudden storm occurrences.
- j. Operations procedures which will be used to secure critical dredging equipment such as spuds, swing wires, anchor wires, or tugs during adverse weather conditions.
- k. Communications protocol with local law enforcement and fire and rescue agencies.

The Contractor shall incorporate the Hurricane and Severe Storm Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

GP-12 HEALTH AND SAFETY PLAN AND INSPECTIONS

The Contractor shall develop and maintain a written Health and Safety Plan which allows the Work to be performed in compliance with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the safety of personnel or property. This includes maintaining compliance with the Code of Federal Regulations, Title 29, Occupational Safety and Health Administration (OSHA) and all applicable Health and Safety Provisions of the State of Louisiana.

The Contractor shall institute a daily inspection program to assure that the requirements of the Health and Safety Plan are being fulfilled. Inspections shall include the nature of deficiencies observed, corrective action taken or to be taken, location of inspection, date, and signature of the person responsible for its contents. The results of the inspections shall be recorded on Daily Progress Reports and kept at the Project Site during the Work.

The Contractor shall incorporate the Health and Safety Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

GP-13 PROGRESS MEETINGS AND REPORTS

The Engineer shall schedule meetings to review the progress of the Work, coordinate future efforts, discuss compliance with the Progress Schedule and resolve miscellaneous problems. The Engineer or Resident Project Representative, Contractor, and all Subcontractors actively working at the Project Site shall attend each meeting. Representatives of suppliers, manufacturers, and other Subcontractors may also attend at the discretion of the Contractor. The Contractor shall record the details of each meeting in a Progress Report. The format of this report shall be developed by the Contractor, approved by the Engineer, and included in the Work Plan. The progress meetings and reports shall be scheduled according to the Special Provisions.

GP-14 PRE-CONSTRUCTION CONFERENCE

A Pre-Construction Conference shall be held by the Contractor, Owner, Engineer, local stakeholders, and other appropriate personnel prior to starting construction on the date specified in the Special Provisions. This conference shall serve to establish a mutual understanding of the Work to be performed, the elements of the Progress Schedule and Work Plan, expectations for bi-weekly progress meetings, the Plans and Specifications, processing Applications for Payment, and any other items of concern. If any subcontractors are not present, another pre-construction conference will be required.

GP-15 CONTRACT INTENT

The Bid Documents are complementary; what is called for by one is as binding as if called for by all. Clarifications and interpretations or notifications of minor variations and deviations of the Contract Documents will be issued by Engineer as provided in these Specifications. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Bid Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided at no additional cost to the Owner.

GP-16 ENGINEER AND AUTHORITY OF ENGINEER

The Engineer will be the designated representative of the Owner, the initial interpreter of the Contract Documents and the judge over acceptability of all the Work. Claims, disputes, and other matters relating to the acceptability of the Work, performance by the Contractor or the interpretation of the requirements of the Contract Documents must be submitted to the Engineer in writing. Upon written request from the Contractor, the Engineer shall issue written clarifications or interpretations which are consistent with the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on the Owner and the Contractor. Either the Owner or the Contractor may make a Claim if a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times.

The Engineer has the authority to suspend the Work in whole or in part due to failure of the Contractor to correct conditions unsafe for workmen or the general public, carry out provisions of the Contract, perform conformance work, or to carry out orders. The Engineer shall submit a written order to the Contractor for work which must be suspended or resumed. Nothing in this provision shall be construed as establishing responsibility on the part of the Engineer for safety which is the responsibility of the Contractor.

The Engineer or Resident Project Representative shall keep a daily record of weather and flood conditions and may suspend the Work as deemed necessary due to periods of unsuitable weather, conditions considered unsuitable for execution of the Work, or for any other condition or reason deemed to be in the public interest.

GP-17 CONFORMITY WITH PLANS AND SPECIFICATIONS

All work and materials involved with the Work shall conform with the lines, grades, cross sections, dimensions, and other requirements shown on the Plans or indicated in these Specifications unless otherwise approved by the Engineer.

GP-18 CLARIFICATIONS AND AMENDMENTS TO CONTRACT DOCUMENTS

The Contract Documents may be clarified or amended by the Engineer to account for additions, deletions, and revisions to the Work after the Effective Date of the Contract. The clarifications and amendments shall be addressed by either a Change Order or a written clarification by the Engineer. The Contractor shall not proceed with the Work until the Change Order or clarification has been issued by the Engineer. The Contractor shall not be liable to the Owner or Engineer for failure to report any such discrepancy unless the Contractor had reasonable knowledge.

The Contractor may request a clarification or amendment for the following:

- a. Any conflict, error, ambiguity, or discrepancy within the Contract Documents; or
- b. Any conflict, error, ambiguity, or discrepancy between the Bid Documents and the provision of any Law or Regulation applicable to the performance of the Bid; or
- c. Any standard, specification, manual, or code (whether or not specifically incorporated by reference in the Bid Documents); or
- d. Instructions by a supplier.

The official form for a written clarification is provided in Appendix B. This form shall be filled out appropriately by the Contractor and submitted to the Engineer. The Engineer shall clarify the issue in writing on either the clarification form, Field Order or a Change Order and submit it to the Contractor.

GP-19 SUBCONTRACTS

The Contractor shall provide the names of all Subcontractors to the Engineer in writing before awarding any Subcontracts. The Contractor shall be responsible for the coordination of the trades and Subcontractors engaged in the Work. The Contractor is fully responsible to the Owner for the acts and omissions of all the Subcontractors. The Owner and Engineer will not settle any differences between the Contractor and Subcontractors or between Subcontractors. The Contractor shall have appropriate provisions in all Subcontracts to bind Subcontractors to the Contractor by the terms of the General Provisions and other Contract Documents, as applicable to the Work of Subcontractors. The provisions should provide the Contractor the same power regarding termination of Subcontracts that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

GP-20 WORKERS, METHODS, AND EQUIPMENT

The Contractor shall provide competent, qualified, and trained personnel to perform the Work. The Contractor shall not employ any person found objectionable by the Engineer. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform the Work in a proper, skillful, and orderly manner shall be immediately removed upon receiving a written order by the Engineer. The Engineer may also suspend the Work until the Contractor removes the employee or provides a suitable replacement. Such an employee shall not be re-employed in any portion of the Work without written approval from the Engineer.

The on-site superintendent for the Contractor shall be competent, English-speaking, and qualified to receive orders, supervise, and coordinate all Work for the Contractor and any Subcontractors. The qualifications of the superintendent must be established and approved by the Engineer prior to commencement of the Work. The superintendent shall be furnished by the Contractor regardless of how much Work may be sublet. In the performance of the Work under this Contract, the Contractor shall conduct operations to avoid interference with any other Contractors.

All equipment, products, and material incorporated into the Work shall be as specified, or if not specified, shall be new, of good quality, and protected, assembled, used, connected, applied, cleaned, and conditioned in accordance with the manufacturer's instructions, except as otherwise may be provided in the Bid Documents. All equipment shall be of sufficient size and mechanical condition to meet the requirements of the Work and produce a satisfactory quality of work. Equipment shall not damage adjacent property throughout the performance of the Work. The Plant and Equipment Schedule should be completed by the Contractor.

The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures used to complete the Work in conformance with the Contract Documents.

The Contractor shall obtain permission from the Engineer if a method or type of equipment other than specified in the Contract is desired. The request shall be in writing and shall include a full description of the methods, equipment proposed, and reasons for the modification. A proposed item of material or equipment may be considered by the Engineer to be functionally equal to an item specified in the Contract if:

- a. It is at least equal in quality, durability, appearance, strength, and design characteristics;
- b. There is no increase in any cost including capital, installation, or operating to the Owner;
- c. The proposed item will conform substantially, even with deviations, to the detailed requirements of the item named in the Bid Documents.

If, after trial use of the substituted methods or equipment, the Engineer determines that the Work produced does not meet Contract requirements, the Contractor shall discontinue use of the substituted methods or equipment and shall complete the Work with the specified methods and equipment. The Contractor shall remove the deficient Work and replace it with Work of specified quality or take other corrective action as directed. No change will be made in basis of payment for construction items involved or in Contract Time as a result of authorizing a change in methods or equipment.

GP-21 ACCIDENT PREVENTION, INVESTIGATIONS, AND REPORTING

The Contractor shall be responsible to develop and maintain all safeguards and safety precautions necessary to prevent damage, injury, or loss throughout the performance of the Work. All accidents at the Project Site shall be investigated by the immediate supervisor of employee(s) involved and reported to the Engineer or Resident Project Representative within one (1) working day. A complete and accurate written report of the accident including estimated lost time days shall be submitted to the Engineer within four (4) calendar days. A follow-up report shall be submitted to the Engineer if the estimated lost time days differ from the actual lost time days.

GP-22 PRESERVATION AND RESTORATION OF PROPERTY, MONUMENTS, ETC.

The Contractor shall comply with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the preservation and protection of public and private property. The Contractor shall install and maintain suitable safeguards and safety precautions during the Work as necessary to prevent damage, injury, or loss to property. This responsibility shall remain with the Contractor until the Work has been completed and accepted. Any damage, injury, or loss to property which is caused by the Contractor or Subcontractors shall be repaired or replaced at the expense of the Contractor.

The Contractor shall protect all land monuments, State and United States bench marks, geodetic and geological survey monuments, and property markers from disturbance or damage until an authorized agent has witnessed or otherwise referenced their location. The Contractor shall also provide protection for all public and private property including trees, utilities, pipes, conduits, structures, etc. These items shall not be removed unless directed by the Engineer.

The Contractor shall be responsible to completely repair all damages to public or private property due to any act, omission, neglect, or misconduct in the execution of the Work unless it is due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, public enemies, or governmental authorities. The damage must be repaired at the expense of the Contractor before final acceptance of the Work can be granted by the Engineer. If the Contractor fails to repair the damage within forty-eight (48) hours, the Owner may independently proceed with the repairs at the expense of the Contractor by deducting the cost from the Contract. If the Contractor cannot provide for the cost of repairs, the Surety of the Contractor shall be held until all damages, suits, or claims have been settled.

GP-23 PROTECTION OF THE WORK, MATERIALS, AND EQUIPMENT

It shall be the responsibility of the Contractor to protect the Work, materials, and equipment from damages or delays due to inflows, tidal rise, and storm water runoff which may occur at the Project Site. The Owner shall not be held liable or responsible for these types of delays or damages.

GP-24 LAND RIGHTS

The Owner has been granted all of the temporary easements, servitudes, and right-of-way agreements from public and private landowners in order to perform the Work. A land rights memorandum which lists all known responsible contacts and required stipulations is provided in Appendix C. The Contractor is responsible to notify all of the contacts and abide by stipulations listed in that memorandum.

GP-25 UTILITIES

The Owner has been granted all of the temporary easements, servitudes, and right-of-way agreements from known public and private utilities in order to perform the Work. The utilities include, but are not limited to telephone, telegraph, power poles or lines, water or fire hydrants, water or gas mains and pipelines, sewers, conduits, and other accessories or appurtenances of a similar nature which are fixed or controlled by a city, public utility company or corporation.

The Contractor shall conduct the Work in such a manner as to cooperate and minimize inconveniences with utilities. Prior to commencement of the Work, the Contractor is responsible to notify all of the utilities and abide by stipulations required by the utility company(s). The Contractor shall also call Louisiana One Call at 1-800-272-3020 a minimum of 5 working days prior to construction to locate existing utilities at the Project Site.

Any damage to utilities that is caused by the Contractor within the Project Site shall be repaired at the expense of the Contractor. The Owner will not be responsible for any delay or damage incurred by the Contractor due to working around or joining the Work to utilities left in place or for making adjustments.

Any unidentified pipes or structures which may be discovered within the limits of the Project Site shall not be disturbed and shall be reported to the Engineer as soon as possible. Construction or excavation shall not be performed around unidentified utilities without prior approval from the Engineer.

GP-26 PERMITS

Federal and State permits that are required to perform the Work, such as the Department of the Army Permit, Coastal Use Permit, LDEQ Clean Water Permit, LDWF Fill Material License, and LADOTD highway crossing permit have been secured by the Owner. Permit conditions affecting the construction processes have been included in these Specifications. Copies of these permits will be provided to the Contractor at the pre-construction conference. These permits will not relieve the responsibility of the Contractor from obtaining any additional permits which may be needed to complete the Work. Copies of any special permits that are obtained by the Contractor must be submitted to the Owner. The Contractor shall conform to the requirements therein and display copies of the permits in a public setting at the Project Site at all times.

GP-27 PROJECT SITE CLEAN-UP

The Contractor shall keep the Project Site free from accumulations of waste material or trash at all times. All trash and waste materials shall be removed by the Contractor and disposed off-site in an approved waste disposal facility. In addition, all equipment, tools, and non-conforming work shall also be removed prior to the Work being accepted. No materials shall be placed outside of the Project Site.

GP-28 OWNER INSPECTION

The Owner, Resident Project Representative, and Federal Sponsor shall have the right to perform reasonable inspections and testing of the Work at the Project Site. Access shall be granted to the entire Project Site including all materials intended for use in the Work. The Contractor shall allow reasonable time for these inspections and tests to be performed. The inspections shall not relieve the Contractor from any obligation in accordance with the requirements of the Contract.

The Owner shall notify the Contractor prior to all tests, inspections, and approvals of the Work which are to be conducted at the Project Site. The Owner shall also provide the Contractor with the written results of all inspections and tests. Inspections, tests, or Payments made by the Owner shall not constitute acceptance of non-conforming Work of prejudice the Owner's rights under the Contract.

GP-29 DUTIES OF RESIDENT PROJECT REPRESENTATIVE

A Resident Project Representative shall be assigned by the Engineer to the Project Site to observe the Contractor and monitor the progress and manner in which the Work is being performed. The Resident Project Representative will also report to the Engineer and Contractor whenever materials or Work fail to comply with the Contract. The Resident Project Representative is authorized to reject any materials or suspend work which does not comply with the Contract until the issue is resolved by the Engineer.

However, the Resident Project Representative is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, or to approve or accept any portion of the Work, or to issue instructions contrary to the Plans and Specifications. The Resident Project Representative shall not manage or perform duties for the Contractor.

GP-30 CONSTRUCTION STAKES, LINES, AND GRADES

The Engineer shall direct the Contractor to all control points necessary for setting stakes and establishing lines and grades as shown on the Plans. The Contractor shall be responsible for laying out all of the Work. All layouts shall be witnessed and verified by the Engineer or Resident Project Representative prior to beginning the Work. The Contractor shall be responsible for proper execution of the Work according to the layouts after receiving verification from the Engineer.

The Contractor shall be responsible for furnishing and maintaining stakes such that the Work can be verified for acceptance. The Engineer may suspend the Work at any time if it cannot be adequately verified due to the number, quality, or condition of the stakes.

GP-31 CONTRACTOR'S RESPONSIBILITY FOR WORK

The Contractor shall execute all items covered by the Contract, and shall furnish, unless otherwise definitely provided in the Contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to complete the Work. The Contractor shall pay constant attention to the progress of the Work and shall cooperate with the Engineer in every way possible. The Contractor shall maintain a complete copy of the Contract at all times, including the Plans, Specifications, and any authorized modifications.

GP-32 ENVIRONMENTAL PROTECTION

The Contractor shall comply with and abide by all federal, state, and local laws and regulations controlling pollution of the environment, including air, water, and noise. The Contractor shall take precautions to prevent pollution of waters and wetlands with fuels, oils, bituminous materials, chemicals, sewage, or other harmful materials and contaminants, and to prevent pollution of the atmosphere from particulate and gaseous matter, in accordance with all terms and conditions of federal, state, and local air and water pollution control laws and programs and their rules and regulations, including the federal Clean Air Act and the federal Clean Water Act.

The Contractor shall adhere to the provisions which require compliance with all standards, orders, or requirements contained under Section 306 of the Clean Air Act and Section 508 of the Clean Water Act, which prohibit the use under non-exempt Federal contracts, grants, or loans, of facilities included on the Environmental Protection Agency (EPA) list of Violating Facilities.

Construction operations in rivers, streams, lakes, tidal or coastal waters, reservoirs, canals, wetlands, and any other impoundments shall be restricted to areas where it is necessary to accomplish the Work and performed in accordance with any applicable federal, state, and local laws, regulations, permit requirements, and guidelines, and the Contractor shall conduct the Work in a manner that will not cause damaging concentrations of silt or pollution to water.

Contractor shall maintain and operate equipment to minimize noise, dust, and vibration near noise, dust and vibration-sensitive areas such as churches, hospitals, schools, and residential areas, and assure that any activities conducted near such areas are not unduly disruptive. Contractor shall maintain all equipment with properly functioning mufflers.

The Contractor shall be responsible for determining and utilizing any erosion and pollution control features or methods that may be necessary to comply with all federal, state, and local laws and regulations.

GP-33 SANITARY PROVISION

The Contractor shall provide and maintain sanitary accommodations for use by all employees and Subcontractors. Facilities shall comply with the requirements of the Louisiana State Board of Health and Hospitals and other authorities having jurisdiction. Committing public nuisance on the Project Site is prohibited.

GP-34 PAYMENT OF TAXES

The Contractor shall be responsible for all taxes and duties that maybe levied under existing State, Federal, and local laws during the completion of the Work. The Owner will presume that the amount of such taxes is included in the unit prices bid by the Contractor and will not provide additional reimbursement.

GP-35 RADIO AND TELEPHONES

The Contractor shall furnish and maintain radio and telephone equipment throughout the Contract Time which will allow communication between the Contractor and the Engineer or Resident Project Representative.

GP-36 NAVIGATION

All marine vessels shall comply with the following Federal Laws and Regulations:

- a. The International Navigational Rules Act of 1977 (Public Law 95-75, 91 Stat. 308, or 33 U.S.C. 1601-1608); and
- b. The Inland Navigation Rules Act of 1980 (Public Law 96-591, 94 Stat. 3415, 33 U.S.C. 2001-2038).

These rules can be found on the Internet at:

<http://www.navcen.uscg.gov/mwv/navrules/navrules.htm>. All marine vessels shall display the lights and day shapes required by Part C- Lights and Shapes of the Inland Navigation Rules. The location, type, color, and size of the lights and day shape shall be in accordance with Annex I - Positioning and Technical Details of Lights and Shapes. Any vessel engaged in dredging is considered a "Vessel restricted in her ability to maneuver" and shall display all the lights and shapes required in Rule 27, "Vessel Not Under Control."

GP-37 OBSTRUCTION TO NAVIGATION

The Contractor shall minimize all obstructions to navigation in compliance with pertinent U. S. Coast Guard regulations while conducting the Work. The Contractor shall promptly move any floating equipment or marine vessels which obstruct safe passage of other marine vessels. Upon completion of the Work, the Contractor shall remove all marine vessels and other floating equipment such as temporary ranges, buoys, piles, and other marks or objects that are not permanent features of the Work.

GP-38 MARINE VESSELS AND MARINE ACTIVITIES

All marine vessels operated by the Contractor shall possess a valid United States Coast Guard (USCG) inspection certificate and current American Bureau of Shipping (ABS) Classification. All officers and crew shall possess valid USCG licenses as required by USCG regulations. These certificates, classifications, and licenses shall be posted in a public area on board each vessel.

All marine vessels not subject to USCG certification or ABS Classification shall be inspected annually by a marine surveyor accredited by the National Association of Marine Surveyors (NAMS) or the Society of Accredited Marine Surveyors (SAMS). All inspections shall be documented using an appropriate report format. At a minimum, the inspections shall evaluate the structural integrity of the vessel and comply with the National Fire Protection Association Code No. 302- Pleasure and Commercial Motor Craft. The most recent inspection report shall be posted in a public area on board each vessel.

GP-39 RECORD KEEPING

The Contractor shall maintain orderly records of the Progress Schedule, Daily Progress Reports, Progress Meetings, correspondence, submittals, reproductions of original Contract Documents, Change Orders, Field Orders, certificates, additional drawings issued subsequent to the executed Contract, clarifications and interpretations of the Contract Documents by the Engineer, and other related documents at the Project Site until all of the Work is accepted by the Engineer.

GP-40 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in three (3) copies. Each certificate shall be certified by an authorized agent of the supplying company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date of shipment. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the testing date. The Contractor shall also certify that all materials and test reports conform to the requirements of the Contract. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if the material is tested and determined to be in nonconformance.

GP-41 SUBMITTALS

The Contractor shall review all Submittals for compliance with the requirements of the Contract prior to delivery to the Engineer. Each Submittal shall contain a signed statement by the Contractor that it complies with the Contract requirements with any exceptions explicitly listed. The Contractor shall comply with these requirements for Submittals from Subcontractors, manufacturers, and suppliers.

All Submittals shall include sufficient data to demonstrate that the requirements of the Contract are met or exceeded. All submittals shall be legible and marked with the project title and clearly identify the item submitted. Each submittal package shall include an itemized list of the items submitted.

All Submittals will be reviewed within fourteen (14) days after being received by the Engineer. The Contractor shall allow the Engineer sufficient time for review, corrections, and resubmission of all Submittals prior to beginning the associated Work. The Contract Time shall not be extended based on incorrect or incomplete Submittals.

GP-42 CLAIMS FOR EXTRA COST

The Contractor is expected to complete the Work according to the Contract Price specified in the Bid Documents. If the Contractor deems additional compensation is due for work, materials, delays or other additional costs/or expenses not covered in the Contract or not ordered as extra work, the Contractor shall give the Engineer written notice thereof within fourteen (14) calendar days after the receipt of such instructions and, in any event, before commencing the procedure. The Contractor shall justify the claim for extra cost by providing supporting data and calculations. The Engineer shall determine whether the Contractor is entitled to be compensated for such extra cost and shall make any required adjustments of the Contract in accordance with GP-43. If no written claim is made within this fourteen (14) calendar-day period, the Contractor will be deemed to have waived any claim for extra cost for such work.

Claim for damages or delays of the Work shall not be made by the Contractor for a relocation of the construction operation or portions thereof to other locations within the geographical scope of the project, when in the opinion of the Engineer, such relocation is necessary for the most effective prosecution of the Work and may be accomplished without undue hardship.

GP-43 ALTERATION OF THE CONTRACT AND COMPENSATION

Using Change Orders, Field Orders, or Written Amendments, the Owner may order extra work or make changes by altering the details of construction, add to or deduct from the Work. The requirements and stipulations of these documents shall be binding on the Owner and Contractor throughout the remainder of the Contract. Any claim for an extension of Contract Time caused thereby shall be adjusted at the time of ordering such change.

The value of any such extra work or change shall be determined in one or more of the following ways and in the following priority:

- a. By application of the unit prices in the Contract to the quantities of the items involved or subsequently agreed upon; or
- b. By mutual acceptance between the Owner and Contractor of a lump sum.

If none of the above methods is agreed upon, the Contractor, provided he is so ordered by the Owner in writing, shall proceed with the Work on a "force account" basis. In such a case, the Contractor shall keep and preserve in such form as the Engineer may direct, a correct itemized account of the direct cost of labor, materials, equipment, together with vouchers bearing written certification by the Contractor. In any case, the Engineer shall certify to the amount, including an allowance of fifteen percent (15%) for jobsite and home office overhead indirect expenses and profit due to the Contractor. Where such change involves a subcontractor, an allowance of fifteen percent (15%) for overhead and profit shall be due the subcontractor and an allowance of ten percent (10%) shall be due the Contractor. Pending final determination of value, payments on account of changes shall be made on the Engineer's estimate and as approved in an executed Change Order.

If the Contractor is prevented from completing the Work according to the Contract Price due to the Owner, the Contractor may be entitled to any reasonable and necessary addition of cost as determined by the Engineer. Neither the Owner nor the Contractor shall be entitled to any damages arising from events or occurrences which are beyond their control, including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, acts of war, and other like matters. The provisions of this section exclude recovery for damages caused by the Contractor and compensation for additional professional services by either party.

GP-44 EXTENSION OF CONTRACT TIME

The Contractor is expected to complete the Work within the Contract Time specified in the Bid Documents. A legitimate increase of the Contract time may be requested by the Contractor throughout the course of the Work. This Claim must be submitted to the Engineer in writing within fourteen (14) days of the event which caused the time delay to the Contractor. If an extension of Contract Time involves an increase in Contract Price, both claims shall be submitted together. The Contractor shall justify the increase of the Contract Time in the Claim using supporting data and calculations. The Engineer may deny the claim if there is insufficient information to make a determination. If the Claim is approved, the Engineer shall issue a Change Order within thirty (30) days of the Claim. The Contract Time shall be increased on a basis that is commensurate with the amount of additional or remaining Work. For example, the Contract Time can be increased where the number of actual adverse weather days exceeds the number of days estimated in the Contract.

GP-45 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE OR CONVENIENCE

45.1 TERMINATION FOR CAUSE

The Owner shall submit a written notice to the Contractor and Surety which justifies placement of the Contractor in default if:

- a. The Work is not begun within the time specified in the Notice to Proceed; or
- b. The Work is performed with insufficient workmen, equipment, or materials to assure prompt completion; or
- c. The Contractor performs unsuitable, neglected or rejected work, refuses to remove materials; or
- d. The Work is discontinued; or
- e. The Work is not completed within the Contract Time or time extension; or
- f. Work is not resumed within a reasonable time after receiving a notice to continue; or
- g. The Contractor becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency; or
- h. The Contractor allows any final judgment to stand unsatisfied for a period of ten (10) days; or
- i. The Contractor makes an assignment for the benefit of creditors; or
- j. The Work is not performed in an acceptable manner.

If the Contractor or Surety does not remedy all conditions cited in the written notice within ten (10) days after receiving such a notice, the Contractor will be in default and the Owner shall remove the Contractor from the Work. If the Contractor is placed into default, the Owner may obtain the necessary labor, materials, and equipment or enter into a new Contract in order to complete the Work. All costs incurred by the Owner for completing the Work under the new Contract will be deducted from the payment due the Contractor. If the expense exceeds the sum payable under the Contract, the Contractor and Surety shall be liable to pay the Owner the difference.

45.2 TERMINATION FOR CONVENIENCE

Owner may, at any time, terminate this Contract or any portion thereof, for Owner's convenience, upon providing written notice to the Contractor. In such case, Contractor shall be paid for all work completed through the date notice was provided (less payments already received) and reasonable demobilization and restocking charges incurred and reasonable overhead and profit based upon industry standards on the work performed. In no event shall the Contractor be entitled to payment of overhead and profit on work not performed. In the event it is determined that the Contractor was wrongfully terminated for cause, pursuant to Section GP 45.1 above, such termination shall be automatically converted to a termination for convenience under and payment made as provided under this Section.

GP-46 TEMPORARY SUSPENSION OF WORK

The Engineer shall have the authority to temporarily suspend the Work in whole or in part. A Field Order shall be issued to the Contractor for any of the Work that is suspended for periods exceeding one (1) calendar day. The Field Order shall include the specific reasons and details for the suspension. The Contract Time shall not be extended if the Work is suspended due to failure by the Contractor to comply with a Field Order or with the Plans and Specifications. If the Work is suspended in the interest of the Owner, the Contractor shall make due allowances for the lost time.

GP-47 NON-CONFORMING AND UNAUTHORIZED WORK

Work not conforming to the Plans, Specifications, Field Orders, or Change Orders shall not be accepted for payment. Unacceptable or unauthorized work shall be removed and replaced in an acceptable manner at the expense of the Contractor in order to obtain final acceptance of the Work.

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Owner after seven (7) calendar days written notice to the Contractor, may correct such deficiencies itself or by use of other contractors without prejudice to any other remedy it may have, and may deduct the cost thereof from the payment then or thereafter due to the Contractor.

GP-48 CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

The Contractor may terminate the Contract or Work and recover payment from the Owner for labor and materials if the Work is stopped through no act or fault of the Contractor for more than three (3) months. For example, such an occurrence could be caused by a court order or other public authority. In any case, the Contractor shall submit a written notice to the Engineer at the beginning of the occurrence, and a written Claim to the Owner at the end of the occurrence.

GP-49 **BREACH OF CONTRACT**

The Owner shall submit a written Claim to the Contractor regarding any breach of the Contract. The Contractor must provide a written response to the Owner regarding the breach of Contract within ten (10) days after the Claim. This response must provide either an admission to the Claim or a detailed denial based on relevant data and calculations. The failure of the Contractor to provide a proper response within ten (10) days shall result in justification of the Claim by default.

GP-50 **NO WAIVER OF LEGAL RIGHTS**

The Owner shall not be prevented from recovering costs from the Contractor, Surety, or both due to failure of the Contractor to fulfill all of the obligations under the Contract. If a waiver is provided to the Contractor for a breach of Contract by the Owner, it shall not apply to any other breach of Contract. Final acceptance of the Work shall not prevent the Owner from correcting any measurement, estimate, or certificate. The Contractor shall be liable to the Owner without prejudice to the terms of the Contract or any warranty for latent defects, fraud, or gross negligence.

GP-51 **LIABILITY FOR DAMAGES AND INJURIES**

To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer, and their officers, employees, representatives, and/or agents from all suits, actions, claims, costs, losses, demands, and judgments (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) brought because of injuries or damage sustained by an person or property due to the operations of Contractor; due to negligence in safeguarding the Work, or use of unacceptable materials in constructing the Work.; or any negligent act, omission, or misconduct of the Contractor; or claims or amounts recovered under the Workmen's Compensation Act or other law, ordinance, order, or decree; any money due the Contractor as considered necessary by the Owner for such purpose may be retained for use of the State or in case no money is due, the performance and payment bond may be held until such suits, actions, claims for injuries or damages have been settled and suitable evidence to that effect furnished to the Owner; except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that adequate Workman's Compensation, Public Liability, and Property Damage Insurance are in effect.

The indemnification obligations of the Contractor shall not extend to the liability of the Owner, Engineer, and their affiliates arising out of the preparation or approval of the Plans, Specifications, maps, opinions, reports, surveys, or Change Orders, or for providing directions or instructions which are the primary cause of the injury or damage.

Should the Owner or Contractor suffer from any injury or damage due to an error, omission, or act of the other party or their legally liable affiliates, a written Claim shall be submitted to the other party within ten (10) days. The Claim shall provide all details regarding the injury or damage, the results of any investigations, and the action to be taken to prevent any reoccurrence.

GP-52 LIABILITY FOR LOSSES BY ACTS OF THE GOVERNMENT

The Owner shall not be liable for any loss or damage suffered by the Contractor arising out of a cessation of Work under this Contract due to any act or order of any local, state, or federal government agency. If this cessation occurs, the Contractor may request an extension of the Contract Time according to the provisions in GP-44 "Extension of Contract Time".

GP-53 SUBSTANTIAL COMPLETION

Upon notice from the Contractor that it believes the project has reached substantial completion, and before final acceptance, the Engineer will make an inspection of the Work. "Substantial Completion" is defined as the date on which the Work is complete in accordance with the Contract Documents in order that the Owner can occupy and use the project for its intended use. The date of Substantial Completion shall be specified in the Notice of Acceptance.

If the Owner or its representative determines the Project is substantially complete, the Owner shall issue a Notice of Acceptance identifying the date the Project reached Substantial Completion and attach a punch list identifying the remaining items that must be completed before final payment. The Owner will then file an official Notice of Acceptance with the Clerk of Court in the Parish where the work is performed and will forward one copy of the recorded acceptance to the Contractor and Engineer. If the inspection discloses any work as being unsatisfactory or incomplete and such work generates a formal punch list, the Engineer will give the Contractor instructions for correction of same, and the Contractor shall immediately comply with such instructions. Upon satisfactory completion of the corrections, when a "Punch List" is generated, the Engineer shall prepare a "Recommendation of Acceptance" incorporating the punch list and submit to the Owner. Upon approval of the Recommendation of Acceptance, the Owner may issue a Notice of Acceptance of the Contract which shall establish the date of Substantial Completion.

Any punch list generated by the Engineer shall be accompanied by a cost estimate to correct the particular items of work the Engineer has developed. The cost estimate shall be developed based on mobilization, labor, material, and equipment costs of correcting each punch list item and shall be retained from monies owed to the Contractor, above and beyond the standard retainage. The Engineer shall retain his working papers used to determine the punch list items cost estimates should the matter be disputed later. The Owner shall not withhold from payment more than the value of the punch list. Punch list items completed shall be paid upon the expiration of the forty-five (45) day lien period. After that payment, none of the remaining funds shall be due the Contractor until all punch list items are completed and are accepted by the Engineer.

If the dollar value of the punch list exceeds the amount of funds, less retainage amount, in the remaining balance of the Contract, the Project shall not be accepted as Substantially Complete. If the funds remaining are less than required to complete the punch list work, the Contractor shall pay the difference. The provisions listed above shall not be subject to waiver.

Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work/project as provided in the Notice of Acceptance, unless otherwise agreed to in writing by the Owner and Contractor. In the instance where the Owner has accepted the Work/project as substantially complete and issued a Notice of Acceptance, and the Contractor must remain on the premises to complete the "Punch List" or for whatever reason, the Contractor shall maintain Commercial General Liability insurance, Auto Liability insurance and Worker's Compensation insurance as set forth herein until the expiration of the forty-five (45) day lien period or upon the completion of the work/project, whichever is later. Builder's Risk insurance, if applicable, may be cancelled only with the written permission of the Owner or the Owner's representative at Substantial Completion.

If the punch list is not completed within forty-five (45) days, through no fault of Owner or Engineer, the Owner may, but is not required, to place the Contractor in default. Thereafter, the Owner shall notify the Surety. If the Surety has not completed the punch list within forty-five days of receipt of notification, the Owner may, but is not required to, complete the remaining punch list items. Any costs incurred shall be paid for first out of any remaining Contract funds. If the costs incurred exceed the remaining Contract funds, the Contractor and its Surety shall be liable for such costs.

Upon completion of the punch list, Contractor shall request Final Inspection.

GP-54 FINAL INSPECTION AND ACCEPTANCE

Whenever the work provided for, or contemplated by the contract, have been satisfactorily completed, all punch list items completed and the final cleaning up is performed, the Engineer shall be notified in writing that said work is completed and ready for final inspection. The Engineer shall, unless otherwise provided, make the final inspection within a reasonable length of time after the receipt of such notification.

If all construction provided for in the contract is found completed to the Engineer's satisfaction, that inspection shall constitute the final inspection and the Engineer will make recommendation to the Owner for final acceptance and notify the Contractor in writing of this recommendation of acceptance.

GP-55 AS-BUILT DRAWINGS

The Contractor shall submit all originals and copies of the As-Built Drawings to the Engineer for review and acceptance in accordance with the Special Provisions. The As-Built Drawings shall provide complete data for quantities, dimensions, specified performance and design criteria, and similar items which clearly represent the services, materials, and equipment the Contractor has provided. All revision sheets shall be clearly stamped with the words "As-Built".

GP-56 **COMPLETION OF CONTRACT**

Notwithstanding any other provision of this Contract and all applicable and necessary time delays under Louisiana law, completion of the Contract requires all of the Work to be complete, inspected by the Engineer, accepted by the Owner as recommended by the Engineer, and after final payment is made. After the Contract is complete, the Contractor will then be released from further obligation except as set forth in the Contract Bond and Contractor's Guarantee.

GP-57 **CONTRACTOR'S GUARANTEE**

The Contractor is obligated to provide a written guarantee to the Owner that all of the Work conforms to the Contract Documents. The Work shall be guaranteed to survive for a minimum period of 1 year after final acceptance, unless otherwise specified in the Technical Specifications.

- a. The guarantee shall include:
 - 57.a.1 A written warranty by the manufacturer for each piece of installed project equipment or apparatus furnished under the Contract.
 - 57.a.2 Any necessary repair or replacement of the warranted equipment during the guarantee period at no cost to the Owner.
 - 57.a.3 Satisfactory operation of installed equipment including, but not limited to, any mechanical and electrical systems furnished and constructed under the Contract during the guarantee period. The Contractor shall repair all equipment which fails due to defective materials or faulty workmanship during the guarantee period. The Contractor shall also be liable for all other ancillary expenses incurred by the Owner due to the failure.

- b. The guarantee shall exclude defects or damage caused by:
 - 57.b.1 Abuse or improper modification, maintenance, or operation by anyone other than the Contractor; or
 - 57.b.2 Wear and tear under normal usage.

- c. This obligation by the Contractor shall be absolute. The following actions will not constitute acceptance of non-conformance Work or release the Contractor from obligation to furnish the Work in accordance with the Contract Documents:
 - 57.c.1 Observations by the Owner or Engineer; or
 - 57.c.2 Recommendations by the Engineer or payment by the Owner; or
 - 57.c.3 Use of the Work by the Owner; or

- 57.c.4 Issuance of a notice of acceptance by the Owner pursuant to the provisions of GP-53, or failure to do so; or
- 57.c.5 Any inspection, test, or approval by others; or
- 57.c.6 Any correction to non-conforming work by the Owner.

GP-58 DISPUTE RESOLUTION

The parties shall use their best efforts to resolve all disputes in an amicable fashion. Prior to filing suit by either party with respect to any claims, or disputes arising between the parties, the disputes shall be submitted first to non-binding mediation. The mediation shall be conducted in accordance with the Construction Industry Mediation Rules of the American Arbitration Association. If the parties cannot agree to a private mediator, then the mediator shall be selected by the American Arbitration Association, upon the filing of a demand for mediation.

If the dispute is not resolved by mediation within 60 days from the request for mediation, then either party may institute legal proceedings. Any litigation involving the Owner and arising under or related to the Contract or the bidding or award thereof shall be instituted exclusively in the 19th Judicial District Court in and for the Parish of East Baton Rouge, State of Louisiana.

GP-59 PAYMENT

The Owner hereby agrees to pay to the Contractor as full compensation for all work performed under the contract, and/or supplemental agreements thereto, the monetary value of the actual quantities in the completed work according to the schedule of unit prices and/or lump sum prices set forth in attached bid proposal and/or duly authorized supplements thereto, and made a part of the Contract.

Partial payments under the Contract shall be made at the request of the Contractor not more than once each month, based upon partial estimates agreed to by the Contractor and Engineer and shall be furnished to the Engineer and approved by the Engineer prior to transmittal to the Owner for approval and payment.

The partial estimates will be approximately stated, and all partial estimates and payments shall be subject to corrections in the estimate rendered following the discovery of any error in any previous estimates.

The payment of the partial estimate shall be taken as verification that the work has been performed and that its quality is satisfactory, however it will in no way serve as a release to the Contractor for the responsibility of any portions thereof. The work and any particulars relating thereto shall be subject to revision and adjustment by the Engineer and/or the Owner at any time prior to final payment, regardless of any previous action taken.

There shall be reserved from the payments provided for the Contract ten percent (10%) for contracts less than \$500,000 or five percent (5%) for contracts of \$500,000 or more, of the estimates submitted, said sum to constitute a trust fund for the protection of and payment to any person or persons, mechanic, subcontractor or materialmen who shall perform any labor upon such contract, or the doing of said work, and all persons who shall supply such person or persons or subcontractors with provisions and supplies for the carrying on of such work, and shall be withheld for a minimum of forty-five (45) calendar days after final acceptance of the completed contract.

After the expiration of the forty-five (45) calendar day period, the reserve in excess of a sum sufficient to discharge the claims of materialmen and laborers who have filed their claims, together with a sum sufficient to defray the cost of such action and to pay attorneys' fees, shall be paid to the Contractor.

The Contractor shall be responsible for obtaining and furnishing a clear lien and privilege certificate to the Owner at the expiration of the retainage period, and prior to payment of any reserve withheld.

GP-60 PAYMENTS WITHHELD

In addition to the percentage provided for in Section GP-58 of these General Provisions and in accordance with any other provision of this Contract, the Owner may withhold such amounts from any payment as may be necessary to protect himself from loss on account of:

- a) Defective work not remedied;
- b) Claims filed or reasonable evidence indicating probable filing of claims;
- c) Failure of the Contractor to make payments properly to subcontractors or for material or labor;
- d) Reasonable evidence that the Work will not be completed within the Contract time and that the unpaid balance would not be adequate to cover damages for the anticipated delay;
- e) A reasonable doubt that the contract can be completed within the time period remaining under the contract;
- f) Damage to another contractor;
- g) Failure to submit required reports; or
- h) Modifications of the contract which necessitate the execution of change orders prior to payment of funds.

Furthermore, nothing contained in this Section shall be deemed to limit the right of the Owner to withhold liquidated damages, as stated in the Instructions to Bidders and as permitted under Section SP-7 of the Special Provisions, from any amounts which may be due and owing the Contractor for work performed under the contract.

GP-61 LIENS

Neither the final payment nor any part of the retained percentage shall come due until the Contractor shall deliver to the Owner a complete release of all liens arising out of this contract, or receipts in full in lieu thereof, and, if required by the Owner, an affidavit that so far as he has knowledge or information, the releases and receipts include all labor and material for which a lien could be filed; but if any subcontractor refuses to furnish a release or receipt in full, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against any lien, construction cost, or attorney's fees.

GP-62 EQUAL EMPLOYMENT OPPORTUNITY

The State of Louisiana is an equal opportunity employer, and looks to its Contractor, subcontractors, vendors and suppliers to take affirmative action to effect this commitment in its operations.

By submitting the bid proposal and executing the Contract, the Contractor agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veterans Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, and the Age Act of 1975, and the Contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

The Contractor agrees not to discriminate in its employment practices, and will render services the Contract, without regard to their race, age, color, religion, sex, national origin, veteran status, political affiliation or disabilities. Any act of discrimination committed by the Contractor, or failure to comply with these statutory obligations when applicable, shall be grounds for termination of the Contract.

GP-63 ANTI-KICKBACK CLAUSE

The Contractor agrees to adhere to the mandate dictated by the Copeland "Anti-Kickback" Act which provides that each contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the completion of the work, to give up any part of the compensation to which he is otherwise entitled.

GP-64 SUSPENSION/DEBARMENT

Contractor certifies, by signing and submitting any bid, that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in OMB Circular A-133. A list of parties who have been suspended or debarred can be viewed via the internet at www.epls.gov.

Contractor agrees to secure from any contractor(s) and subcontractor(s) for the captioned project, certification that such contractor(s) and subcontractor(s) are not suspended, debarred or declared ineligible from entering into contracts with any department or agency of the Federal Government or of the State of Louisiana, or in receipt of a notice of proposed debarment or suspension.

Contractor shall provide immediate notice to Owner in the event of it or its contractor(s) or any subcontractor(s) being suspended, debarred or declared ineligible by any department or agency of the Federal Government or of the State of Louisiana, or upon receipt of a notice of a proposed debarment or suspension, either prior to or after execution of this Contract.

Upon receipt of notice of suspension, debarment, or declaration that Contractor or its contractor(s) or any subcontractor(s) is/are ineligible to enter into contracts with any department or agency of the Federal Government or of the State of Louisiana, either prior to or after execution of this Contract, Owner reserves the right to review cause for said debarment, suspension, or declaration of ineligibility, and to terminate this Contract pursuant to the terms of GP-45 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE OR CONVENIENCE, or take such other action it deems appropriate under this Contract.

END OF PART I - GENERAL PROVISIONS

PART II - SPECIAL PROVISIONS

SP-1 Location Of Work

The Work site is located along the Freshwater Bayou (FWB) Canal in Vermilion Parish, between the FWB Lock and the Gulf Intracoastal Water Way (GIWW). The FWB Canal provides direct access from the GIWW to the Gulf of Mexico through a lock structure. The Project Site is accessible from the public boat launch at Intracoastal City, the GIWW, and thru the FWB lock. See [Appendix E](#) for directions to the boat launch at Intracoastal City.

SP-2 Work To Be Done

The Contractor shall provide all labor, materials, and equipment necessary to perform the Work. The Work shall include, but not be limited to, mobilization and demobilization at or to the Project Site, delivery and placement of rip-rap, and installation of settlement plates. The Work shall be performed in accordance with these Specifications and in conformity to lines, grades, and elevations shown on the Plans or as directed by Engineer. Quantity calculations, layouts, shop drawings, and construction sequencing of these items shall be provided in the Work Plan. The major tasks associated with the Work are described as follows:

2.1 Description of Bid Variations

2.1.1 Base Bid

The Base Bid includes the construction of 27,116-linear feet of rock dike along the NE, NW #1, and SW reaches, as labeled and shown on the plans.

2.1.2 Additive Alternate #1

Additive Alternate #1 includes the construction of an additional 8,876-linear feet of rock dike along the NW #2 and SE #1 and 2 reaches, as labeled and shown on the plans.

2.1.3 Additive Alternate #2

Additive Alternate #2 which results in the addition of approximately 26,000-tons of rock, raises the crown elevation to 4.0-feet in the NE, NW #1 and 2, and SE #1 and 2 reaches.

2.1.4 Additive Alternate #3

Additive Alternate #3 which results in the addition of approximately 30,000-tons of rock, flattens the protected side slope to 4H:1V on the NE and NW #1 and 2 reaches.

2.2 Surveying

Prior to construction, the survey transects established in the design survey shall be resurveyed for bathymetry and topography. Also, the Contractor shall perform a magnetometer survey of the flotation channels (if they will be required), pipelines, and along the rock dike and spoil area. Settlement plates shall be surveyed during installation and throughout construction. After construction is complete, the Contractor shall perform an As-Built Survey, which shall be reviewed by the Engineer for acceptance of the Work.

2.3 Delivery and Placement of Rip-Rap

A semi-continuous rock dike shall be constructed along Freshwater Bayou Canal in accordance with the Plans and Specifications. In order to coordinate a subsequent marsh creation project adjacent to the SW Reach Dike, work shall begin and the Contractor shall concentrate their efforts on the SW Reach Dike until it has been completed and accepted.

2.4 Settlement Plates

Settlement plates shall be installed along the centerline of the rock dikes as shown on the Plans.

2.5 Use of Equipment

The equipment used for the Work shall be operated within the boundaries of the Project Construction Limits and away from existing vegetated wetlands or any other sensitive areas. The Contractor shall be responsible for returning all disturbed wetlands to pre-existing conditions at no expense to the Owner. The use of Flotation Channels on this project is optional.

SP-3 Bid Items, Contract Dates, And Deliverables

| MILESTONE | LOCATION OR RECIPIENT | DATE DUE |
|---|------------------------------------|--|
| Advertisement for Bids | Publications | As Advertised |
| Mandatory Pre-Bid Conference and Recommended Site Visit | Provided in Advertisement for Bids | Provided in Advertisement for Bids |
| Questions on Bid Documents | Deliver to CPRA | As Stated in Instructions to Bidders |
| Effective Date of Contract | Contractor and Owner | As Stated in Contract Between Owner and Contractor |
| Start of Contract Time | Contractor and Owner | As Stated in Notice to Proceed |
| Work Plan | Submit to Engineer | At Least 14-days Prior to Pre-Construction Conference |
| Progress Schedule | Submit to Engineer | At Least 14-Days Prior to Starting Construction, Monthly Thereafter |
| Pre-Construction Conference | Contractor and Engineer | As Determined by the Engineer After the Notice to Proceed is Issued |
| Pre-Construction Survey Drawings | Submit to Engineer | As Determined by the Engineer After the Pre-Construction Conference and Prior to Construction. |
| Progress Meetings and Reports | At Project Site | Bi-Weekly or as Determined at the Pre-Construction Conference (See GP-13, GP-39) |
| As-Built Drawings | Deliver to Engineer | Prior to Final Inspection as Scheduled by the Engineer |
| End of Contract Time After Notice to Proceed | At Project Site | Base Bid: 240-Calendar Days Additive Alternate No. 1: Additional 40-Calendar Days Additive Alternate No. 2: Additional 20-Calendar Days Additive Alternate No. 3: Additional 20-Calendar Days |
| Daily Progress Reports | Resident Project Representative | By Noon Daily |

SP-4 Deliverables

4.1 Prior to Construction

- 4.1.1 The Contractor shall submit the following documents to the Engineer prior to the Pre-Construction Conference specified in GP-14:
 - 4.1.1.1 Work Plan and Barge Displacement Table as specified in GP-8 and SP-13;
 - 4.1.1.2 Progress Schedule as specified in GP-9;
 - 4.1.1.3 Copy of typical Daily Progress Report as specified in GP-10.

4.1.1.4 Hurricane and Severe Storm Plan as specified in GP-11;

4.1.1.5 Health and Safety Plan as specified in GP-12.

4.1.2 The Contractor shall provide the following information to the Engineer at the Pre-Construction Conference specified in GP-14:

4.1.2.1 Updates to all plans and schedules based on comments from the Engineer;

4.1.2.2 Potential construction corridors (if needed, other than from what is provided) which may be approved on an as needed basis.

4.2 During Construction

The Contractor shall deliver copies of the following documents upon request by the Engineer, or as specified in these provisions:

4.2.1 The results of all surveys and calculations as specified in TS-201;

4.2.2 Progress Schedule as specified in GP-9;

4.2.3 Daily Progress Reports as specified in GP-10;

4.2.4 Copies of all inspection reports;

4.2.5 All Change Orders, Field Orders, Claims, Clarifications, and Amendments;

4.2.6 Results of any materials testing.

4.3 Administrative Records

4.3.1 Notice of Intent to Dredge

If the Contractor chooses to construct flotation channels, the Contractor shall notify the U.S. Coast Guard, Sector New Orleans Command Center, of his intended operations to dredge, and request that it be published in the Local Notice to Mariners at least 30-days prior to commencement of Work on this Contract, at the address below. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least seven (7) days prior to the commencement of this dredging operation. A copy of the Department of the Army Permit and drawings shall be provided to the U.S. Coast Guard. A copy of the notification shall be provided to the Owner and Engineer.

U.S. Coast Guard
Sector New Orleans Command Center
201 Hammond Hwy
Metairie, LA 70005
Telephone: 504-846-5923

4.3.2 Relocation of Navigational Aids

Temporary removal of any navigation aids located within or near the areas required to be dredged or filled and material stockpile areas shall be coordinated by Contractor with the U.S. Coast Guard prior to removal. The Contractor shall not otherwise remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation. The Contractor shall notify the Eighth U.S. Coast Guard District, New Orleans, Louisiana, in writing, with a copy to the Owner and Engineer, seven (7) days in advance of the time he plans to dredge or Work adjacent to any aids which require relocation to facilitate the Work. The Contractor shall contact the U.S. Coast Guard for information concerning the position to which the aids will be relocated.

4.3.3 Dredging Aids

The Contractor shall obtain approval for all dredging aids, including but not limited to temporary navigation aids, warning signs, buoys, and lights, he requires to conduct the Work specified in this Contract. The Contractor shall obtain a temporary permit from the U.S. Coast Guard for all buoys or dredging aid markers to be placed in the water prior to installation. The permit application shall state the position, color, and dates to be installed and removed for all dredging aid markers and be submitted to the U.S. Coast Guard. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids. Copies of the application and permit shall be submitted to the Owner and Engineer seven (7) days prior to commencement of dredging operations.

4.3.4 Notification of Discovery of Historical or Cultural Sites

If during construction activities the Contractor observes items that may have prehistoric, historical, archeological, or cultural value, the Contractor shall immediately cease all activities that may result in the destruction of these resources and shall prevent his employees from trespassing on, removing, or otherwise damaging such resources. Such observations shall be reported immediately to the Owner and Engineer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special dispositions of the finds should be made. The Contractor shall report any observed unauthorized removal or destruction of such resources by any person to the Owner and Engineer so the appropriate State of Louisiana authorities can be notified. The Contractor shall not resume Work at the site in question until State authorities have rendered judgment concerning the artifacts of interest.

4.4 Post Construction

The Contractor shall contact the Engineer by phone, a minimum of five (5) working days prior to the anticipated completion of the Work in order to schedule the final inspection and gain Acceptance by the Engineer. The following documents shall also be submitted to the Engineer:

4.4.1 Copies of all delivery slips, which shall include the source of construction materials, date of delivery, exact quantity, and size of materials delivered with each shipment to the Project Site;

4.4.2 As-Built Drawings as specified in TS-201.

4.5 Summary of Project Submittals

The following table is a summary of submittals required of the Contractor as part of this section and other sections of these Specifications:

| SPECIFICATION | DELIVERABLE | SUBMITTAL |
|----------------------|--------------------------------------|--------------------------------------|
| GP-9 | Progress/Work Schedule | Prior to Pre-Construction Conference |
| GP-10 | Daily Progress Reports | As Directed By the Engineer |
| GP-19 | Names of All Subcontractors | Prior to Awarding Subcontracts |
| GP-54 | Written Notice of Completion of Work | Upon Completion of Work |

SP-5 Contact Information

Prior to Bid opening date, the Contractor shall send all questions and requests for clarification or interpretation of the Bid Documents in writing to the attention of Renee McKee of the Coastal Protection and Restoration Authority. The address and contact information is as follows:

Coastal Protection and Restoration Authority
450 Laurel Street, Suite 1501
Baton Rouge, LA 70801
Attn: Renee McKee
Tel: (225) 342-0811 / Fax: (225) 342-4674
E-Mail: cpra.bidding@la.gov

After execution of the Contract between Owner and Contractor, the successful Contractor shall contact the Engineers concerning bid documentation or questions. The addresses and contact information for the Engineers are listed as follows:

| | |
|--|--|
| Project Engineer Larry Cramer, PE, PLS 148-B Easy Street Lafayette, Louisiana 70506 Tel: (337) 232-0777 Fax: (337) 232-0851 | Field Construction Manager Melvin Guidry 635 Cajundome Blvd. Lafayette, Louisiana 70506 Tel: (337) 482-0682 Fax: (337) 482-0685 |
|--|--|

The Owner and Engineer shall deliver all written Claims, Notices, Submittals, Plans, and other documents to the Contractor at the address indicated on the Bid.

SP-6 Failure To Complete On Time

For each day the Work remains incomplete beyond the Contract Time, as specified in SP-3, or Extension of Contract Time, as specified in GP-44, the sum of one thousand four hundred fifty dollars (\$1,450) per calendar day will be deducted from any money due to the Contractor as liquidated damages. The Contractor and Surety shall be liable for any liquidated damages that are in excess of the amount due the Contractor.

SP-7 Transportation

The Contractor shall provide a safe and reasonable means of transportation to and from the marine access structure, staging area, and Project Site for the Engineer and the federal sponsor throughout the Work.

The schedule and pickup location shall be arranged by the Engineer and the Contractor prior to mobilization. Upon request, overnight room and board shall be provided to these personnel by the Contractor if adequate facilities are available. The Contractor shall provide a boat for the exclusive use of the Engineer and/or Resident Project Representative to tour the Project Site during the Work. The boat shall have the following features:

- 7.1 An enclosed cabin space;
- 7.2 Capable of maintaining 25 knots (29 mph);
- 7.3 Six (6) passenger capacity;
- 7.4 Coast Guard certified;
- 7.5 Operable marine radio;
- 7.6 All safety equipment required by the Coast Guard for the size and type of that boat;
- 7.7 Draft of two feet (2') or less.

The Contractor shall supply the fuel and maintain the boat. All mechanical malfunctions of the boat shall be repaired within twelve (12) hours. In the event that the Contractor refuses, neglects, or delays compliance with the requirements of this provision, the Owner may obtain and use other necessary boats at the expense of the Contractor. The costs associated with providing the boats shall be included in the lump sum price for Bid Item No. 1, "Mobilization and Demobilization".

SP-8 Office For Owner

The Contractor shall provide an office for the Engineer and Resident Project Representative at the Project Site if requested by the Engineer. This office shall be for the sole use of the Engineer or Resident Project Representative, suitably sized, and provided with lighting, heat, and air conditioning. The office furnishings shall include a work table, drafting table, stool, and two chairs.

In the event that the Contractor refuses, neglects, or delays compliance with the requirements of this provision, the Owner may obtain and use another necessary office at the expense of the Contractor. The cost for providing and furnishing this office shall be included in the contract lump sum price for Bid Item No. 1, "Mobilization and Demobilization".

SP-9 Landowner And Pipeline Requirements

The Owner has obtained all temporary easement, servitude, and right-of-way agreements required for construction of the project. The agreements executed with landowners for the Work at the site contain special requirements pertaining to access routes and insurance. A land rights memorandum is included in **Appendix C**. The Contractor shall abide by the stipulations set forth by the respective landowners (Grantors):

| ADJACENT LANDOWNERS | |
|---|---|
| VERMILION CORPORATION c/o W. P. Judge Edwards III 115 Tivoli Street, Abbeville, LA 70510 Tel: (337) 893-0268 Cell: (337) 652-7469 Email: bayou@connections-lct.com | RAINBOW GUN CLUB c/o Richard Smith P. O. Box 176 Gueydan, LA 70542 Tel: (337) 536-9210 |
| EXXON MOBIL CORPORATION c/o Peggy Carr P. O. Box 4610 / 396 West Greens Road Houston, TX 77067 Tel: (713) 431-1486 | |
| PIPELINE CONTACTS | |
| EL PASO / TENNESSEE GAS c/o Jeff Fawcett Tel: (337) 738-6124 Email: jeff.fawcett@elpaso.com | UNOCAL / CHEVRON c/o Danny Trahan Tel: (337) 898-3038 Cell: (337) 523-4651 |
| TRANSCO / WILLIAMS c/o Kevin Wilkerson Tel: (337) 457-3602 | ACADIAN GAS / EPCO c/o Buddy Pierce Tel: (337) 351-1439 |

The Contractor shall add the landowners listed above as additional insured. It is also agreed and understood that the Contractor will at all times indemnify and hold harmless all landowners from and against any and all claims, demands, causes of action, judgments, liabilities, and expense of every nature, including attorney's fees, by reason of personal injury, death (including but not limited to injuries to and death of employees of the landowners and the Contractor's employees) or damage to property, (including environmental) which arises out of, results from, or is in any manner related to, directly or indirectly, any operations or acts hereunder, or to the exercise of your rights hereunder, or to your presence upon or use of the landowners' premises above referred to, or to the use or existence of your facilities on such premises. The indemnity provisions of this paragraph shall not apply if any such injury, death, damage, liability claim, or cause of action is caused by the negligence of the landowners, their employees, agents, or representatives.

The Contractor shall notify all pipeline companies at least seventy-two (72) hours in advance of any construction work. All pipelines located within one hundred fifty feet (150') of the dike alignments shall be probed and their locations marked prior and throughout the duration of construction activities.

SP-10 Oyster Lease Restrictions

There are no known existing oyster leases near or within the boundaries of the Project Site. Therefore, no oyster lease restrictions are provided for performing the Work within the boundaries of the Project Site.

SP-11 General Provision Revisions

This project is not subject to the Davis-Bacon Act of 1931; therefore, omit Paragraph 4 of GP-4: Laws, Regulations, Standards, Specifications, and Codes.

SP-12 Buy American Act Requirements

Pursuant to Section 307(b) of the Department of the Interior (DOI) and Related Agencies Appropriations Act, F.Y. 2000, Public Law 106 – 113, please be advised on the following:

In the case of any equipment or product that may be authorized to be purchased with financial assistance provided using funds made available in F.Y. 2000 and thereafter, it is the sense of the Congress that entities receiving the assistance should, in expending the assistance, purchase only American-Made equipment and products.

SP-13 Barge Displacement Table

The Contractor shall develop a barge displacement table for measurement and payment of rock and include it in the Work Plan. The table shall be approved by the Engineer. It shall show the name and/or number, dimensions, name of owner, and name of fabricator for each barge. The Contractor shall furnish a dimensioned drawing or sketch of each barge that is sufficient to verify the barge displacement table. The drawings shall show, at a minimum, the length, width, and depth of the barge, and dimensions of rake(s). All new or modified barges shall be field checked for current dimensions by the Contractor in the presence of the Engineer or the Inspector. Each table shall contain the freeboard of the barge in feet and tenths from zero (0) to the full depth of the barge and the corresponding gross displacement to the nearest ton.

Each barge shall be suitably marked with two (2) displacement gaging lines along each side of the barge. Each gaging line shall be painted perpendicular to the edge of the barge and be no less than four (4) inches wide and one (1) foot long on both the deck and side of the barge. Barges with rakes shall have the displacement gaging lines placed at each corner of the box section between the rakes. If a barge has a box end or ends, the gaging lines shall be placed approximately four (4) feet from the box end. The freeboard will be measured at the four (4) gaging locations and the displacement determined by the use of the “CELMV Standard Barge Tables” from the average of these measurements. The displacement shall be determined before and after the barge is unloaded and the difference between these values shall be the quantity delivered.

If the barge tables were originally furnished for fresh water and the barge displacement measurements are being taken in salt water, the Contractor has the option to obtain water samples and determine the densities or unit weights of the water. Water sampling shall be performed concurrently with the measurements of the barges, both when fully loaded and empty. Water samples shall be taken by the Contractor and witnessed by the Engineer. The water samples shall be taken in accordance with ASTM D-3370 (practice A- Grade Sample) at depths of four (4) and eight (8) feet in the area where measurements are made using a “Polypro” 2,000 ml. water sampler, or approved equal.

Densities shall be tested by a certified testing laboratory according to ASTM D-1429 (Method D- Hydrometer Method). After review and approval of the test results by the Engineer, the average of the densities will be used to adjust the measurements. A unit weight of 62.45-pounds/cubic foot is standard for fresh water. If the Contractor does not obtain water samples and densities, then no adjustments will be applied to the displacement table and rock quantities.

SP-14 Sequence of Construction

The Contractor shall begin construction operations on the SW Reach Dike in order to coordinate work between this project and the “Surplus Marsh Creation Near Freshwater Bayou Project”, State Project No. ME-25 SF. The Contractor shall begin at the north end of the dike (Point 21 shown in the Plans) and progress southward. Construction of the dike shall be complete and accepted prior to mobilizing to one of the other dikes. All other dikes may be sequenced as desired and coordinated with the Engineer or his Representative.

SP-15 Insurance and Bonds

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

15.1 MINIMUM SCOPE AND LIMITS OF INSURANCE

15.1.1 Worker’s Compensation

Worker’s Compensation insurance shall be in compliance with the Worker’s Compensation law of the State of Louisiana. Employers Liability is included with a minimum limit of \$500,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included and the Employers Liability limit increased to a minimum of \$1,000,000. A.M. Best’s insurance company rating requirement may be waived for Worker’s compensation coverage only.

15.1.2 Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

The aggregate loss limit must apply to each project. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.

COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

The required minimum combined single limit amount of insurance shall be as provided below:

| <u>Initial Contract Amount</u> | <u>Minimum Insurance</u> |
|---------------------------------|--------------------------|
| Up to \$1,000,000 | \$1,000,000 |
| From \$1,000,001 to \$2,000,000 | \$2,000,000 |
| Over \$2,000,000 | \$5,000,000 |

15.1.3 Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per occurrence of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles. If any non-licensed motor vehicles are engaged in operations within the terms of the contract on the site of the work to be performed thereunder, such insurance shall cover the use of any such vehicles.

NOTE: If the Contractor does not own an automobile and an automobile is utilized in the execution of the contract, then hired and non-owned coverage is acceptable. If an automobile is not utilized in the execution of the contract, then automobile coverage is not required.

15.1.4 Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability and Automobile Liability only.

15.1.5 Pollution Liability (*required when asbestos or other hazardous material abatement is included in the contract*)

Pollution Liability insurance, including gradual release as well as sudden and accidental, shall have a minimum limit of not less than \$1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no earlier than 30 days after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy. The policy shall not be cancelled for any reason, except non-payment of premium.

15.1.6 Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

15.2 OTHER INSURANCE PROVISIONS

15.2.1 The policies are to contain, or be endorsed to contain, the following provisions:

15.2.1.1 Worker's Compensation and Employers Liability Coverage

15.2.1.1.1 The insurer shall agree to waive all rights of subrogation against the Owner, its officers, agents, employees and volunteers for losses arising from Work performed by the Contractor for the Owner.

15.2.1.2 General Liability Coverage

15.2.1.2.1 The Owner, its officers, agents, employees and volunteers are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Form CG 20 10 (current form approved for use in Louisiana), or equivalent, is to be used.

15.2.1.2.2 The Contractor's insurance shall be primary as respects the Owner, its officers, agents, employees and volunteers. The coverage shall contain no special limitations on the scope of protection afforded to the Owner, its officers, officials, employees or volunteers. Any insurance or self-insurance maintained by the Owner shall be excess and non-contributory of the Contractor's insurance.

15.2.1.2.3 The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the policy limits.

15.2.1.3 All Coverages

15.2.1.3.1 Coverage shall not be canceled, suspended, or voided by either party (the Contractor or the insurer) or reduced in coverage or in limits except after 30 days written notice has been given to the Owner. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy.

15.2.1.3.2 Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement.

15.2.1.3.3 The insurance companies issuing the policies shall have no recourse against the Owner for payment of premiums or for assessments under any form of the policies.

15.2.1.3.4 Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

15.2.2 ACCEPTABILITY OF INSURERS

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-:VI or higher**. This rating requirement may be waived for Worker's compensation coverage only.

If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance as required in the contract.

15.2.3 VERIFICATION OF COVERAGE

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Owner before Work commences and upon any contract renewal thereafter. The Certificate Holder must be listed as follows:

State of Louisiana
Coastal Protection and Restoration Authority
450 Laurel Street, Suite 1501
Baton Rouge, LA 70801
Attn: Project # TV-11b(EB)

In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision endorsement for each insurance policy. The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the Owner, may be suspended, discontinued or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

15.2.4 SUBCONTRACTORS

Contractor shall include all subcontractors as insureds under its policies OR shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time.

If Contractor does not verify subcontractors' insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

15.2.5 WORKER'S COMPENSATION INDEMNITY

In the event Contractor is not required to provide or elects not to provide Worker's compensation coverage, the parties hereby agree the Contractor, its Owners, agents and employees will have no cause of action against, and will not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Worker's Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its Owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, Owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

15.2.6 INDEMNIFICATION/HOLD HARMLESS AGREEMENT

Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees and volunteers, from and against any and all claims, damages, expenses and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.

Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent.

15.3 PERFORMANCE AND PAYMENT BOND

15.3.1 RECORDATION OF CONTRACT AND BOND [38:2241A(2)]

The Owner shall record within thirty (30) days the Contract Between Owner and Contractor and Performance and Payment Bond with the Clerk of Court in the Parish in which the Work is to be performed.

SP-16 INCREASE OR DECREASE OF CONTRACT QUANTITIES

Where the quantity of Work with respect to any item is covered by a unit price, such quantities are estimated quantities to be used when comparing bids and the right is reserved by the Owner to increase/decrease such quantities as may be necessary to complete the Work and/or remain within the funding limits. In the event of material underruns/overruns, the unit costs will be used to determine payment to the Contractor as long as the underrun/overrun remains within 25% of the the original contract quantity.

END OF PART II – SPECIAL PROVISIONS

PART III - TECHNICAL SPECIFICATIONS

TS-101 MOBILIZATION AND DEMOBILIZATION

101.1 Description

The Contractor shall provide all labor and equipment costs necessary to move personnel, equipment, supplies and incidentals to and from the Project Site, establish offices, buildings, and other facilities necessary for the Work, obtain bonds, required insurance and any other pre-construction expenses necessary to perform the Work. This section shall exclude the cost of construction materials.

101.2 Arbitrary Mobilization by Contractor

The Owner shall pay for only one mobilization and demobilization effort. Should the Contractor demobilize prior to completing the Work, subsequent remobilization shall be performed at no cost to the Owner.

101.3 Ratio of Mobilization (60%) and Demobilization (40%) Payment

Sixty percent (60%) of the mobilization/demobilization lump sum price will be paid to the Contractor upon complete mobilization to the Project Site. The remaining forty percent (40%) will be paid to the Contractor upon final acceptance of the Work and removal of all equipment and unused materials.

101.4 Justification of Costs

In the event the unit cost does not bear a reasonable relation to the amount of work for mobilization and demobilization in the Contract, the Engineer may require the Contractor to produce cost data to justify the unit cost in the Bid. Failure to justify such cost to the satisfaction of the Engineer will result in payment of actual mobilization costs, as determined by the Engineer at the completion of mobilization, and actual demobilization cost at the completion of the demobilization, and payment of the remainder of this item in the final payment under this contract. The determination of the Engineer is not subject to appeal.

101.5 Measurement and Payment

Payment for mobilization and demobilization shall be paid for at the contract lump sum price for Bid Item No. 101, "Mobilization and Demobilization". Payment shall constitute full compensation for moving personnel, equipment, supplies and incidentals to and from the job site and establishing offices, buildings and other facilities for the work, obtaining bonds, insurance and any other associated expenses.

TS-201 CONSTRUCTION SURVEYS

201.1 Scope

The Contractor shall furnish all of the materials, labor and equipment necessary to perform preconstruction, process and as-built surveys of the baseline, transects, rock dikes, settlement plates, and flotation channels as shown in the Plans. All surveys shall be performed by qualified personnel under the direct supervision and stamped by a professional land surveyor or professional engineer licensed in the State of Louisiana. Survey data shall reference the North American Datum of 1983 (NAD 83), Louisiana South Zone, U. S. Survey Feet for horizontal control, and the North American Vertical Datum of 1988 (NAVD 88, 2006.81)(GEOID 03, 2004.65), U. S. Survey Feet for vertical control. Horizontal and vertical control shall be established by using the monuments specified in Appendix F.

201.2 Pre-Construction Survey

The baseline, transects and benchmarks shown on the Plans shall be re-surveyed and staked by the Contractor after the Pre-Construction Conference and prior to construction. This survey shall be used to verify the alignment of the various project features and to make modifications or adjustments as deemed necessary by the Engineer. Drawings of the plan views and cross sections and calculations of the projected quantities of materials shall be developed from this survey by the Contractor.

201.2.1 Temporary Bench Marks (TBM)

TBMs shall be installed at locations necessary to complete all surveys. Horizontal and vertical coordinates shall be determined for all TBMs installed. The Contractor shall maintain the TBMs for the duration of the Work. In the event that a single TBM is disturbed and/or destroyed, the TBM shall be reinstalled at no cost to the Owner by qualified personnel that are approved by the Engineer. If multiple TBMs are destroyed, the Engineer may require the TBMs to be reinstalled by a professional land surveyor licensed in State of Louisiana. The TBMs shall be shown on the plan view drawings.

201.2.2 Baseline

If necessary, an offset to the baseline shall be surveyed and staked at all points of inflection and at intersections with the transects, where possible to traverse over land, as shown in the Plans. The baseline shall be shown on the plan view drawings.

201.2.3 Transects

The transects shall be surveyed from the baseline as shown on the plans.

The transects shall be staked at each ends, at all intersections with the rock dike alignments, the inside and outside toes of the flotation channels. The inflection points, points of curvature and radius points of the rock dike alignments shall also be surveyed and staked.

The Contractor shall develop drawings which show the cross sections and plan views of the bank line, rock dikes and flotation channels. Elevations, coordinates, lines and grades for each of these features shall all be shown on the drawings. Contours at elevations +1.0', 0.0', -1.0, -3.0', and -5.0' NAVD 88 shall also be shown on all plan view drawings.

The Contractor shall also determine the projected quantities for rock and geotextile fabric. The quantities of rock shall be calculated using a method that is approved by the Engineer, such as the average end area. The projected quantities of rock shall be calculated in tons and account for an in-place unit weight of rock equal to 1.5 tons per cubic yard and the assumed settled section (below existing ground) shown in the Plans.

201.2.4 Stakes

The stakes shall be untreated wood of sufficient diameter and length such that they are embedded at least three feet into the soil and protrude 5 feet above existing grade if within marsh, or 5 feet above mean water elevation if within canal.

201.2.5 Magnetometer Survey

A magnetometer survey shall be performed along the flotation channels and pipelines, where possible. Perpendicular track lines shall be run at 500 foot intervals and extend 25 feet beyond the outside edge of each of these proposed features, where possible. All pipelines shall also be probed and appropriately marked throughout construction according to United States Coast Guard Standards. The magnetometer survey shall show all track lines, coordinates, amplitudes, signature types, and signature widths of all hits. The survey shall also show the coordinates, top elevation and ground cover for all pipelines.

201.3 Process Surveys

The rock dike settlement plates and rock dikes shall be surveyed during construction as follows:

201.3.1 Rock Dike Settlement Plates

The Contractor shall survey the settlement plates along each Reach within one day after installation and daily thereafter until each rock dike lift along that Reach is accepted by the Engineer.

201.3.2 Rock Dikes

The dikes shall be surveyed on days 1, 14 and 28 after the lift has been placed along each of the Reaches. The crown and both toes of the rock dikes shall be surveyed at all survey transects, inflection points, points of curvature and radius points along the rock alignments. The Engineer shall determine if the lift on each Reach is to be accepted or modified based on these surveys. Those portions of dikes which are modified must also be resurveyed.

201.4 As-Built Surveys

The flotation channels, rock dikes and settlement plates shall be surveyed by the Contractor after construction is complete. Final payment will not be received until the as-built survey and work have been accepted by the Engineer.

201.4.1 Rock Dikes

The final process surveys for rock dikes on those Reaches that are accepted by the Engineer shall be incorporated into the as-built survey.

201.4.2 Settlement Plates

All of the settlement plates shall be surveyed after all of the rock dikes have been accepted by the Engineer.

201.5 Deliverables

The pre-construction, process and as-built surveys shall be stamped by a professional land surveyor or professional engineer licensed in the State of Louisiana. The Contractor shall provide the details for the survey layout and stakeout in the Work Plan.

The pre-construction survey drawings and projected material quantities shall be submitted to the Engineer for review and approval by the date provided in SP-3. Three copies shall be provided on 11" x 17" paper and one digital copy provided in AutoCAD or an approved equal.

The process survey drawings, in-place material quantities and supporting calculations shall be submitted to the Engineer for review immediately after they are completed in order to receive acceptance and payment. Three copies shall be provided on 11" x 17" paper and one digital copy provided in AutoCAD or an approved equal.

The as-built survey and in-place material quantities shall be submitted to the Engineer by the date provided in SP-3 in order to receive acceptance and final payment. Three copies shall be provided on 11" x 17" paper and one digital copy provided in AutoCAD or an approved equal. The survey shall incorporate all field changes, change orders, and quantities of materials placed. All revisions shall be shown in red and be easily distinguishable from the original design.

Point files of the pre-construction, process and As-Built Surveys shall be included in the digital copies and shall contain the following information:

201.5.1 Point number;

201.5.2 Northing (NAD 83 US. FT.);

201.5.3 Easting (NAD 83 US. FT.);

201.5.4 Elevation (NAVD 88 FT.);

201.5.5 Description.

201.6 Measurement and Payment

Payment for Bank Stabilization Surveys shall be paid for at the contract lump sum price for Bid Item No. 201, "Bank Stabilization Surveys". Price and payment shall constitute full compensation for furnishing all labor, materials and equipment to perform the Pre-construction, Process and As-Built Surveys specified herein.

TS-301 FLOTATION CHANNELS

301.1 Scope

The Contractor shall furnish all materials, labor and equipment necessary to construct the flotation channels through removal and permanent disposal of spoil material. The limits of work shall conform to the lines and grades shown on the project Plans. The channels shall be maintained in a useable configuration throughout the duration of the Work at the expense of the Contractor. Boring logs for the project site are provided in [Appendix G](#).

301.2 Method

The flotation channels shall be mechanically excavated using a bucket dredge, barge mounted track hoe or approved equal. The Contractor shall use any environmentally acceptable method that will complete the Work in accordance with the Plans. The Contractor shall provide the method and equipment intended to be used to complete dredging of flotation channels in the Work Plan.

301.3 Excavation Limits

The limits of excavation shall conform to the lines, grades and slopes specified in the Plans and 404 Permit. The minimum bottom elevation of the channels shall be -5.0' NAVD 88 (i.e. the invert of the channel shall not be lower than -5.0' NAVD 88). The locations of the permitted channels are shown in the Plans. It shall be the responsibility of the Contractor to obtain a permit modification and prior approval from the Engineer in order to enlarge or relocate the channels. The Contractor shall also obtain and submit to the Engineer a letter of no objection from any pipeline company for the proposed excavation inside their right-of-way.

301.4 Permanent Spoil Disposal

The permanent dredge material shall be deposited behind the rock dikes and must conform to the elevations, grades, and lines as specified in the Plans or as directed by the Engineer. Permanent dredge fill shall be placed to the greatest extent possible based on the Contractor's equipment, or as directed by the Engineer. Spoil material shall not be deposited outside of the limits as shown on the Plans without written approval from the Engineer. Any material that is deposited in areas other than indicated on the Plans or as authorized by the Engineer shall be removed and deposited in an approved location at the expense of the Contractor. Unauthorized disposal areas shall be restored to pre-construction conditions at the expense of the Contractor.

301.5 Maintenance

The flotation channels shall be maintained according to the dimensions shown on the Plans throughout construction. Any maintenance excavation shall be performed at the expense of the Contractor.

301.6 Measurement and Payment

Payment for this item shall constitute full compensation for all materials, labor, supplies, and equipment required for dredging and maintenance of the flotation channels. Payment for this item, whether flotation channels are dredged or not, shall be made at the lump sum price for Bid Item No. 301 "Flotation Channels". The percentage of the contract lump sum price to be paid during construction shall be computed by pro-rating the linear feet of completed dike constructed (linear feet constructed divided by the total length of dike to be constructed).

TS-510 ROCK SETTLEMENT PLATES

510.1 Scope

The Contractor shall furnish all of the materials, labor and equipment necessary to construct, install, survey and maintain the settlement plates in accordance with the Plans and these Specifications.

510.2 Materials

Plates shall be fabricated with a 4' x 4 x' 1/4" steel plate and a 3" diameter galvanized riser pipe welded to the center of the plate using a 3/16" continuous fillet. The pipe will be 9' in length and the top will be closed with a threaded galvanized cap. After fabrication, the plates shall be hot-dipped galvanized.

510.3 Zinc Coating

Zinc coating shall be applied in a manner and thickness quality conforming to ASTM A 123. In any case where the zinc coating becomes damaged, the damaged area shall be re-galvanized with a suitable low-melting zinc base alloy as recommended by the American Hot-Dip Galvanizers Association. One (1) coat of a vinyl wash primer followed by red top coat shall be applied over the zinc coat. All painting shall conform to the latest edition of the LA DOTD Standard Specification Section 811 and 1008, or approved equivalent.

510.4 Installation

The plates shall be installed at 1,000' intervals along the centerline of the rock dikes as shown on the Plans. The Contractor shall exercise care when placing rock and geotextile fabric in the vicinity of the settlement plates. Leveling of the plate bed shall be accomplished by removing the minimum amount of earth or rock necessary to produce a level foundation and in a manner such that the densities of the plate bed and undisturbed adjacent ground remain the same. Leveling of the plate bed by the addition of any material will not be permitted.

510.5 Maintenance

The Contractor shall maintain all rock settlement plates until the Work is completed. Any damaged settlement plates shall be repaired or replaced by the Contractor at no expense to the Owner. Settlement plates must be maintained in order to accurately locate the centerline elevation under the rock dikes.

510.6 Measurement and Payment

Payment for this item will be made at the contract unit price per each for Bid Item No. 510, "Settlement Plates". Price and payment shall constitute full compensation for furnishing all labor, materials and equipment for construction and maintenance of all required containment and performing all work specified herein. No payment shall be made for settlement plates that are rejected or damaged due to fault or negligence by the Contractor.

TS-610 WOVEN GEOTEXTILE FABRIC

610.1 Scope

The Work provided herein consists of furnishing all labor, material, equipment, and performance of all operations required for furnishing, hauling, placing, completing, and maintaining the woven geotextile fabric until placement of the stone cover is completed and accepted, as specified herein and on the plans.

610.2 Materials

The material shall be a woven geotextile fabric consisting only of long chain polymeric filaments or yarns formed into a stable network such that the filaments or yarns retain their position relative to each other during handling, placement, and throughout the design service life. At least 85-percent, by weight, of the material shall be polypropylenes, polyesters, polyamides, polyethylene, or polyolefins. The geotextile fabric shall be free of any treatment or coating which might adversely alter the geotextile fabric's hydraulic or physical properties after installation. When required, the geotextile fabric shall contain stabilizers and/or inhibitors added to the base material to make filaments resistant to deterioration due to ultraviolet light and/or heat exposure. The edges of the geotextile fabric shall be selvaged. The geotextile fabric shall be free from defects and tears and shall meet or exceed the physical property requirements listed in the table on the next page. Thread used for factory or field sewing shall be of contrasting color to the fabric and made of kevlar, polypropylene, polyester, or polyamide thread. The thread shall be as resistant to deterioration due to ultraviolet light and/or heat exposure.

| MINIMUM PHYSICAL PROPERTY REQUIREMENTS FOR WOVEN GEOTEXTILE FABRIC | | |
|--|--------------------|--|
| Physical Property | Test Method | Geotextile Fabric Requirements |
| *Wide Width Tensile Strength (lb./ft.) | ASTM D4595 | 4,800 (lb/ft) minimum, indirection perpendicular to centerline |
| **Seam Strength, (lb./ft.) | ASTM D 4884 | 2,400 (lb/ft) minimum, in direction perpendicular to centerline |
| Elongation at Break, (%) | ASTM D 4595 | 9% in any principal direction |
| Puncture Resistance, (lb.) | ASTM D 4833 | 90 minimum |
| Ultraviolet Radiation Stability, (% residual strength) | ASTM D 4355 | 70% at 500 hrs. minimum |
| Apparent Open Size- AOS | ASTM 4751 | No finer than U. S. standard sieve size number 50 and no courser tan U. S. standard sieve size number 30 |
| Water Permittivity, (sec -1) | ASTM D 4491 | 0.1 minimum |
| Flow Rate, (gal/min/ft ²) | ASTM 4491 | minimum of 10 and a maximum of 50 |
| Trapezoid Tear Strength, (lb.) | ASTM D 4533 | 220 minimum |
| (*) Value represents minimum average roll value (MARV) in the direction perpendicular to the centerline of the new geotextile fabric received from the manufacturer or distributor (i.e., any roll in a lot shall meet or exceed the minimum strength value in the table). (**) All of the samples shall yield test values greater than the minimum strength value specified. | | |

610.3 Shipment and Storage

The geotextile fabric shall be shipped/transported and maintained in a protective cover prior to placement. During all periods of shipment and storage, the geotextile fabric shall be protected from moisture, dust, debris, ultraviolet light, and other contaminants. Each geotextile fabric roll shall be labeled or tagged with the manufacturer's name, date of manufacture, batch number, and name of product.

610.4 Seams and End Laps

A woven geotextile fabric panel shall consist of multiple geotextile fabric strips sewn together at the factory for as large a panel area as manageable. All geotextile fabric panel seams shall be sewn at the factory using a double row, "butterfly" two-thread ("401") chainstitch. Each row of stitching shall be located a minimum of two (2) inches from the geotextile fabric edge. The sewing shall consist of two parallel stitched rows at a minimum spacing of one (1) inch. The panel width must cover the minimum structure width shown on the plans and shall overlap the structure edge a minimum of one (1) foot and a maximum of three (3') feet on each side. No payment will be made for material placed outside of the maximum edge overlap stated above. Each geotextile fabric panel end lap shall be overlapped a minimum of five (5) feet to provide the area coverage shown on the plans. In areas deemed necessary by the engineer, the geotextile fabric shall be overlapped a minimum of ten (10) feet or as directed by engineer.

610.5 Installation

The woven geotextile fabric shall be placed with the machine direction perpendicular to the centerline under the stone at the locations, and to the lines and grades shown on the plans. The Contractor shall prepare the surface to receive the geotextile fabric, insuring the surface is relatively smooth and free of obstructions, depressions, debris, soft or low density pockets of material, and stone, which could damage the geotextile fabric during placement. At the time of installation, the geotextile fabric shall be rejected if defects, rips, holes, flaws, deterioration or damage incur during manufacture, transportation, or storage. The geotextile fabric shall be protected at all times during construction to insure the geotextile fabric's original chemical and physical properties are unchanged. Work shall be scheduled so that the geotextile fabric placed is completely covered with a layer of the specified material by the end of each workday. Failure to comply shall require replacement of geotextile fabric. All wrinkles and sags shall be stretched out immediately before stone is placed on the geotextile fabric. The geotextile fabric shall be protected from damage during placement of stone. This shall be accomplished by limiting the height of drop to less than one (1) foot. In the event the stone placement damages the geotextile fabric, the stone shall be placed directly on the geotextile fabric with zero (0) height of drop. Before placement of stone, the Contractor shall demonstrate the stone placement will not damage the geotextile fabric. Any geotextile fabric rejected or damaged shall be replaced by the Contractor at no additional cost to the Owner. The Contractor shall also submit a geotextile fabric panel placement plan for each site and the corresponding factory sewn panel dimensions. The Contractor shall allow the Engineer a minimum of seven days for review and approval of the placement plan, prior to geotextile fabric fabrication.

610.6 Acceptance

All brands of geotextile fabric and all seams used in construction will be accepted on the following basis. At least thirty (30) days prior to installation, the Contractor shall furnish to the Engineer, in duplicates, a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the geotextile fabric. The certificate shall contain the signer's title, the name and address of the Contractor, the contract number, and the project name and location. The mill certificate or affidavit shall attest the geotextile fabric meets the chemical, physical, and manufacturing requirements stated above in this specification, and the seams used to meet the seam requirements. Accompanying the certificate/affidavit, the Contractor shall submit a three (3) foot by three (3) foot sample of each geotextile fabric to be used. If seams are used, an additional three (3) foot by three (3) foot sample containing a seam in the center of the geotextile fabric sample shall be submitted.

610.7 Measurement and Payment

Payment for this item will be made at the contract unit price per square yard for Bid Item No. 610, "Woven Geotextile Fabric". The woven geotextile fabric will be measured in place to the nearest square yard, as delineated on the plans. Overlaps will be measured as a single layer. Price and payment shall constitute full compensation for providing all plant, labor, material, and equipment and performing all operations necessary for the complete and satisfactory installation of the woven geotextile fabric. No payment shall be made for geotextile fabric that is rejected or damaged due to Contractor fault or negligence.

TS-702 440-LB. CLASS ROCK

702.1 Scope

The Contractor shall furnish all of the materials, labor and equipment necessary to construct the rock dikes in conformity to the lines, grades and thicknesses provided on the Plans and in these Specifications, or as directed by the Engineer. The boring logs for the Project Site are provided in [Appendix G](#).

702.2 Materials

The rock shall not disintegrate upon exposure to the elements or be easily broken from handling, and shall be reasonably free from earth and other foreign materials. When tested in accordance with AASHTO Designation: T 85, the solid weight of rock shall be at least one hundred and fifty (150) pounds per cubic foot (based on bulk specific gravity) and the absorption shall not exceed two percent (2%). The least dimension of an individual rock shall be at least one third (1/3) its maximum dimension.

702.3 Quarries

On the basis of information and data available to the Engineer, rock which meets the quality requirements of this specification is produced by the sources listed in the following table.

| PRODUCER | NEAREST TOWN TO PIT | PIT DESIGNATION |
|------------------------------------|---------------------|---------------------------|
| B.E. Construction Co. | Murfreesboro, AR | Murfreesboro Quarry |
| Boorhem Fields, Inc. | Black Rock, AR | Valley Stone Quarry |
| Bussen Quarries, Inc. | Mehlville, MO | Bussen Quarry |
| Central Stone Co. | Withers Mill, MO | Pitt No. 1 |
| Central Stone Co. | Perry, MO | Pitt No. 9 |
| Central Stone Co. | Danby, MO | Plattin Quarry |
| Dravo Basic Material Co., Inc. | Smithland, KY | Three Rivers Quarry |
| Farmer=s Limestone Co. | Uniontown, MO | Farmer=s Limestone Quarry |
| Graysonia Quarries, Inc. | Delight, AR | Delight Quarry |
| H.M.B. Construction | Dequeen, AR | H.M.B. Quarry |
| Industrial Mineral Products Div/3M | Little Rock, AR | 3M Arch Street Quarry |
| Little Rock Quarry Co., Inc. | Caddo Valley, AR | DeRock Creek Quarry |
| Little Rock Quarry Co., Inc. | Little Rock, AR | Little Rock Quarry |
| McGeorge Corp. | Sweet Home, AR | Granite Mountain Quarry |
| Pine Bluff Sand and Gravel | Delaware, Ark. | River Mountain Quarry |
| Reed Crushed Stone Co. | Lake City, KY | Givertsville Quarry |
| Rigsby-Barnard Quarry, Inc. | Cave-In-Rock, IL | Rigsby-Barnard Quarry |
| Tower Rock Stone Co. | St. Genevieve, MO | Tower Rock Stone Quarry |
| Vulcan Materials Co. | Tuscumbia, AL | Quarry No. 114 |
| Vulcan Materials Co. | Iuka, MS | Iuka Plant |
| West Lake Quarry Materials | Scott City, MO | Gray=s Point Quarry |
| West Lake Quarry Materials | Neely=s Landing, MO | Neely=s Landing Quarry |
| West Lake Quarry Materials | Barnhart, MO | Barnhart Quarry |
| West Lake Quarry No. 2 | Musicks Ferry, MO | West Lake Quarry |

Other rock supplies may be accepted prior to construction by the Engineer. In order to gain acceptance, the Contractor shall obtain and test samples of the rock for gradation under the supervision of the Engineer. The Engineer shall accept the rock if the test results comply with this specification.

702.4 Gradation

All rock shall be LADOTD Class 440 lb. graded rip-rap as specified by Section 711.02 (a) of the Louisiana Standard Specifications For Roads and Bridges, latest Edition or Owner approved equivalent. The rock shall meet the following gradation:

| STONE SIZE (LBS.) | SPHERICAL DIAMETER (FT) | % OF STONE SMALLER THAN |
|--------------------------|--------------------------------|--------------------------------|
| 2,200 | 3.00 | 100 |
| 900 | 2.23 | 40 - 100 |
| 440 | 1.76 | 14 - 50 |
| 130 | 1.17 | 0 - 15 |

Control of gradation will be by visual inspection either at the source, or Project Site or both. The Engineer reserves the right to verify the gradation of any shipment by testing two uniform size random samples. The equipment, labor and cost for testing the samples shall be provided by the Contractor.

702.5 Free Fall

The rock shall be placed carefully onto the geotextile fabric by limiting the height of drop to less than one (1) foot. If this height of drop causes damage to the geotextile fabric, the stone shall be placed directly onto the geotextile fabric with a zero (0) height of drop. Before placement of stone, the Contractor shall demonstrate to the Engineer that the stone will not damage the geotextile fabric.

702.6 Losses

The Contractor is responsible to reclaim and utilize all rock that is lost during shipment or construction.

702.7 Placement of the Rock Dikes

All lifts for the rock dikes shall be constructed according to the lines, grades and elevations specified in the Plans and these Specifications. The rock shall be placed approximately three feet from each edge on top of the geotextile fabric and worked toward the center. The Contractor shall take all precautions so as not to damage the woven geotextile fabric when constructing the rock dike.

702.8 Equipment

The Contractor shall provide a proposed list of equipment in the Work Plan which will be used to construct the rock dikes, protection layer and scour protections berm. This list shall include the type (Drag Bucket, etc.), number of each type, and capacity (Cubic Yards, etc.) of the equipment. All rock shall be placed with a “drag” bucket or approved equal. “Orange peel” or “clamshell” buckets are prohibited.

702.9 Staging Area

The Contractor is responsible for locating a staging area with adequate depth to light load the rock barges. The Contractor shall include the proposed location of the staging area in the Work Plan. If the Staging area is within 150 feet of a well head or pipeline, they shall be probed and appropriately marked by the Contractor. The Contractor shall also submit any letters of no objection or agreements for temporary easements from the landowner, well owner, or pipeline owner to the Engineer.

702.10 Tolerances

The rock dikes shall be placed according to the cross sections (elevations, slopes, dimensions, etc.) shown on the Plans with a maximum tolerance of plus or minus half a foot ($\pm 0.5'$). The maximum tolerance shall not be continuous along the alignment over a distance greater than 200 feet. Any stone placed outside of the specified tolerances will not be paid for by the Owner and must be added or removed by the Contractor.

702.11 Acceptance

Acceptance of the rock dikes shall be accepted by the Engineer if it achieves compliance with the lines, grades, elevations, and tolerances in the Plans and these Specifications. Compliance shall be based upon the survey of the rock dike. The Engineer may require the Contractor to remove rock or place additional rock as necessary in order to achieve compliance.

702.12 Measurement and Payment

Payment for this item will be made at the contract unit price per ton for Bid Item No. 702, "440 lb. Class Rock". The unit of measurement for rock shall be the ton (2,000 pounds). Quantities will be computed to the nearest whole ton using the Barge Displacement Table as specified in SP-13. The Contractor shall provide the Engineer with certified weight tickets issued by the stone quarry for each barge. The Contractor shall measure the weight of the rock by barge displacement prior to unloading any rock from the barge. The Engineer will verify this measurement prior to payment. No payment will be made for any unauthorized or non-conforming placement of the rock.

TS-800 SIGNAGE

800.1 Temporary Warning Signs

800.1.1 Scope

The Contractor shall furnish all of the materials, labor, and equipment necessary to construct and install the warning signs in accordance with the Plans and these Specifications or as directed by the Engineer.

800.1.2 Materials

Each of the warning signs shall be fabricated from 3/16 inch thick plate aluminum or approved equal, and bolted to one (1) 12" diameter (nominal end) x 40 ft long timber piling after it is driven to the proper depth, as shown on the Plans. All timber piling shall conform to LA DOTD 2006 Standard Specification Sections 812 and 1014. All piling shall be treated with Creosote treatment meeting American Wood Preservers Association (AWPA) P2 with a minimum retention of 20 lb./cu. ft. All creosote treated pilings shall be steam flushed for a minimum of one (1) hour at 240° F (116° C) after treatment. Retention shall be determined by assay performed and certified by the treating company. Each sign shall have a reflective face. The sign and face lettering shall be fabricated as shown on the Plans.

800.1.3 Installation

The warning signs shall be installed at the locations shown on the Plans or as directed by the Engineer. The top of the pile shall be at an elevation of 11.0 (±0.5') feet NAVD 88.

800.1.4 Removal

All pilings or pipes shall be removed to depth at least 10' below existing ground. All material not incorporated into the temporary warning signs shall become property of the Contractor and shall be removed from the site prior to demobilization.

800.1.5 Measurement and Payment

Payment for this item will be included in the contract lump sum price for Bid Item No. 1, "Mobilization and Demobilization". No payment shall be made for signs that are rejected or damaged due to fault or negligence by the Contractor.

800.2 Project Funding Sign

800.2.1 Scope

The Contractor shall furnish all of the materials, labor, and equipment necessary to construct and install two project funding signs (one each for north and south reaches) in accordance with the Plans and these Specifications.

800.2.2 Materials

800.2.2.1. Panel

Each sign shall be fabricated from minimum 1/8” thick commercial grade aluminum plate that is five (5) feet high and seven (7) feet wide. Each sign shall have a blue background with white lettering and display the project logos as shown in the Plans. The Owner shall provide the contractor with digital graphic files for the project logos to be used in the signs’ construction.

800.2.2.2. Posts and Hardware

Posts shall be in accordance with Louisiana Standard Specifications for Roads and Bridges, latest edition, Standard Specification Section 1015.02 (a) (3). Sign posts and mountings shall be constructed as to hold the signs in proper and permanent position and to resist swaying under wind loads or displacement by vandalism. All nuts, bolts, and washers shall be hot galvanized. Nylon washers shall be installed at both ends of all bolts.

800.2.3 Installation

The project funding signs shall be installed prior to the beginning of construction at a location and height as directed by the Owner. The signs shall be maintained in good order for the duration of construction. At the direction of the Owner, the Contractor may be required to replace the project funding signs at their own expense if the Owner finds they have not been maintained properly.

800.2.4 Measurement and Payment

Payment for this item will be included in the contract lump sum price for Bid Item No. 1, “Mobilization and Demobilization” and shall constitute compensation for furnishing all overhead, profit, labor, materials, equipment for installation, and any other cost incidental to performing all Work as specified herein. The Owner shall pay for only one mobilization and demobilization effort. Should the Contractor demobilize prior to completing the Work, subsequent remobilization shall be performed at no cost to the Owner.

END OF PART III – TECHNICAL SPECIFICATIONS

APPENDIX A

CPRA FORMS

Attachment 1

Interpretation or Clarification By Engineer Form

CIAP Freshwater Bayou Bank Stabilization (TV-11b)(EB) Project

Interpretation or Clarification by Engineer

Number ()

Date:

Subject:

SUMMARY OF MATTER BY CONTRACTOR

INTERPRETATION OR CLARIFICATION OF MATTER BY ENGINEER

Attachment 2 Change Order Form

CHANGE ORDER NO. X

OWNER: State of Louisiana, Coastal Protection and Restoration Authority
CONTRACTOR:
PROJECT: Freshwater Bayou Bank Stabilization Project (TV-11b EB)
FILE NO:
PURCHASE ORDER NO:
ENGINEER: CPRA/Sellers & Associates

The following changes are hereby proposed to be made to the Contract Documents:

-

Description: See attached summary.

Attachments (list documents supporting change):

- N/A

| Change in Contract Price | | Change in Contract Time | |
|---|--|--|--|
| Original Contract Price | | Original Contract Time (calendar days) | |
| Net Increase (Decrease) from previous Change Orders | | Net Increase (Decrease) from previous Change Orders (days) | |
| Contract Price prior to this Change Order | | Contract Time prior to this Change Order (calendar days) | |
| Net Increase (Decrease) of this Change Order | | Net Increase (Decrease) of this Change Order (days) | |
| Contract Price with this Change Order | | Contract Time with this Change Order (calendar days) | |

RECOMMENDED:

By: _____
 CPRA Design Engineer

Date: _____

RECOMMENDED:

By: _____
 CPRA Construction Manager

Date: _____

ACCEPTED:

By: _____
 Contractor

Date: _____

Attachment 3

Change Order Summary Form

FRESHWATER BAYOU BANK STABILIZATION PROJECT (TV-11b EB)
FILE NO: XXXX, PURCHASE ORDER NO: XXXX

SUMMARY OF CHANGE ORDER NO. XX

| ITEM NO. | DESCRIPTION | UNIT | ORIGINAL QUANTITY | ADJUSTED QUANTITY | UNIT PRICE | AMOUNT OVERRUN | AMOUNT UNDERRUN |
|---|-------------|------|-------------------|-------------------|------------|----------------|-----------------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Total Amount Overrun | | | | | | \$0.00 | |
| Total Amount Underrun | | | | | | | \$0.00 |
| Net Increase (Decrease) of this Change Order | | | | | | | \$0.00 |

JUSTIFICATION:

APPENDIX B

PLANT AND EQUIPMENT SCHEDULE

**CIAP FRESHWATER BAYOU BANK STABILIZATION (TV-11b)(EB)
PLANT AND EQUIPMENT SCHEDULE**

EQUIPMENT CATEGORY: _____

| Type | Capacity | Manufacturer | Age & Condition | Location |
|------|----------|--------------|-----------------|----------|
| | | | | |
| | | | | |
| | | | | |

EQUIPMENT CATEGORY: _____

| Type | Capacity | Manufacturer | Age & Condition | Location |
|------|----------|--------------|-----------------|----------|
| | | | | |
| | | | | |
| | | | | |

EQUIPMENT CATEGORY: _____

| Type | Capacity | Manufacturer | Age & Condition | Location |
|------|----------|--------------|-----------------|----------|
| | | | | |
| | | | | |
| | | | | |

NOTE: The Plant and Equipment Schedule is for information purposes only. The information submitted is pertinent to the evaluation of the proposed dredges and their capability to perform the Work as required and as agreed to by the Bidder through the submittal of a Proposal. The Bidder may only omit information that he/she considers proprietary. Provide separate table for each category of equipment including dredging, excavating, material handling, pile driving, barges, loading, grading, earthworks, trucking, etc. Specify production rate of equipment. Use separate line for each major item. Use additional pages if necessary.

(CONTRACTOR TO INCLUDE WITH WORK PLAN)

APPENDIX C
LANDRIGHTS MEMORANDUM



Coastal Protection and
Restoration Authority of Louisiana

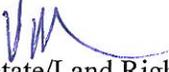
State of Louisiana

BOBBY JINDAL
GOVERNOR

MEMORANDUM

February 5, 2013

TO: Craig Rabalais
TV-11B (EB) and ME-25 (SF) Project Manager

FROM: V. J. Marretta 
CPRA Real Estate/Land Rights Division

RE: Notice of Landrights Completion
Freshwater Bayou Bank Stabilization Project TV-11B (EB)
Marsh Creation Near Freshwater Bayou Project ME-25 (SF)
Vermilion Parish, Louisiana

In reference to the subject projects this letter will confirm that all of the necessary landrights have been acquired in order to move forward with advertising, selection of a construction contractor and construction of the projects. The following information is being transmitted via this memorandum, or has already been forwarded to you under separate memorandum:

- | | |
|---|--|
| <input checked="" type="checkbox"/> <i>Servitude Agreement(s)</i> | <input checked="" type="checkbox"/> <i>Grants of Particular Use</i> |
| <input checked="" type="checkbox"/> <i>Corps of Engineers Consent</i> | <input type="checkbox"/> <i>State Land Office Letter of No Objection</i> |
| <input type="checkbox"/> <i>Oil/Gas Operator Agreement(s)</i> | <input type="checkbox"/> <i>Assignment of Rights to Federal Sponsor</i> |
| <input type="checkbox"/> <i>Memorandum(s) of Agreement</i> | <input type="checkbox"/> <i>Landrights Certification Letter</i> |
| <input type="checkbox"/> <i>CWPPRA Section 303(e) approval</i> | <input type="checkbox"/> <i>Surface Lease</i> |
| <input type="checkbox"/> <i>Right(s) of Entry for Construction</i> | <input type="checkbox"/> <i>Pipeline Letter of Consent</i> |
| <input type="checkbox"/> <i>Mineral Operations Agreement(s)</i> | <input type="checkbox"/> <i>Pipeline Notice of Construction</i> |

NOTE: No dredging over any pipeline rights-of-ways can be permitted. Although no dredging will occur within pipeline/utility rights-of-ways, special care and extremely close coordination by the construction contractor with the pipeline/utility companies will be crucial in order to avoid impacting the pipelines/utilities within or near the project area. Due to the limited time available to obtain landrights coverage for same, the contractor(s) will need to acquire any permission for crossings of lines outside of those that may not have been previously found. It is recommended that confirmation in the field, including, but not limited to, use of a magnetometer survey(s) be a requirement of the contractor(s) to ensure that any lines in the area are identified and will not be impacted. The conveyance of sediment, if via pipeline, will need to be floated over pipelines that may potentially be impacted by same. Verification of pipelines, their depths and draft of the equipment to be used will be essential. The assumption resulting from current investigations does not include oil and gas operations that might commence in the future.

Land Rights Completion Memo
Freshwater Bayou Bank Stabilization Project TV-11B (EB)
Marsh Creation Near Freshwater Bayou Project ME-25 (SF)
February 5, 2013

2

The construction contractor will also need to contact Louisiana One Call at (800) 272-3020 at least two (2) business days prior to construction.

The agreements secured from all necessary landowners provide the necessary landrights for the projects to be constructed. This information has been sent electronically, which includes landowner contacts, for your reference and use. Please let me know if you have any questions.

VJM

c: Rudy Simoneaux, CPRA Project Engineer
Cynthia Wallace, CPRA, Counsel, Real Estate/Landrights Division
Jim Altman, CPRA Land Manager

APPENDIX D

GOVERNMENT PERMITS

BOBBY JINDAL
GOVERNOR



PEGGY M. HATCH
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

JUL 09 2010

RECEIVED
2010 JUL 16 AM 9:29
LA-OCPR

Louisiana Office of Coastal Protection and Restoration
P.O. Box 44027
Baton Rouge, LA 70804

Attention: Kristi Cantu, Agent for the Vermilion Parish Police Jury

RE: Water Quality Certification (WQC 100324-02/AI 94676/CER 20100001)
Corps of Engineers Permit (MVN-2010-0547-WOO)
Coastal Management Permit (P20100240)
Vermilion Parish

Dear Ms. Cantu:

The Louisiana Department of Environmental Quality (the Department) has reviewed your application to dredge waterbottoms and place spoil and fill material for erosion control and coastal marsh restoration at two sites along Freshwater Bayou Canal.

Based on the information provided in the application, the Department made a determination that the requirements for a Water Quality Certification have been met and concludes that the placement of the fill material will not violate water quality standards of Louisiana as provided for in LAC 33:IX.Chapter 11. Therefore, the Department hereby issues a Water Quality Certification to the Vermilion Parish Police Jury.

Sincerely,

Melvin C. Mitchell, Sr.
Administrator
Water Permits Division
MCM/jjp

c: Corps of Engineers- New Orleans District
Coastal Management Division



**DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT**

P.O. BOX 44487
BATON ROUGE, LOUISIANA 70804-4487
(225)342-7591
1-800-267-4019

COASTAL USE PERMIT/CONSISTENCY DETERMINATION

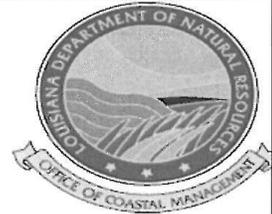
C.U.P. No.: P20100240
C.O.E. No.: MVN-2010-00547-WOO
NAME: VERMILION PARISH POLICE JURY
c/o OFFICE OF COASTAL PROTECTION AND RESTORATION
P.O. BOX 44027
BATON ROUGE, LA 70804
Attn: Kristi Cantu

LOCATION: Vermilion Parish, LA
The North project site is approx. 12 mile easterly of White Lake, and the South project site is approx. 10 miles southeasterly of White Lake. The North site baseline reference begins at Lat 29° 45' 20.5"N, Long 92° 12' 08.8"W, and ends at Lat 29° 46' 17.1"N, Long 92° 10' 35.7"W. The dredging of the canal in the South site begins at Lat 29° 33' 16.3"N, Long 92° 18' 16.3"W, and ends at Lat 29° 37' 05.8"N, Long 92° 16' 35.5"W; the marsh creation site is centered at Lat 29° 35' 06"N, Long 92° 18' 08"W.

DESCRIPTION: CIAP Freshwater Bayou Bank Stabilization (TV-11b)(EB) and Surplus Marsh Creation Near Freshwater Bayou (ME-25SF). Proposed construction of a foreshore rock dikes to stabilize the banklines along two areas of Freshwater Bayou Canal. This project has two areas: a North project site and a South project site. The North project site consists of 16,265 linear feet of rock dike construction, and the dredging of an optional flotation channel to accommodate the rip rap barge. The South project site consists of 19,645 linear feet of rock dike construction, the parallel and adjacent dredging of approx. 25,372 linear feet of Freshwater Bayou Canal to place material in a marsh creation site (approx. 115 acres), and the dredging of an optional flotation channel to accommodate the rip rap barge. Approx. 1,394,200 cubic yards of material will be excavated by dredging operations and the marsh creation containment dike. Approx. 203,670 cubic yards of rip rap will be used to construct the rock dike for bankline stabilization.

In accordance with the rules and regulations of the Louisiana Coastal Resources Program and Louisiana R.S. 49, Sections 214.21 to 214.41, the State and Local Coastal Resources Management Act of 1978, as amended, the permittee agrees to:

1. Carry out, perform, and/or operate the use in accordance with the permit conditions, plans and specifications approved by the Department of Natural Resources.
2. Comply with any permit conditions imposed by the Department of Natural Resources.
3. Adjust, alter or remove any structure or other physical evidence of the permitted use if, in the opinion of the Department of Natural Resources, it proves to be beyond the scope of the use as approved or is abandoned.
4. Provide, if required by the Department of Natural Resources, an acceptable surety bond in an appropriate amount to ensure adjustment, alteration, or removal should the Department of Natural Resources determine it necessary.
5. Hold and save the State of Louisiana, the local government, the department, and their officers and employees harmless from any damage to persons or property which might result from the use, including the work, activity, or structure permitted.
6. Certify that the use has been completed in an acceptable and satisfactory manner and in accordance with the plans and specifications approved by the Department of Natural Resources. The Department of Natural Resources may, when appropriate, require such certification to be given by a registered professional engineer.
7. All terms of the permit shall be subject to all applicable federal and state laws and regulations.
8. This permit, or a copy thereof, shall be available for inspection at the site of work at all times during operations.
9. The applicant will notify the Office of Coastal Management of the date on which initiation of the permitted activity described under the "Coastal Use Description" began. The applicant shall notify the Office of Coastal Management by mailing the enclosed green initiation card on the date of initiation of the coastal use.
10. Unless specified elsewhere in this permit, this permit authorizes the initiation of the coastal use described under "Coastal Use Description" for two (2) years from the date of the signature of the Secretary or his designee on the original permit which was November 28, 2010. If the coastal use is not initiated within this two (2) year period, then this permit will expire and the applicant will be required to submit a new application. Initiation of the coastal use, for the purposes of this permit, means the actual physical beginning of the use of activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the coastal use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, the permittee must, in good faith, and with due diligence, reasonably progress toward completion of the project once the coastal use has been initiated.
11. The following special conditions must also be met in order for the use to meet the guidelines of the Coastal Resources Program:



- a. The requirement for compensatory mitigation for impacts to marsh habitat resulting from the referenced project will be determined after one full growing season (March 1 to November 1) following the completion of the permitted activities. This assessment shall include both primary impacts and secondary impacts which may result from the permitted activities.

If OCM determines that compensatory mitigation is required, permittee shall submit a compensatory mitigation plan for approval within 30 days of notification of the compensatory mitigation requirements by OCM. All necessary approvals shall be obtained for the compensatory mitigation plan and the plan shall be implemented as directed by OCM. Permittee should be aware that compensatory mitigation projects may be required to be maintained for as many as 20 years for marsh mitigation projects and 50 years for forested wetland mitigation projects. A processing fee will be assessed for the determination of compensatory mitigation requirements and evaluation of the proposed compensatory mitigation plan in accordance with LAC Title 43, Part I, Chapter 7, §724.D. This fee shall apply regardless of which compensatory mitigation option is selected and does not include the cost incurred to implement the required compensatory mitigation.

- b. This permit does not convey any property rights, mineral rights, or exclusive privileges; nor does it authorize injury to property.
- c. All logs, stumps and other debris unearthed during dredging shall be removed to an approved disposal site on land.
- d. No wheeled or tracked vehicles are to be used in any phase across vegetated wetland areas.
- e. The use of airboats shall be limited to one pass ingress and one pass egress.
- f. Structures must be marked/lighted in accordance with U. S. Coast Guard regulations.
- g. That permittee shall insure that all sanitary sewage and/or related domestic wastes generated during the subject project activity and at the site, thereafter, as may become necessary shall receive the equivalent of secondary treatment (30 mg/l BOD5) with disinfection prior to discharge into any of the streams or adjacent waters of the area or, in the case of total containment, shall be disposed of in approved sewerage and sewage treatment facilities, as is required by the State Sanitary Code. Such opinion as may be served by those comments offered herein shall not be construed to suffice as any more formal approval(s) which may be required of possible sanitary details (i.e. provisions) scheduled to be associated with the subject activity. Such shall generally require that appropriate plans and specifications be submitted to the Department of Health and Hospitals for purpose of review and approval prior to any utilization of such provisions.
- h. The area where the project is located is all part of the aboriginal homelands of the Chitimacha Tribe of Louisiana. As such, large villages, burial sites, and sacred sites were in place in that entire area. If at any time during the course of the work, any traditional cultural properties are discovered, Permittee shall immediately contact Kimberly S. Walden (Cultural Director) or Melanie Aymond (Research Coordinator) at (337) 923-9923 or (337) 923-4395. Office hours are Monday through Thursday from 7:30 A.M. - 5:00 P.M. and on Friday between 7:30 A.M. - 11:30 A.M. If traditional cultural properties are discovered on the weekend or after business hours, the notification shall be made the next business morning.
- i. As-built drawings shall be submitted within 30 days of completion of this project to the Louisiana Department of Natural Resources, Office of Coastal Management, PO Box 44487, Baton Rouge, LA 70804-4487.
- j. All structures built under the authorization and conditions of this permit shall be removed from the site within 120 days



of abandonment of the facilities for the herein permitted use, or when these structures fall into a state of disrepair such that they can no longer function as intended. 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.

- k. Permittee is subject to all applicable state laws related to damages which are demonstrated to have been caused by this action.
- l. Permittee shall allow representatives of the Office of Coastal Management or authorized agents to make periodic, unannounced inspections to assure the activity being performed is in accordance with the conditions of this permit.
- m. Permittee shall comply with all applicable state laws regarding the need to contact the Louisiana One Call (LOC) system (1-800-272-3020) to locate any buried cables and pipelines.
- n. This permit authorizes the initiation of the Coastal Use described under "Coastal Use Description" for two (2) years from the date of the signature of the Secretary or his designee on the original permit which was November 28, 2010. Initiation of the Coastal Use, for purposes of this permit, means the actual physical beginning of the use or activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the Coastal Use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, Permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the Coastal Use has been initiated. If the Coastal Use is not initiated within this two (2) year period, an extension may be granted pursuant to the requirements contained in the Rules and Procedures for Coastal Use Permits (Title 43:1.723.D.). Please note that a request for permit extension MUST be made no sooner than one hundred eighty (180) days and no later than sixty (60) days prior to the expiration of the permit.

The expiration date of this permit is five (5) years from the date of the signature of the Secretary or his designee on the original permit which was November 28, 2010.

Upon expiration of this permit, a new Coastal Use Permit will be required for completion of any unfinished or uncommenced work items and for any maintenance activities involving dredging or fill that may become necessary. Other types of maintenance activities may also require a new Coastal Use Permit.

***** End of Conditions *****

By accepting this permit the applicant agrees to its terms and conditions.
I affix my signature and issue this permit this 28th day of November, 2010.

THE DEPARTMENT OF NATURAL RESOURCES

Karl L. Morgan, Acting Administrator
Office of Coastal Management

This agreement becomes binding when signed by Administrator of
the Office of Coastal Management Permits/Mitigation Division, Department of Natural Resources.

Attachments

Page: 4 of 4
C.U.P. No.: P20100240
C.O.E. No.: MVN-2010-00547-WOO



Final Plats:

1) P20100240 Final Plats 11/17/2010

cc: Pete Serio, COE w/attachments
Dave Butler, LDWF w/attachments
Stephen Broussard, LED w/attachments
Peggy Rooney, OCM w/attachments
Charlie Mestayer, OCM/FI w/attachments

VERMILION PARISH POLICE JURY w/attachments

RECEIVED

Site Copy

DEPARTMENT OF THE ARMY PERMIT

Permittee: Vermilion Parish Police Jury

Permit No. MVN-2010-00574-WOO

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: Conduct dredge and fill operations as required to implement the CIAP Freshwater Bayou Bank Stabilization & Surplus Marsh Creation Restoration Project (TV-11b)(EB), in accordance with drawings attached in eight sheets; sheets 1,2 6,7 and 8 dated February 2010, sheets 3 and 5 dated November 2010, and sheet 4 dated March 2010.

Project Location: Along Freshwater Bayou, south of Intracoastal City, Louisiana in Vermilion Parish.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **JUNE 30, 2016**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: Page 4

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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

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

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

X Kristi Cantu X 8/1/11
 (PERMITTEE) (DATE)

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

Ronnie W. Duke January 30, 2012
 Ronnie W. Duke, (DATE)
 Chief, Western Evaluation Section

for Edward R. Fleming, District Commander

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.

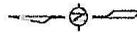
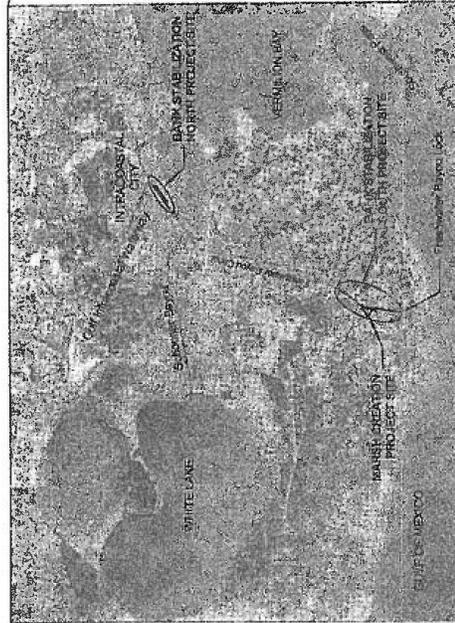
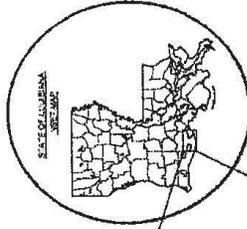
 (TRANSFEE) (DATE)

SPECIAL CONDITIONS: MVN 2010-00574-WOO

7. If the proposed project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc..) in the waterway, you are advised to notify the US Coast Guard, Marine Safety Office, Waterways Management Section so that a Notice to Mariners, if required, may be prepared. Notification, with a copy of the permit and drawings, should be mailed to the Commander (oan), Eighth Coast Guard District, Sector New Orleans Command Center, 201 Hammond Highway, Metairie, Louisiana 70005, about one month before you plan to start work. Telephone inquiries can be directed to (504) 846-5923.
8. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
9. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
10. You must install and maintain, at your expense, any safety lights, signs, and signals prescribed by the US Coast Guard, through regulations or otherwise, on your authorized facilities.
11. The elevation of existing, healthy marsh in or near the project area should be used as the reference/target elevation for the placement of fill in areas that are predominantly open water.
12. Pre- and post-construction photographs shall be provided to ensure that there has not been excessive deposition of fill material into vegetated areas.
13. Permittee shall assure water exchange with newly created wetland area by gapping retention dike (125 feet gap every 500 feet of length) when soil conditions support such interchange not to exceed three years following construction.
14. Our Real Estate Division has indicated that your project is located in an area over which the federal government holds a real estate interest. No work may be performed under this permit until a real estate instrument has been issued by our Real Estate Division. If you require further information regarding the Real Estate instrument, call (504) 862-1701.

STATE OF LOUISIANA
 OFFICE OF COASTAL PROTECTION AND RESTORATION
 ENGINEERING AND OPERATIONS BRANCH

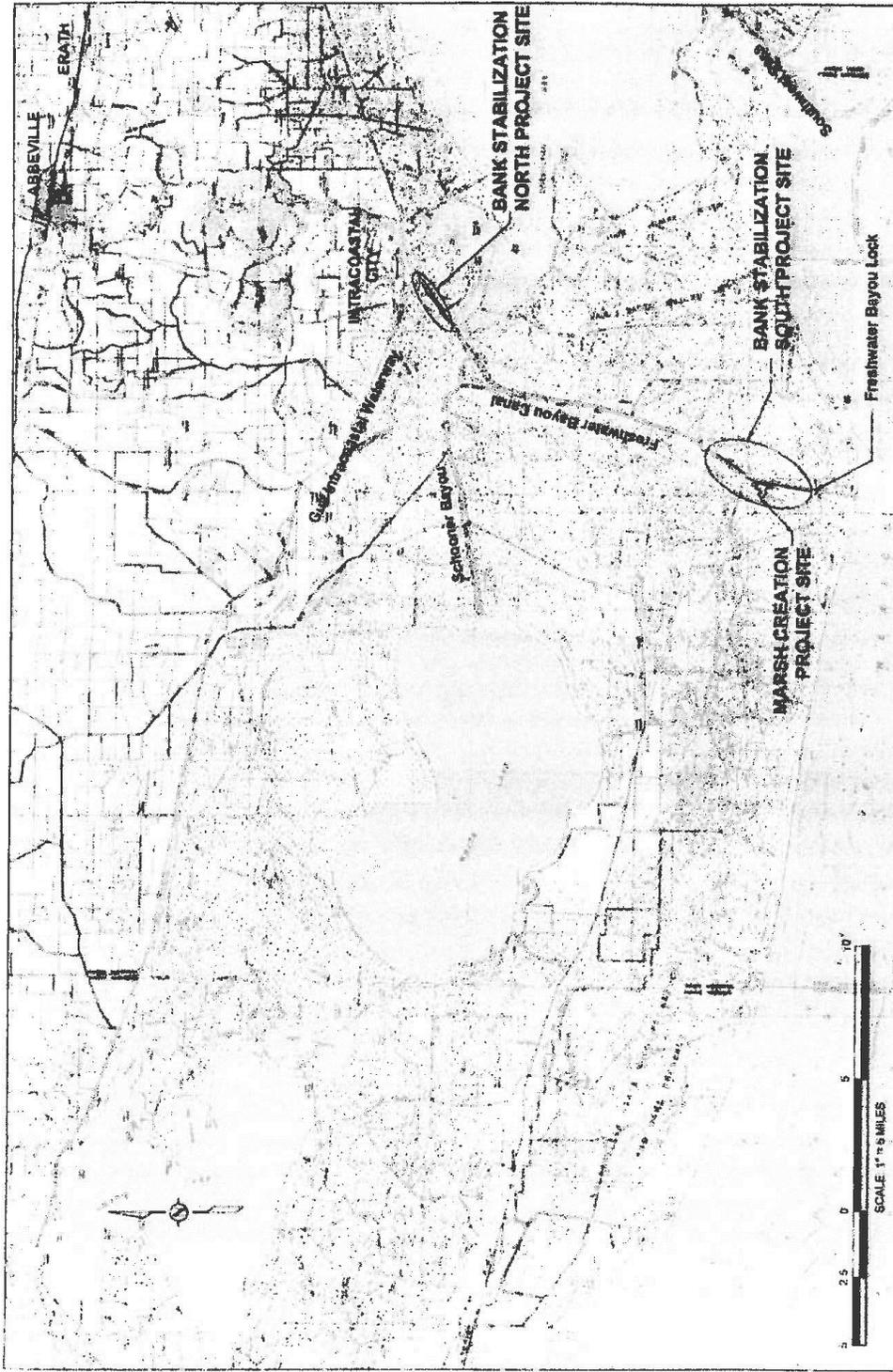
CIAP FRESHWATER BAYOU BANK STABILIZATION &
 SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU
 STATE PROJECT NO. TV-111b(EB) & ME-25SF
 VERMILION PARISH



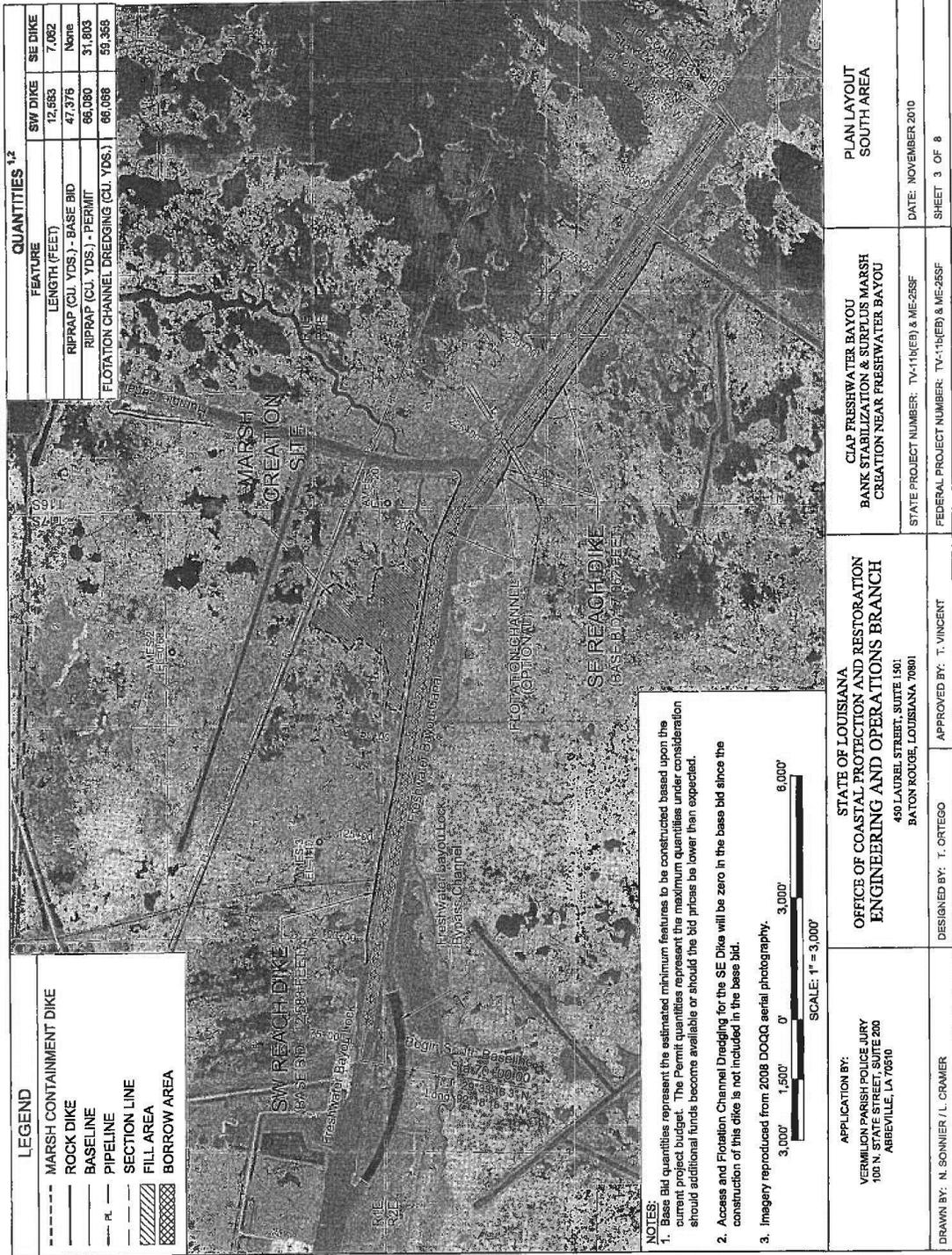
INDEX TO SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|-----------------------------------|
| 1 | TITLE SHEET |
| 2 | VICINITY MAP |
| 3 | PLAN LAYOUT - SOUTH AREA |
| 4 | PLAN LAYOUT - NORTH AREA |
| 5 | PLAN LAYOUT - MARSH CREATION AREA |
| 6-7 | TYPICAL SECTIONS |
| 8 | TYPICAL DETAILS |

| | | | |
|---|--|---|---------------------|
| APPLICATION BY: VERMILION PARISH POLICE JURY 1101 N. STATE STREET, SUITE 201 ABBEVILLE, LA 70511 | STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 450 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801 | CIAP FRESHWATER BAYOU BANK STABILIZATION & SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU | TITLE SHEET |
| DESIGNED BY: T. ORTEGO | APPROVED BY: T. VINCENT | STATE PROJECT NUMBER: TV-111b(EB) & ME-25SF | DATE: FEBRUARY 2019 |
| DRAWN BY: N. SONNIER / L. CRAMER | | FEDERAL PROJECT NUMBER: TV-111b(EB) & ME-25SF | SHEET 1 OF 8 |



| | | | |
|---|--|---|-------------------------------------|
| APRIL 2015 TERREBONNE PARISH FOR THE STATE OF LOUISIANA | STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 481 LAUREL STREET, SUITE 100 MONROE, LOUISIANA 70131 | CLAP FRESHWATER BAYOU BANK STABILIZATION & SLOPE'S MARSH CREATION NEAR FRESHWATER BAYOU | QUADRANGLE VICINITY MAP |
| DRAWN BY: M. GARDNER, L. GRUBIER | DESIGNED BY: T. CURTELO APPROVED BY: T. VINCENT | STATE PROJECT NUMBER: T-11-001-3-MEAS-F FEDERAL PROJECT NUMBER: T-11-001-3-MEAS-F | DATE: FEBRUARY 2014 SHEET 2 OF 8 |



QUANTITIES 1/2

| FEATURE | SW DIKE | SE DIKE |
|---------------------------------------|---------|---------|
| LENGTH (FEET) | 12,583 | 7,062 |
| RIPRAP (CU. YDS.) - BASE BID | 47,376 | None |
| RIPRAP (CU. YDS.) - PERMIT | 66,080 | 31,803 |
| FLOTATION CHANNEL DREDGING (CU. YDS.) | 66,068 | 59,358 |

LEGEND

| | |
|--------|------------------------|
| ----- | MARSH CONTAINMENT DIKE |
| ————— | ROCK DIKE |
| ————— | BASELINE |
| — PL — | PIPELINE |
| ————— | SECTION LINE |
| | FILL AREA |
| | BORROW AREA |

NOTES:

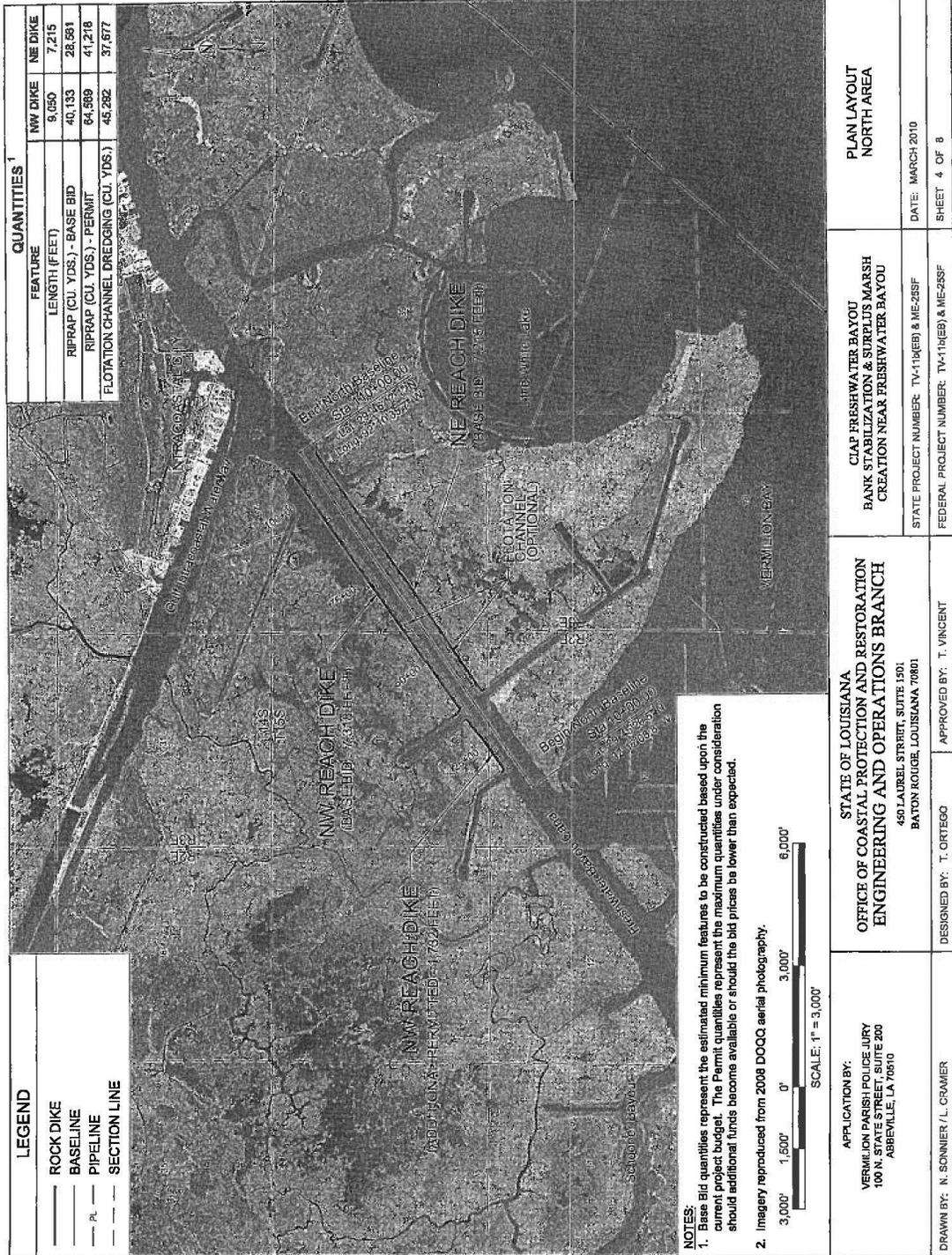
- Base bid quantities represent the estimated minimum features to be constructed based upon the current project budget. The Permit quantities represent the maximum quantities under consideration should additional funds become available or should the bid prices be lower than expected.
- Access and Flotation Channel Dredging for the SE Dike will be zero in the base bid since the construction of this dike is not included in the base bid.
- Imagery reproduced from 2008 DOQQ aerial photography.

3,000' 1,500' 0' 3,000' 6,000'

SCALE: 1" = 3,000'

| | | | |
|--|--|---|---------------------------|
| APPLICATION BY: VERMILION PARISH POLICE JURY 100 N. ARREVILLE STREET, SUITE 200 ARREVILLE, LA 70501 | STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 450 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801 | CIAP FRESHWATER BAYOU BANK STABILIZATION & SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU | PLAN LAYOUT SOUTH AREA |
| DRAWN BY: N. SONNIER / L. CRAMER | DESIGNED BY: T. ORTEGO | STATE PROJECT NUMBER: TV-11(E9) & ME-255F | DATE: NOVEMBER 2010 |
| | | FEDERAL PROJECT NUMBER: TV-11(E9) & ME-255F | SHEET 3 OF 8 |

4: (08A)72381725-08 Permit/2732-08 Copied: 1/12/2010 8:49 AM Rev. 14, 05/10 2010



QUANTITIES¹

| FEATURE | MW DIKE | NE DIKE |
|---------------------------------------|---------|---------|
| LENGTH (FEET) | 9,050 | 7,215 |
| RIPRAP (CU. YDS.) - BASE BID | 40,133 | 28,591 |
| RIPRAP (CU. YDS.) - PERMIT | 64,569 | 41,218 |
| FLOTATION CHANNEL DREDGING (CU. YDS.) | 45,292 | 37,577 |

LEGEND

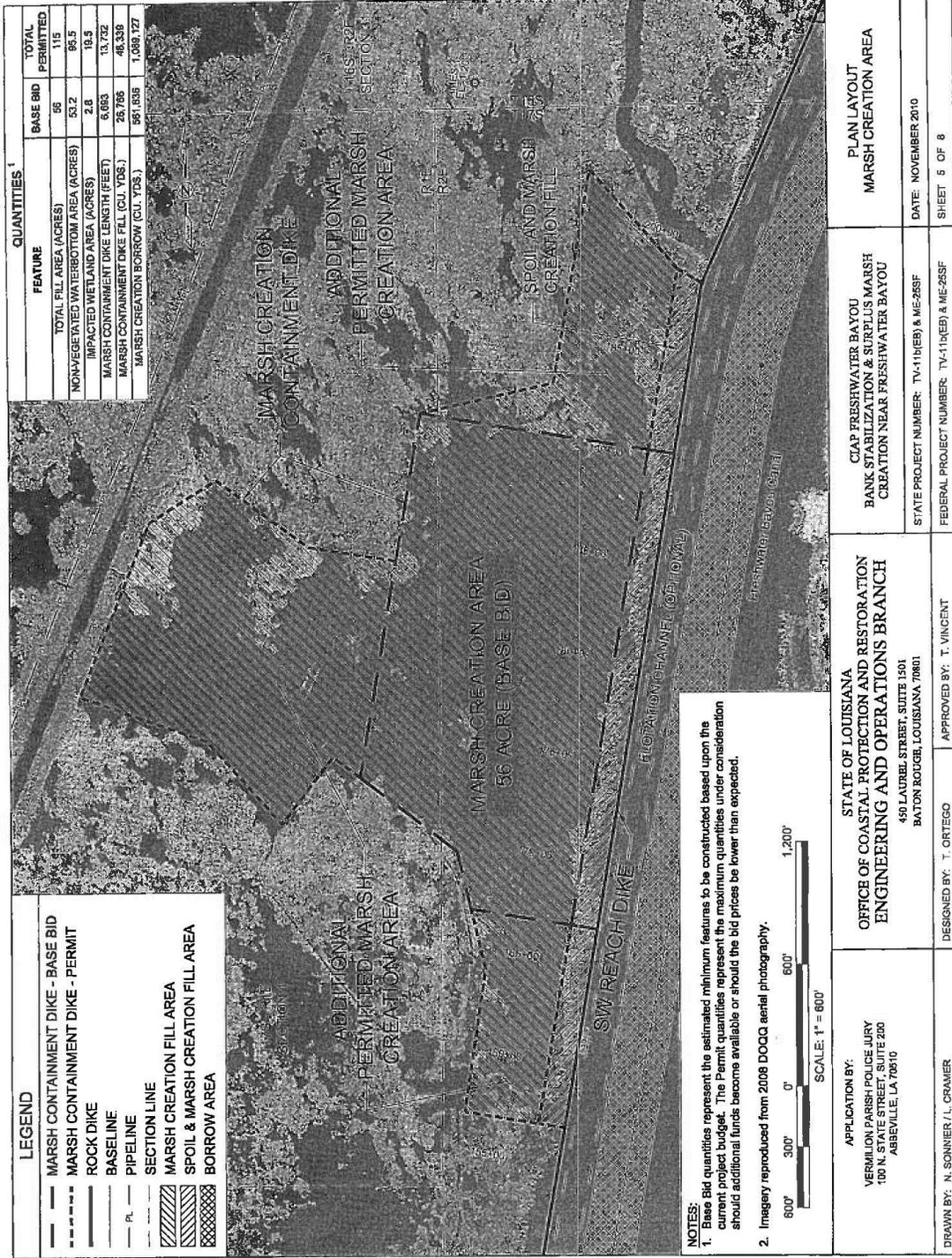
| | |
|--------|--------------|
| — | ROCK DIKE |
| — | BASELINE |
| — PL — | PIPELINE |
| --- | SECTION LINE |

NOTES:

1. Base Bid quantities represent the estimated minimum features to be constructed based upon the current project budget. The Permit quantities represent the maximum quantities under consideration should additional funds become available or should the bid prices be lower than expected.
2. Imagery reproduced from 2008 DOQQ aerial photography.



| | | | |
|--|---|--|--|
| <p>APPLICATION BY: VERMILION PARISH POLICE JURY 100 N. STATE STREET, SUITE 200 ABBEVILLE, LA 70510</p> | <p>STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 400 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801</p> | <p>CIAP FRESHWATER BAYOU BANK STABILIZATION & SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU</p> | <p>PLAN LAYOUT NORTH AREA</p> |
| <p>DESIGNED BY: T. ORTEGO</p> | <p>APPROVED BY: T. VINCENT</p> | <p>STATE PROJECT NUMBER: TV-11(4E) & ME-255F FEDERAL PROJECT NUMBER: TV-11(4E) & ME-255F</p> | <p>DATE: MARCH 2010 SHEET 4 OF 8</p> |
| <p>DRAWN BY: N. SONNIER / L. CRAMER</p> | <p>Permit 1725-08 / 10/20/08</p> | | |



QUANTITIES¹

| FEATURE | BASE BID | TOTAL PERMITTED |
|--|----------|-----------------|
| TOTAL FILL AREA (ACRES) | 56 | 115 |
| NONVEGETATED WATERBOTTOM AREA (ACRES) | 53.2 | 95.5 |
| IMPACTED WETLAND AREA (ACRES) | 2.8 | 19.5 |
| MARSH CONTAINMENT DIKE LENGTH (FEET) | 6,693 | 13,732 |
| MARSH CONTAINMENT DIKE FILL (CU. YDS.) | 28,795 | 48,339 |
| MARSH CREATION BORROW (CU. YDS.) | 561,836 | 1,088,127 |

LEGEND

| | |
|-------|-----------------------------------|
| --- | MARSH CONTAINMENT DIKE - BASE BID |
| - - - | MARSH CONTAINMENT DIKE - PERMIT |
| --- | ROCK DIKE |
| --- | BASELINE |
| --- | PIPELINE |
| --- | SECTION LINE |
| ▨ | MARSH CREATION FILL AREA |
| ▩ | SPOIL & MARSH CREATION FILL AREA |
| ▧ | BORROW AREA |

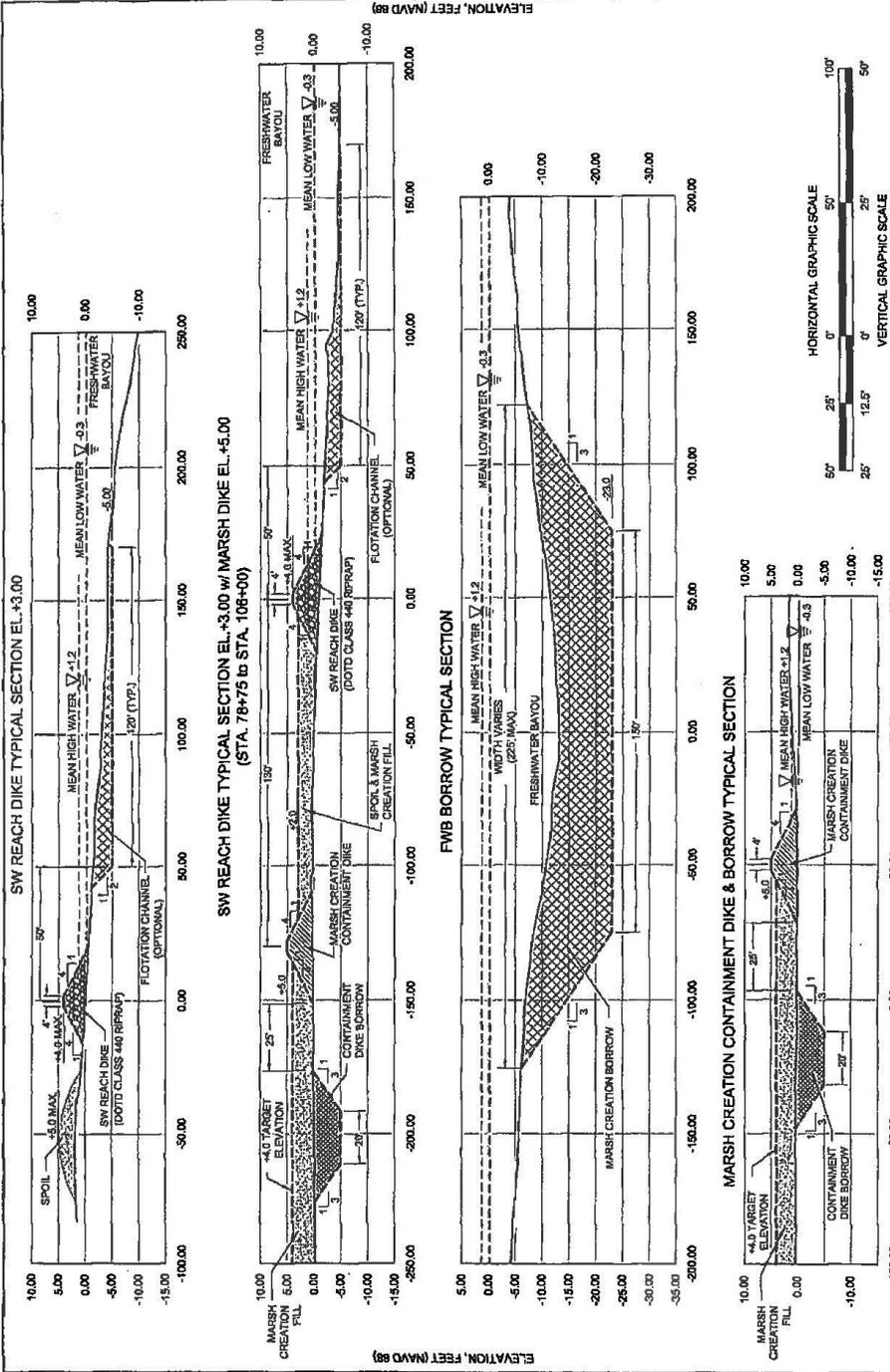
NOTES:

- Base Bid quantities represent the estimated minimum features to be constructed based upon the current project budget. The Permit quantities represent the maximum quantities under consideration should additional funds become available or should the bid prices be lower than expected.
- Imagery reproduced from 2008 DOQQ aerial photography.

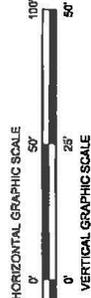
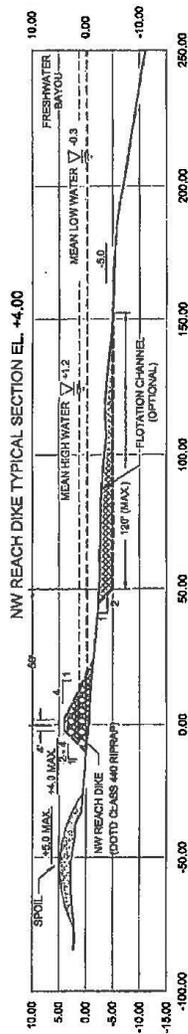
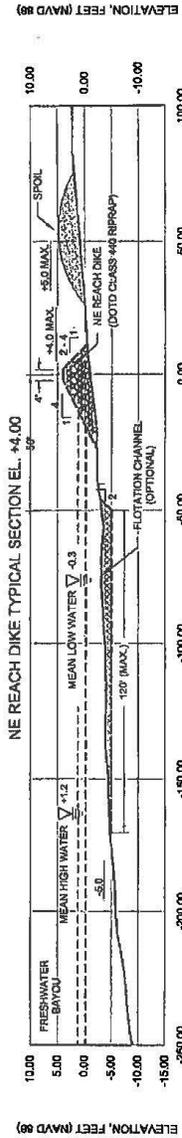
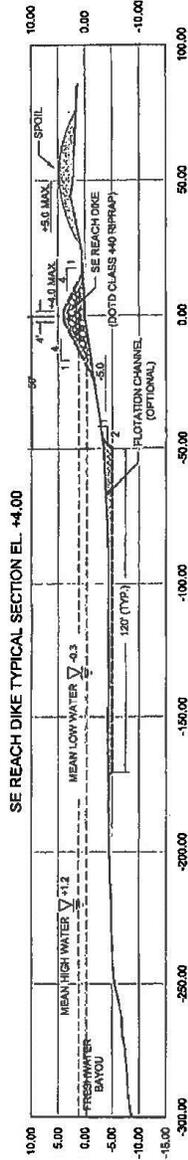


| | | | | |
|--|---|--|---|------------------------------------|
| APPLICATION BY: VERMILION PARISH POLICE JURY 100 N. STATE STREET, SUITE 200 ABBEVILLE, LA 70510 | DESIGNED BY: T. ORTEGO APPROVED BY: T. VINCENT | STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 450 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801 | CIAP FRESHWATER BAYOU BANK STABILIZATION & SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU | PLAN LAYOUT MARSH CREATION AREA |
| DRAWN BY: N. SONNIER / L. CRAMER | DATE: NOVEMBER 2010 | STATE PROJECT NUMBER: TV-11(R)EB) & ME-25SF | FEDERAL PROJECT NUMBER: TV-11(R)EB) & ME-25SF | SHEET 5 OF 8 |

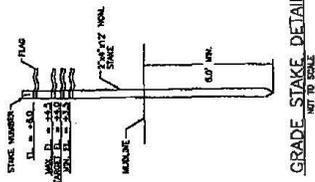
As Shown (7/25/08 Permit) (2/28/09 Update) 11:15:2010.dwg Rev. 10/2010: 3/58



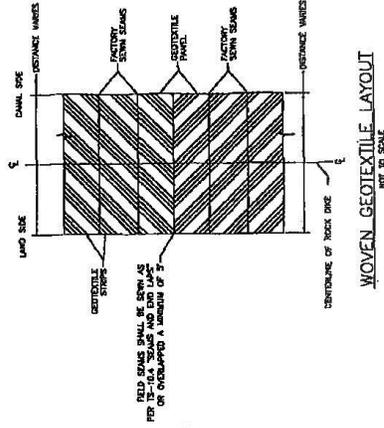
| | | | |
|--|--|--|---------------------|
| APPLICATION BY: VERMILION PARISH POLICE JURY 100 N. STATE STREET, SUITE 200 ABBEVILLE, LA 70510 | STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 450 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801 | TYPICAL SECTIONS | |
| | | DESIGNED BY: T. ORTEGO | DATE: FEBRUARY 2010 |
| DRAWN BY: N. SONNIER / J. CRAMER | APPROVED BY: T. VINCENT | FEDERAL PROJECT NUMBER: TW-11(WEB) & ME-26SF SHEET 6 OF 8 | |



| | | | |
|--|--|---|--|
| APPLICATION BY: VERMILION PARISH POLICE JURY 100 N. STATE STREET, SUITE 200 ABSEVILLE, LA 70510 | STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 450 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801 | CIAP FRESHWATER BAYOU BANK STABILIZATION & SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU | TYPICAL SECTIONS |
| DRAWN BY: N. SONNIER / L. CRAMER | DESIGNED BY: T. ORTEGO | APPROVED BY: T. VINCENT | STATE PROJECT NUMBER: TV-116(E) & ME-265F FEDERAL PROJECT NUMBER: TV-116(E) & ME-265F |
| DATE: FEBRUARY 2010 SHEET: 7 OF 8 | | | |



GRADE STAKE DETAIL
NOT TO SCALE



WOVEN GEOTEXTILE LAYOUT
NOT TO SCALE

- GENERAL APPLICABLE FABRIC NOTES:
1. THE WOVEN GEOTEXTILE FABRIC SHALL OVERLAP ROCK DITCH BY A MINIMUM OF ONE (1) FOOT ON EACH SIDE. THE WOVEN GEOTEXTILE FABRIC SHALL BE SEWN AT THE RAIL/GEOTEXTILE PANEL DITCH INTERSECTION. THE MINIMUM OVERLAP AT THE RAIL/GEOTEXTILE PANEL DITCH INTERSECTION SHALL BE THE (D) TEST UNLESS OTHERWISE SPECIFIED.
 2. THE GEOTEXTILE WITH SEAMS INCLUDES A 3' OVERLAP ON EACH SIDE OF THE ROCK DITCH. SEE 15-110, "WOVEN GEOTEXTILE FABRIC" FOR ADDITIONAL REQUIREMENTS.



MARSH CREATION SETTLEMENT PLATE
NOT TO SCALE

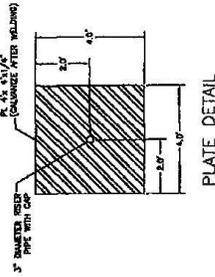
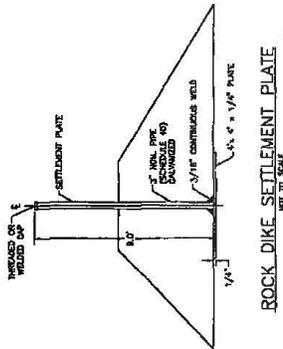


PLATE DETAIL
NOT TO SCALE



ROCK DIKE SETTLEMENT PLATE
NOT TO SCALE

- SETTLEMENT PLATE NOTES:
1. THE SETTLEMENT PLATE SHALL BE INSTALLED ALONG THE PERIMETER OF THE ROCK DITCH.
 2. THE SETTLEMENT PLATE SHALL BE SITUATED WITHIN A MAT OF METALLURGY AND WELDED.
 3. SETTLEMENT PLATES SHALL BE MADE OF 1/4\"/>

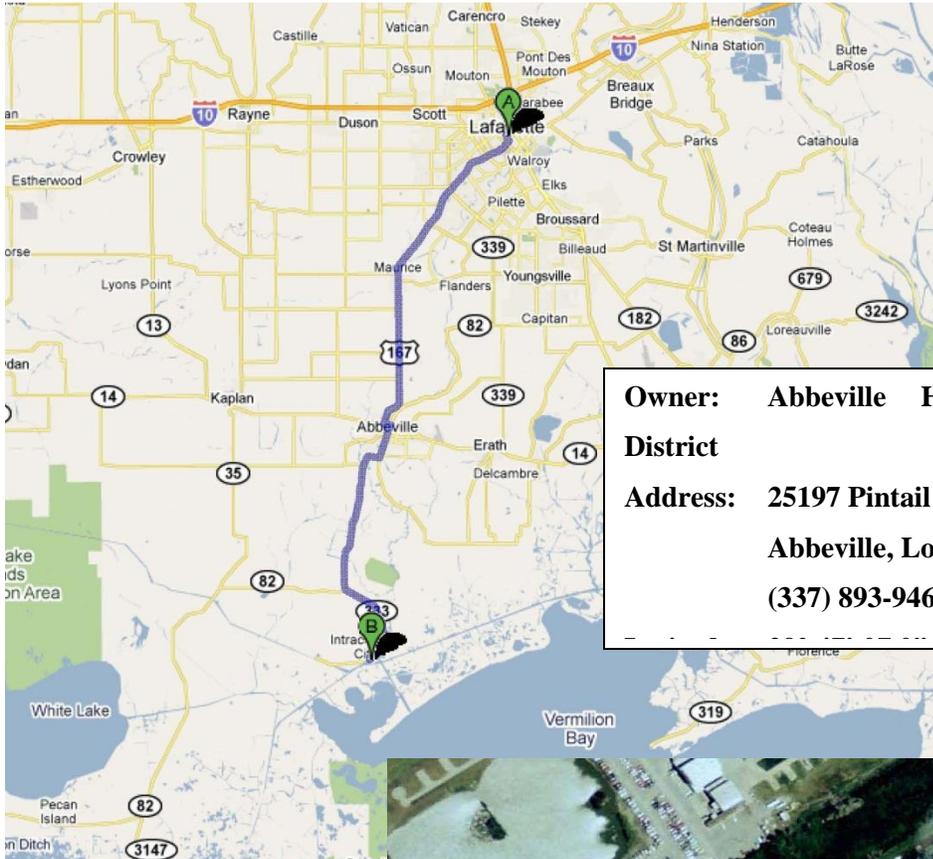
| | | | |
|--|---|---|---|
| <p>APPLICATION BY: VERMILION PARISH POLICE JURY 100 N. STATE STREET, SUITE 200 ABBEVILLE, LA 70510</p> | <p>STATE OF LOUISIANA OFFICE OF COASTAL PROTECTION AND RESTORATION ENGINEERING AND OPERATIONS BRANCH 450 LAUREL STREET, SUITE 1501 BATON ROUGE, LOUISIANA 70801</p> | <p>CIA P FRESHWATER BAYOU BANK STABILIZATION & SURPLUS MARSH CREATION NEAR FRESHWATER BAYOU</p> | <p>TYPICAL DETAILS</p> |
| <p>DRAWN BY: M. SONNIER / L. CRAMER</p> | <p>DESIGNED BY: T. ORTEGO</p> | <p>APPROVED BY: T. VINCENT</p> | <p>DATE: FEBRUARY 2010 SHEET 8 OF 8</p> |
| <p>FEDERAL PROJECT NUMBER: TY-11(E)B & ME-253F</p> | | <p>STATE PROJECT NUMBER: TY-11(E)B & ME-253F</p> | |

APPENDIX E

DIRECTIONS TO BOAT LAUNCH

Directions to Public Boat Launch at Intracoastal City

From Lafayette take La Hwy 167 South to Abbeville. Take left at La Hwy 14 and then turn right on La Hwy 82. Continue thru Abbeville and continue south on La Hwy 82 until reaching the intersection of La Hwy 333. Continue south on La Hwy 82 to Intracoastal City. The boat launch is located on the left as shown below.

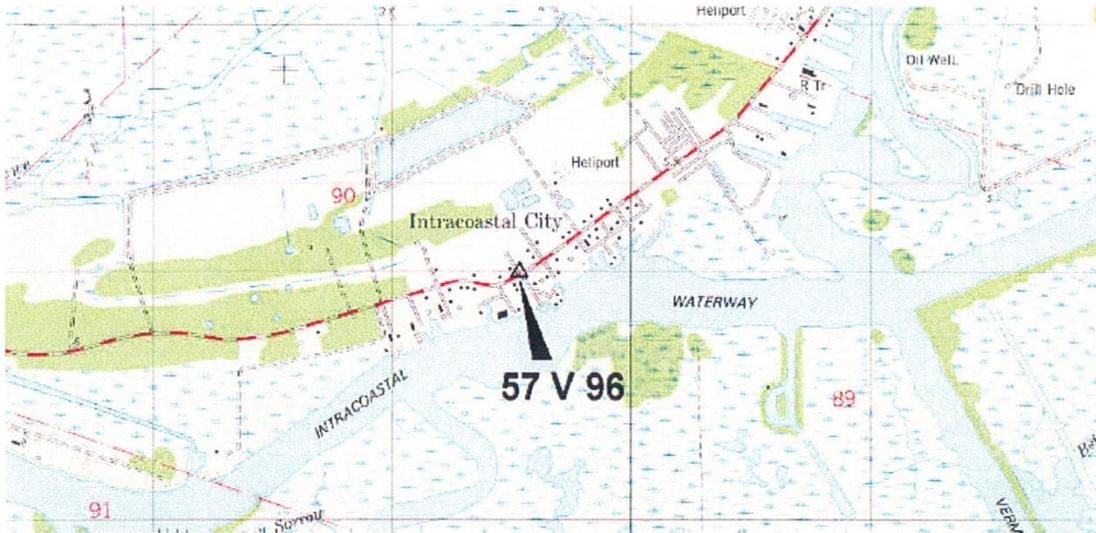


Owner: Abbeville Harbor & Terminal District
Address: 25197 Pintail Avenue
Abbeville, Louisiana 70510
(337) 893-9465



APPENDIX F

SURVEY CONTROL



VICINITY MAP Scale: 1" = 2000' Reproduced from USC&GS "INTRACOASTAL CITY, LA" Quadrangle

Station Name: "57 V 96"

Monument Location: Located at the intersection of LA Hwy 333 and Oyster Lane in Intracoastal City, Louisiana, 23 feet west-southwest of the centerline of Oyster Lane and 53 feet north-northwest of the centerline of LA Highway 333.

Monument Description: Standard survey disk set in top of concrete monument stamped "57 V 96 1968"

Re-Adjusted: January 2008

Monument Established By: National Geodetic Survey

Published NAD83 Geodetic Position (NSRS2007)

Lat. 29° 47' 04.17551" N
 Long. 92° 09' 24.36806" W

Published NAD83 Datum LSZ (1702) Ft (NSRS2007)

N= 468,060.50
 E= 3,019,628.79

Published NAVD88 Height (2004.65)

Elevation = 3.2 ft (0.98 mtrs)
 Ellipsoid = -25.246 mtrs (02/10/07)

Adjusted NAVD88 Height (2006.81)

Elevation = 3.17 feet (0.965 mtrs)

Ellipsoid Height = -25.292 mtrs
 Geoid03 Height = -26.257 mtrs (2004.65)



Adjusted Position Established by John Chance Land Surveys, Inc. for CPRA-OCPR



VICINITY MAP

Image Reproduced from Google Earth™

Station Name: "876 6072 A"

Monument Location: Located at the northwest corner of the Freshwater Bayou Locks near Freshwater City, Louisiana. Prior to access, please notify Lockmaster Casey Shultz at 337 737-2478.

Monument Description: A standard brass cap set in top of concrete lock structure.

Stamping: "876 6072 A"

Date: November 2008

Monument Established By: NOAA-NGS

Adjusted NAD83 Geodetic Position (NSRS2007)

Lat. 29° 33' 06.35562" N
 Long. 92° 18' 18.87936" W

Adjusted NAD83 Datum LSZ (1702) Ft (NSRS2007)

N= 383,801.19
 E= 2,971,813.60

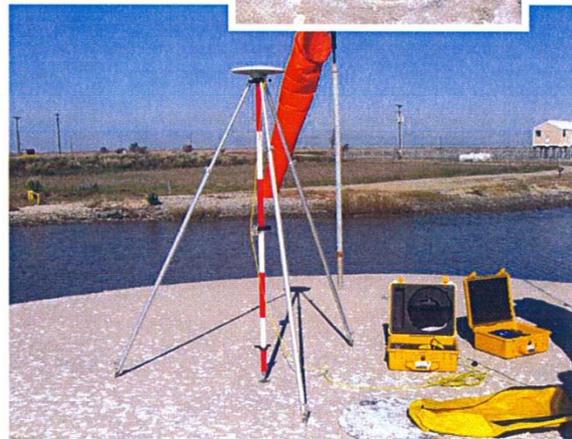
Adjusted NAVD88 Height (2006.81)

Elevation = 7.28 feet (2.218 mtrs)

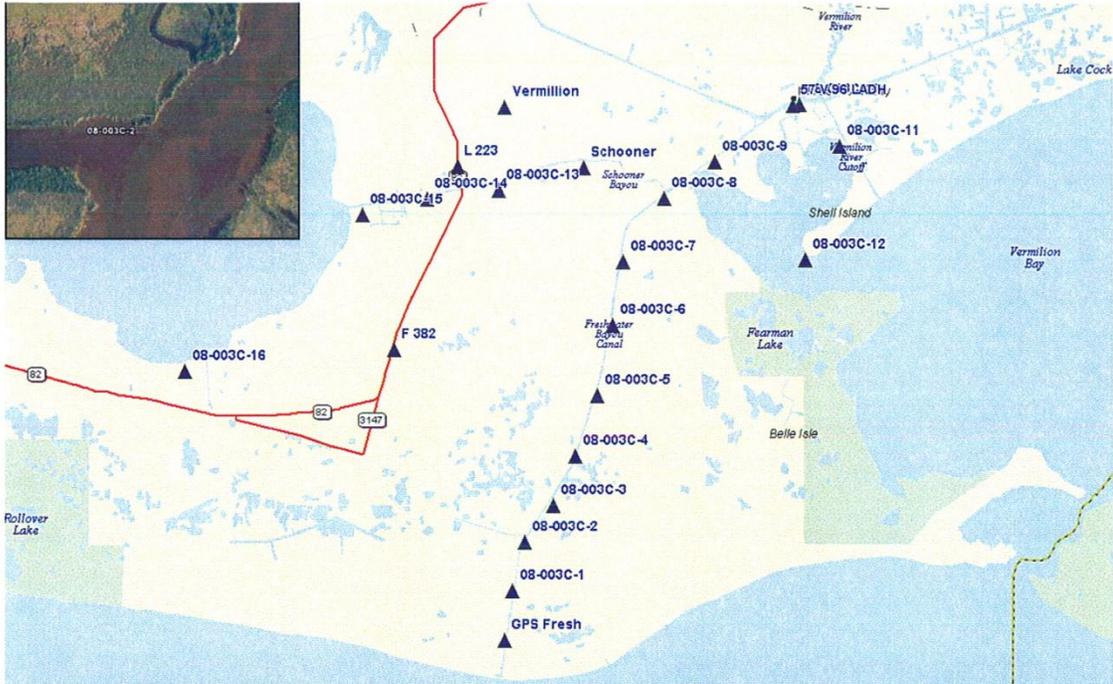
*Ellipsoid Height = -23.324 mtrs.
 Geoid03 Height = -25.542 mtrs. (2004.65)*

OPUS Average for Comparison Only

NAVD88 Height (2004.65)
 Elevation = 7.34 feet (2.236 mtrs)



Adjusted position determined by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, Coastal Engineering Division



VICINITY MAP

Station Name: 08-003C-2

Station Location: To reach the station by boat from the north end of freshwater bayou lock, proceed north 2.84 miles to the mark and station on the left. The mark is surrounded by two metal T-posts painted yellow. The mark is located 5' west of the west edge of rip rap on the west bank of freshwater bayou.

Station Description: COE Brass Disk on a 8' iron rod set flush with the ground, stamped "08-003C-2 (2008), surrounded by two metal T-posts painted yellow

Job #: 08-003C

Date: 02/06/2008

Station Established By: EMC Inc.

Horizontal Position Established By: GPS Network

Vertical Position Established By: GPS Network

NAD 83 Geodetic Position

Lat. 29°35'43.51262"N

Long. 92°17'44.34517"W

NAD 1983 Datum LSZ (1702) Feet

N= 399649.837

E= 2974996.979

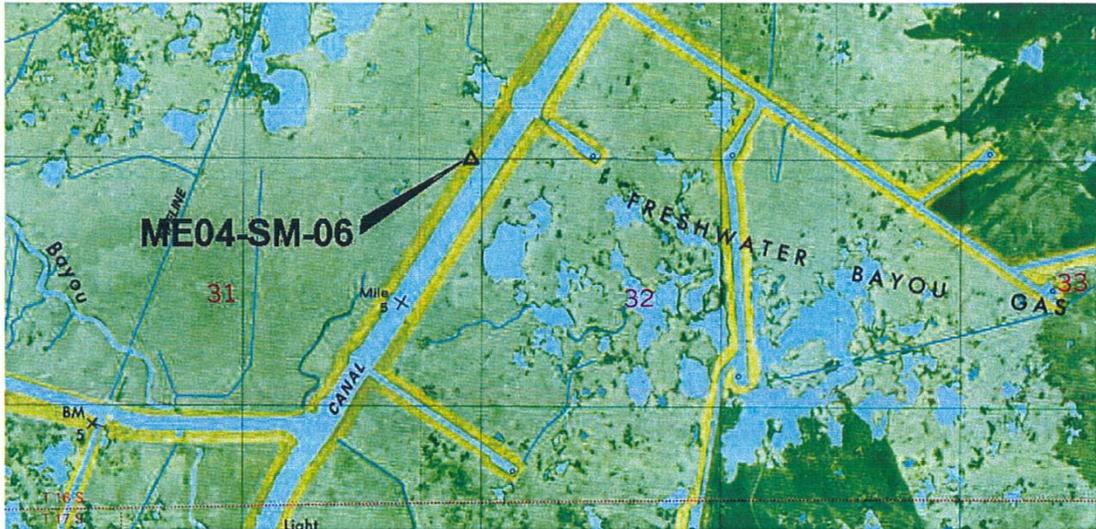
NAVD88 (Feet) / Geoid 03 / Epoch 2006.81

Elevation = 2.978



Adjusted Position Established by EMC, Inc. for the U.S. Army Corps of Engineers, District New Orleans, Survey Section

Ref. No. TV7



VICINITY MAP Scale: 1" = 2000' Reproduced from USC&GS "MULBERRY ISLAND EAST" Quadrangle

Station Name: "ME04-SM-06"

Monument Location: The station is located at mile 5.4 of Freshwater Bayou Canal in Freshwater Bayou Oil & Gas Field, Vermilion Parish, Louisiana, behind a protective rock barrier on the west spoil bank of Freshwater Bayou.

Monument Description: Standard brass survey disk attached to a steel rod to refusal within a 6" PVC sleeve set in concrete and stamped "TIGRE".

Stamping: "TIGRE"

Surveyed: July 2001

Re-Adjusted: January 2008

Monument Established By: John Chance Land Surveys, Inc.

Adjusted NAD83 Geodetic Position NSRS2007

Lat. 29° 36' 17.13334"N
 Long. 92° 17' 16.94426"W

Adjusted NAD83 Datum LSZ (1702) Ft (NSRS2007)

N= 403,025.61
 E= 2,977,444.27

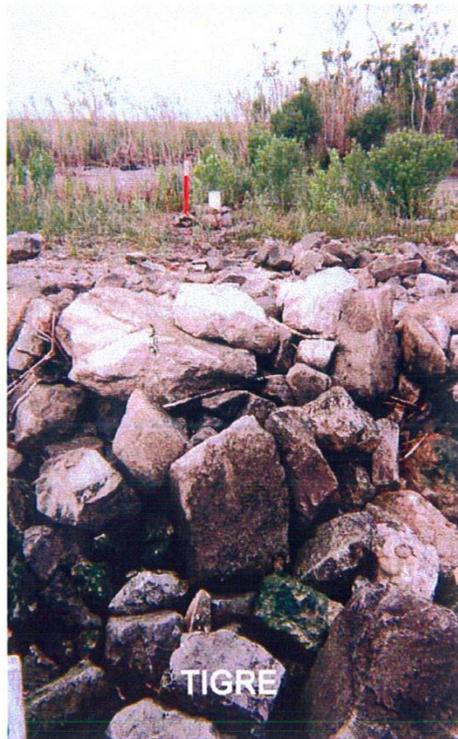
Adjusted NAVD88 Height (2006.81)

Elevation = 2.18 feet (0.665 mtrs.)

*Ellipsoid Height: -25.031 mtrs
 Geoid03 Height: -25.696 mtrs (2004.65)*

FOR REFERENCE ONLY

LCZ Adjusted NAVD88 Height (Geoid99)
 Elevation = 2.73 feet (0.833 mtrs)



Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CED

APPENDIX G

SOIL BORING LOGS

SOIL CLASSIFICATION CHART

| MAJOR DIVISIONS | | | SYMBOLS | | TYPICAL DESCRIPTIONS | |
|-------------------------------------|--|---|-------------------------------------|--------|---|---|
| | | | GRAPH | LETTER | | |
| COARSE GRAINED SOILS | GRAVEL AND GRAVELLY SOILS | CLEAN GRAVELS (LITTLE OR NO FINES) | | GW | WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES | |
| | | GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES) | | GP | POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES | |
| | MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE | SAND AND SANDY SOILS | CLEAN SANDS (LITTLE OR NO FINES) | | SW | WELL-GRADED SANDS, GRAVELLY SANDS |
| | | SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES) | | SP | POORLY-GRADED SANDS, GRAVELLY SAND | |
| | FINE GRAINED SOILS | SILTS AND CLAYS | LIQUID LIMIT LESS THAN 50 | | ML | INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY |
| | | | LIQUID LIMIT GREATER THAN 50 | | CL | INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS |
| MORE THAN 50% PASSING NO. 200 SIEVE | SILTS AND CLAYS | LIQUID LIMIT LESS THAN 50 | | OL | ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY | |
| | | LIQUID LIMIT GREATER THAN 50 | | MH | INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS | |
| HIGHLY ORGANIC SOILS | SILTS AND CLAYS | LIQUID LIMIT GREATER THAN 50 | | CH | INORGANIC CLAYS OF HIGH PLASTICITY | |
| | | LIQUID LIMIT GREATER THAN 50 | | OH | ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY | |
| HIGHLY ORGANIC SOILS | | | | PT | PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS | |

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

Sampler Symbol Descriptions

- 2.4-inch I.D. split barrel
- Standard Penetration Test (SPT)
- Shelby tube
- Piston
- Direct-Push
- Bulk or grab

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

ADDITIONAL MATERIAL SYMBOLS

| SYMBOLS | | TYPICAL DESCRIPTIONS |
|---------|--------|-----------------------------|
| GRAPH | LETTER | |
| | CC | Cement Concrete |
| | AC | Asphalt Concrete |
| | CR | Crushed Rock/ Quarry Spalls |
| | TS | Topsoil/ Forest Duff/Sod |

- Measured groundwater level in exploration, well, or piezometer
- Groundwater observed at time of exploration
- Perched water observed at time of exploration
- Measured free product in well or piezometer

Graphic Log Contact

- Distinct contact between soil strata or geologic units
- Approximate location of soil strata change within a geologic soil unit

Material Description Contact

- Distinct contact between soil strata or geologic units
- Approximate location of soil strata change within a geologic soil unit

Laboratory / Field Tests

- %F Percent fines
- AL Atterberg limits
- CA Chemical analysis
- CP Laboratory compaction test
- CS Consolidation test
- DS Direct shear
- HA Hydrometer analysis
- MC Moisture content
- MD Moisture content and dry density
- OC Organic content
- PM Permeability or hydraulic conductivity
- PP Pocket penetrometer
- SA Sieve analysis
- TX Triaxial compression
- UC Unconfined compression
- VS Vane shear

Sheen Classification

- NS No Visible Sheen
- SS Slight Sheen
- MS Moderate Sheen
- HS Heavy Sheen
- NT Not Tested

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

KEY TO EXPLORATION LOGS

Louis J
CAPOZZOLI a subsidiary of GeoEngineers
and Associates

FIGURE B-1

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|-------------------|
| Date(s) Drilled | 11/23/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 48 | Surface Elevation (ft) | 7.3 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: | N29°46'16.43" |
| | | | | Longitude: | W92°10'50.02" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|----------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| 5 | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| 0 | | | | | | 2 feet from water surface to mudline | | | | | | |
| 0 | | | | | | Mudline | | | | | | |
| 0 | | | | | | No sample recovered | | | | | | |
| 10 | | | | | | | | | | | | |
| -5 | | | 33 | | 1 | Dark gray organic matter (OH) (organic content 39.1%) | 469 | | 460 | 246 | | 0.02 |
| -5 | | | 92 | | 2 | Very soft dark gray slightly organic clay (CH) | 92 | 48 | | | 0.03 @ 0.15 | 0.32 |
| 15 | | | 100 | | 3 | Very soft gray clay (CH) (organic content 5.4%) | 37 | 84 | 50 | 28 | 0.09 @ 0.2 | 0.22 |
| 15 | | | 100 | | 4 | Very soft gray clay (CH) | 35 | 87 | | | 0.11 @ 0.26 | 0.42 |
| -10 | | | 58 | | 5 | Soft gray clay with silt pockets and streaks (CH) | 29 | 93 | 52 | 31 | 0.28 @ 0.32 | 0.22 |
| 20 | | | 69 | | 6 | Medium tan and gray slightly silty clay (CL) | 21 | 100 | | | 0.81 @ 0.38 | 1.62 |
| -15 | | | 75 | | 7 | Stiff tan and gray clay with silt streaks (CH) | 21 | 100 | 55 | 34 | 1.15 @ 0.43 | 2.1 |
| 25 | | | 88 | | 8 | Stiff tan and gray slightly silty clay (CL) | 21 | 101 | | | 1.09 @ 0.49 | 0.84 |
| -20 | | | 83 | | 9 | Medium tan and light gray slightly silty clay with ferrous nodules (CL) | 24 | 100 | 43 | 20 | 0.58 @ 0.55 | 0.44 |
| 30 | | | | | | | | | | | | |
| -25 | | | 88 | | 10 | Medium tan and light gray very silty clay with ferrous nodules (CL) | 26 | 98 | | | 0.54 @ 0.69 | 0.1 |
| 35 | | | | | | | | | | | | |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNR P:11616715007\GINT\1671500700.LOGS\GPI.GEOENGINEERS.GDT 6/12/08

LOG OF BORING B-1

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-007-00

LOG OF BORING LDNR P:1616715007\GINT11671500700 LOGS.CPJ GEOENGINEERS.GDT 6/12/09

| Elevation (feet) | Depth (feet) | SAMPLES | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|--|----------------|---------------------|--------------------------|----------------------|--------------------------|-------------------------------------|
| | | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Moisture Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | | | | | | | | | | | |
| -30 | 100 | | | 11 | Soft tan and light gray silty clay (CL) | 25 | 99 | 35 | 17 | 0.41 @ 0.84 | 1.48 |
| -35 | 92 | | | 12 | Medium tan and gray clay with silt streaks, pockets and ferrous nodules (CH) | 28 | 93 | | | 0.62 @ 0.98 | 0.22 |
| -40 | 92 | | | 13 | Medium tan clay with silt lenses, streaks and ferrous nodules (CH) | 27 | 93 | 51 | 29 | 0.55 @ 1.13 | 0.1 |

LOG OF BORING B-1 (continued)

Louis J CAPOZZOLI
and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/20/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 50 | Surface Elevation (ft) | 7.1 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°37'16.73" W92°16'29.97" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|----------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|--------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Containing Pressure (TSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| 5 | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| 10 | | | | | | 5 feet from water surface to mudline | | | | | | |
| 10 | | | | | | Mudline | | | | | | |
| 15 | | | | | | No sample recovered | | | | | | |
| 15 | | | | | | No sample recovered | | | | | | |
| 15 | | | | | | No sample recovered | | | | | | |
| 10 | | | 38 | | 1 | Very soft gray clay with silt traces (CH) (organic content 5.4%) | 54 | 67 | 61 | 36 | 0.12 @ 0.23 | 0.2 |
| 20 | | | 96 | | 2 | Very soft gray clay (CH) | 47 | 69 | | | 0.17 @ 0.26 | 0.08 |
| 20 | | | 100 | | 3 | Very soft gray slightly organic clay with silt streaks and pockets (CH) | 86 | 53 | | | 0.19 @ 0.32 | 0.06 |
| 15 | | | 100 | | 4 | Very soft gray silty clay (CL) | 37 | 84 | 39 | 18 | 0.22 @ 0.38 | 0.06 |
| 25 | | | 100 | | 5 | Very soft gray clay with silt traces and shells (CH) | 59 | 70 | | | 0.22 @ 0.43 | 0.04 |
| 20 | | | 100 | | 6 | Soft gray clay with silt traces (CH) | 51 | 72 | | | 0.26 @ 0.49 | 0.04 |
| 30 | | | 100 | | 7 | Very soft gray clay with silt traces (CH) | 54 | 69 | 52 | 31 | 0.09 @ 0.55 | 0.08 |
| 25 | | | 100 | | 8 | Very soft gray clay with silt traces and shells (CH) | 53 | 71 | | | 0.14 @ 0.69 | 0.64 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING B-2A

Louis J
CAPOZZOLI
and Associates

a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-008-00

Sheet 1 of 2

LOG OF BORING: LDNR P:1671500800 LOGS: GPJ GEOENGINEERS.GDT 6/12/09

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|-----------------------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth Interval (feet) | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | | | | | | | | | | | |
| 35 - 37 | 100 | | | 9 | Very soft gray clay with silt traces (CH) | 64 | 64 | 89 | 61 | 0.22 @ 0.84 | 0.14 |
| 37 - 40 | | | | | | | | | | | |
| 40 - 42 | 100 | | | 10 | Soft gray clay with silt traces (CH) | 62 | 65 | | | 0.26 @ 0.98 | 0.12 |
| 42 - 45 | | | | | | | | | | | |
| 45 - 48 | 100 | | | 11 | Stiff tan and gray silty clay (CL) | 29 | 88 | 41 | 21 | 1.22 @ 1.13 | 0.62 |
| 48 - 50 | | | | | | | | | | | |

LOG OF BORING: LDNR_P\16\16715008\GINT\1671500800_LOGS.CPJ_GEOENGINEERS.GDT_6/12/09

LOG OF BORING B-2A (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/17/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 46 | Surface Elevation (ft) | 7.6 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°35'51.16" W92°17'26.94" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|-----------------------|---------------|----------------|---------------|-------------|--|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth Interval (feet) | Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| -5 | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| -1 | | | | | | 1 foot from water surface to mudline | | | | | | |
| -1 | 71 | | | 1 | | Very soft gray slightly organic clay (CH) | 85 | 54 | | 0.14 @ 0.03 | 0.1 | |
| -10 | 100 | | | 2 | | Very soft gray slightly organic clay (CH) | 78 | 60 | 85 | 0.17 @ 0.09 | 0.04 | |
| -10 | 100 | | | 3 | | Very soft gray slightly organic clay (CH) | 105 | 45 | | 0.1 @ 0.15 | 0.14 | |
| -5 | 96 | | | 4 | | Very soft gray slightly organic clay (CH) | 103 | 49 | | 0.13 @ 0.2 | 0.1 | |
| -15 | 100 | | | 5 | | Very soft gray slightly organic clay with shells (CH) (organic content 9.5%) | 71 | 55 | | 0.07 @ 0.26 | 0.06 | |
| -10 | 100 | | | 6 | | Very soft gray slightly organic clay with shells (CH) | 96 | 47 | 103 | 0.12 @ 0.32 | 0.14 | |
| -20 | 100 | | | 7 | | Very soft gray slightly organic clay with shells (CH) | 92 | 56 | | 0.18 @ 0.38 | 0.08 | |
| -15 | 100 | | | 8 | | Very soft gray slightly organic clay with shells (CH) | 95 | 51 | | 0.12 @ 0.43 | 0.14 | |
| -25 | 100 | | | 9 | | Soft gray slightly organic clay with shells (CH) | 79 | 60 | | 0.3 @ 0.49 | 0.16 | |
| -25 | 100 | | | 10 | | Very soft gray slightly organic clay with shells (CH) | 110 | 52 | 87 | 0.13 @ 0.55 | 0.08 | |
| -30 | 100 | | | 11 | | Very soft gray clay with shells (CH) | 61 | 60 | | 0.14 @ 0.69 | 0.06 | |
| -35 | | | | | | Note: Surface elevation is measured at the top of casing. | 50 | 68 | | 0.25 @ 0.84 | 0.04 | |

LOG OF BORING LADNR P:1616715008\GINT11671500800_LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-3

Louis J. CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-008-00

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|----------------|---------------|----------------|---------------|---|----------------|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | 35 - 37 | 100 | | 12 | Soft gray clay with shells (CH) | | | | | | |
| 40 | 37 - 39 | 100 | | 13 | Very soft gray clay with organic matter and shells (CH) | 64 | 62 | 103 | 74 | 0.21 @ 0.98 | 0.1 |
| 45 | 39 - 41 | 100 | | 14 | Very soft gray clay with shells (CH) | 57 | 70 | | | 0.23 @ 1.13 | 0.18 |

LOG OF BORING: LDNR_P:\16\16715008\GINT\1671500800_LOGS.GPJ_GEOENGINEERS.GDT_6/12/09

LOG OF BORING B-3 (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|-------------------|
| Date(s) Drilled | 11/15/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 52 | Surface Elevation (ft) | 8.0 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: | N29°35'37.98" |
| | | | | Longitude: | W92°17'46.87" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|---|--|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| -5 | | | | | | | | | | | | |
| | | | | | | 4 feet from barge deck to water surface | | | | | | |
| -10 | | | | | | | | | | | | |
| | | | | | | 6 feet from water surface to mudline | | | | | | |
| -15 | | | | | | Mudline | | | | | | |
| | | | | | | No sample recovered | | | | | | |
| -20 | | | | | | No sample recovered | | | | | | |
| | | 74 | | 1 |  | Very soft gray clay (CH) (organic content 9.5%) | 107 | 46 | 104 | 72 | 0.06 @ 0.15 | 0.02 |
| -10 | | 100 | | 2 |  | Soft gray clay (CH) | 102 | 45 | | | 0.04 @ 0.2 | 0.04 |
| -20 | | 100 | | 3 |  | Very soft gray clay with 1 inch sand layer (CH) | 50 | 69 | | | 0.04 @ 0.26 | 0.08 |
| -15 | | 100 | | 4 |  | Very soft gray clay with sand pockets, streaks and shells (CH) | 75 | 61 | 104 | 70 | 0.08 @ 0.32 | 0.12 |
| -25 | | 100 | | 5 |  | Very soft gray clay with sand streaks and shells (CH) | 45 | 69 | | | 0.04 @ 0.38 | 0.14 |
| -20 | | 100 | | 6 |  | Very soft gray clay with 2 inch sand layer and shells (CH) | 48 | 78 | 80 | 51 | 0.04 @ 0.43 | 0.1 |
| -30 | | 100 | | 7 |  | Loose gray sand and shells with clay streaks (SP) | 48 | 79 | | | 0.11 @ 0.55 | 0.04 |
| -25 | | | | | | | | | | | | |
| -35 | | | | | | | | | | | | |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNR P-1671508-00 LOGS.GPJ.GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-4

Louis J. CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

Sheet 1 of 2

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | | |
|------------------|--------------|----------|---------------|----------------|---------------|----------------------|----------------|---------------------|--------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Moisture Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 35 | | 100 | | | 8 | ● | | 48 | 80 | | | 0.33 @ 0.69 | 0.02 |
| -30 | | | | | | ● | | | | | | | |
| -40 | | 88 | | | 9 | ▨ | | 47 | 79 | | | 0.07 @ 0.84 | 0.06 |
| -35 | | | | | | ▨ | | | | | | | |
| -45 | | 100 | | | 10 | ▨ | | 41 | 80 | 46 | 23 | 0.08 @ 0.98 | 0.02 |
| -40 | | | | | | ▨ | | | | | | | |
| -50 | | 71 | | | 11 | ▨ | | 42 | 80 | | | 0.07 @ 1.13 | 0.12 |

LOG OF BORING LDNR P.161671500B1GINT11671500800_LOSS.CPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-4 (continued)

Louis J CAPOZZOLI a subsidiary of GeoEngineers and Associates

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/13/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 54 | Surface Elevation (ft) | 8.5 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°33'53.90" W92°18'04.47" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|-----------------------|---------------|----------------|---------------|---|---|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth Interval (feet) | Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | | | | | | | | |
| 5 | | | | | | 4 feet from barge deck to water surface | | | | | | |
| 10 | | | | | | | | | | | | |
| 10 | | | | | | 8 feet from water surface to mudline | | | | | | |
| 15 | | | | | | Mudline | | | | | | |
| 15 | | | | | | No sample recovered | | | | | | |
| 15 | 100 | | | 1 |  | Very soft gray slightly organic clay (CH) | 110 | 43 | | | 0.12 @ 0.09 | 0.12 |
| 15 | 100 | | | 2 |  | Very soft gray slightly organic clay (CH) (organic content 10.5%) | 113 | 43 | 131 | 103 | 0.11 @ 0.15 | 0.04 |
| 15 | 100 | | | 3 |  | Very soft gray slightly organic clay (CH) | 102 | 44 | | | 0.09 @ 0.2 | 0.18 |
| 15 | 100 | | | 4 |  | Very soft gray slightly organic clay (CH) | 96 | 46 | 83 | 60 | 0.1 @ 0.26 | 0.12 |
| 15 | 100 | | | 5 |  | Very soft gray slightly organic clay (CH) | 93 | 52 | | | 0.11 @ 0.32 | 0.18 |
| 15 | 100 | | | 6 |  | Very soft gray slightly organic clay with sand traces (CH) | 90 | 48 | 108 | 77 | 0.15 @ 0.38 | 0.18 |
| 15 | 100 | | | 7 |  | Very soft gray slightly organic clay with sand traces (CH) | 116 | 45 | | | 0.1 @ 0.43 | 0.28 |
| 15 | 100 | | | 8 |  | Very soft gray slightly organic clay (CH) | 110 | 44 | 107 | 77 | 0.1 @ 0.49 | 0.12 |
| 15 | 100 | | | 9 |  | Very soft gray slightly organic clay with sand streaks (CH) | 77 | 60 | | | 0.14 @ 0.55 | 0.1 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING: LDNR_P:16715007:GINT11671500700:LOGS.GPJ.GEOENGINEERS.GDT_6/12/09

LOG OF BORING B-6A

Louis J. CAPOZZOLI
and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-007-00

Sheet 1 of 2

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|----------------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | | | | | | | | | | | |
| -30 | 35-30 | 100 | 10 | 10 | Very soft gray slightly organic clay with sand streaks (CH) | 87 | 51 | 80 | 52 | 0.14 @ 0.69 | 0.14 |
| -35 | 35-30 | 100 | 11 | 11 | Soft gray clay with sand traces (CH) | 71 | 62 | | | 0.25 @ 0.84 | 0.12 |
| -40 | 35-30 | 100 | 12 | 12 | Soft gray clay (CH) | 72 | 60 | 65 | 37 | 0.45 @ 0.98 | 0.12 |
| -45 | 35-30 | 100 | 13 | 13 | Very soft gray clay (CH) | 72 | 56 | | | 0.23 @ 1.41 | 0.24 |

LOG OF BORING LDNR P:1616715007\GINT\1671500700_LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-6A (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00
 Sheet 2 of 2

| | | | | | |
|---------------------|--|------------------------|-------------------------------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/22/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | Cathead Hammer 140 lb/30 in drop | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 66 | Surface Elevation (ft) | 7.3 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°45'27.58" W92°11'59.95" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|-------------|---|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| 5 | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| 0 | | | | | | 1 foot from water surface to mudline | | | | | | |
| 0 | | | | | | Mudline | | | | | | |
| 0 | | | | | | No sample recovered | | | | | | |
| 10 | 92 | | | 1 | | Very soft gray clay (CH) | 40 | 82 | 55 | 34 | 0.06 @ 0.09 | 1.58 |
| 10 | 100 | | | 2 | | Very soft gray clay (CH) | 53 | 71 | | | 0.04 @ 0.15 | 1.5 |
| 5 | 100 | | | 3 | | Soft tan and gray clay with silt pockets and streaks (CH) | 35 | 90 | | | 0.28 @ 0.2 | 0.1 |
| 15 | 100 | | | 4 | | Soft tan and gray silty clay with ferrous nodules (CL) | 22 | 99 | 39 | 22 | 0.4 @ 0.26 | 0.74 |
| 10 | 75 | | | 5 | | Medium gray silty clay (CL) | 20 | 100 | | | 0.83 @ 0.32 | 2.4 |
| 20 | 92 | | | 6 | | Medium tan and gray clay with silt pockets (CH) | 23 | 98 | 50 | 30 | 0.82 @ 0.38 | 2.06 |
| 20 | 100 | | | 7 | | Medium tan and gray silty clay with ferrous nodules (CL) | 24 | 97 | | | 0.65 @ 0.43 | 1.34 |
| 15 | 100 | | | 8 | | Medium tan and gray clay with ferrous nodules (CH) | 26 | 96 | 66 | 42 | 0.75 @ 0.49 | 1.5 |
| 25 | 100 | | | 9 | | Medium tan and gray clay with ferrous nodules (CH) | 25 | 95 | | | 0.68 @ 0.55 | 0.78 |
| 30 | 100 | | | 10 | | Medium tan and gray silty clay with ferrous nodules (CL) | 28 | 93 | 39 | 20 | 0.6 @ 0.69 | 0.08 |
| 35 | | | | | | | 27 | 95 | | | 0.54 @ 0.84 | 0.3 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LA0NR P:\16\16715007\GINT\16715007\LOGS.GPJ_GEOENGINEERS.GDT 6/1/2009

| LOG OF BORING B-7 | |
|---|--|
| Louis J CAPOZZOLI a subsidiary of GeoEngineers and Associates | Project: Freshwater Bayou Shoreline Protection Project - LDNR Project Location: Vermilion Parish, Louisiana Project Number: 16715-007-00 Sheet 1 of 2 |

| Elevation (feet) | SAMPLES | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | | |
|------------------|-----------------------|---------------|----------------|----------------------|--|-------------------|--------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth Interval (feet) | Recovered (%) | SPT Blows/foot | | Sample Number | Moist. Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 35 | 35 - 37 | 100 | | 11 | Medium tan and light gray very silty clay with ferrous nodules (CL) | | | | | | |
| 40 | 37 - 39 | 100 | | 12 | Soft tan and light gray slightly silty clay with 2 inch silt layer and silt pockets (CL) | 22 | 98 | 48 | 25 | 0.33 @ 0.98 | 0.44 |
| 45 | 39 - 41 | 100 | | 13 | Firm tan silt (ML) | 25 | 97 | | | 0.44 @ 1.13 | 0.88 |
| 50 | 41 - 43 | 63 | | 14 | Soft tan and light gray clay with sand lenses and 1 inch sand layer (CL) | 35 | 88 | | | 0.4 @ 1.27 | |
| 55 | 43 - 45 | | | | No sample recovered | | | | | | |
| 60 | 45 - 47 | | | 15 | Firm tan sand (SP) | | | | | | |
| 65 | 47 - 49 | | | 16 | Firm tan sand (SP) | | | | | | |

LOG OF BORING LADNR P:\1616715007\GINT\1671500700 LOGS.GPJ GEENGINEERS.GDT 6/12/09

LOG OF BORING B-7 (continued)

Louis J CAPOZZOLI a subsidiary of GeoEngineers and Associates

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/23/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 48 | Surface Elevation (ft) | 7.3 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°45'51.03" W92°11'13.29" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|-----------------------|---------------|----------------|---------------|-------------|--|------------------|--------------------------|----------------------|--------------------------|--------------------------------------|-----------------|
| | Depth Interval (feet) | Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Containing Pressure (TSF) | Mini Vane (KSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| 5 | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| 0 | | | | | | 3 feet from water surface to mudline | | | | | | |
| 10 | 38 | | | 1 | | Mudline Very soft dark gray peat (OH) (organic content 50.9%) | 514 | 11 | 671 | 457 | 0.03 @ 0.03 | 0.28 |
| 10 | 67 | | | 2 | | Very soft gray slightly organic clay (CH) | 103 | 45 | | | 0.1 @ 0.09 | 1.7 |
| 10 | 100 | | | 3 | | Very soft gray clay (CH) (organic content 4.5%) | 77 | 61 | 52 | 33 | 0.06 @ 0.15 | 0.34 |
| 15 | 100 | | | 4 | | Very soft gray clay with silt traces (CH) | 36 | 90 | | | 0.12 @ 0.2 | 0.56 |
| 15 | 100 | | | 5 | | Very soft gray clay (CH) | 34 | 90 | 64 | 44 | 0.22 @ 0.26 | 1.02 |
| 20 | 67 | | | 6 | | Medium tan and gray clay with silt traces (CH) | 23 | 98 | | | 0.79 @ 0.32 | 0.18 |
| 20 | 52 | | | 7 | | Medium tan and gray clay with silt streaks and ferrous nodules (CH) | 22 | 100 | 50 | 30 | 0.83 @ 0.38 | 0.84 |
| 20 | 100 | | | 8 | | Medium tan and gray clay with silt streaks and ferrous nodules (CH) | 22 | 99 | | | 0.69 @ 0.43 | 1.6 |
| 25 | 100 | | | 9 | | Medium tan and gray slightly silty clay with silt streaks and pockets (CL) | 23 | 98 | 48 | 29 | 0.76 @ 0.49 | 1.6 |
| 25 | 100 | | | 10 | | Soft tan and gray silty clay with ferrous nodules (CL) | 25 | 95 | | | 0.42 @ 0.55 | 2.02 |
| 30 | | | | | | | | | | | | |
| 30 | 100 | | | 11 | | Soft tan and light gray silty clay with ferrous nodules (CL) | 27 | 93 | | | 0.36 @ 0.75 | 0.78 |
| 35 | | | | | | | | | | | | |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNR P 16715007 GINT 1671500700 LOGS GPL GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-8

Louis J. CAPOZZOLI
and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-007-00

Sheet 1 of 2

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|-------------|--|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 35 | | | | | | | | | | | | |
| -30 | | 100 | | 12 | | Loose tan clayey sand (SC) | 27 | 95 | 26 | 5 | 0.25 @ 0.84 | 0.12 |
| -35 | | 71 | | 13 | | Loose tan clayey silt (ML) | 27 | 94 | | | 0.36 @ 0.98 | 0.06 |
| -40 | | 100 | | 14 | | Medium tan and gray very silty clay (CL) | 28 | 92 | | | 0.58 @ 1.13 | 0.52 |

LOG OF BORING: LADNR_P:\1616715007\GINT\1671500700_LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-8 (continued)

Louis J CAPOZZOLI a subsidiary of GeoEngineers and Associates

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|-------------------|
| Date(s) Drilled | 11/19/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 48 | Surface Elevation (ft) | 8.0 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: | N29°36'35.86" |
| | | | | Longitude: | W92°16'54.64" |

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|----------|---------------|----------------|---------------|---|------------------|-------------------------|----------------------|--------------------------|--------------------------------------|-----------------|
| | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Water Content, % | Dry Unit Weight, Lbs/cf | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Containing Pressure (TSF) | Mini Vane (KSF) |
| 0 | | | | | Zero (0) feet is at top of casing | | | | | | |
| 2 | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | 3 feet from barge deck to water surface | | | | | | |
| 8 | | | | | 3 feet from water surface to mudline | | | | | | |
| 10 | | | | | Mudline | | | | | | |
| 10 | | | | | No sample recovered | | | | | | |
| 10 | 75 | | | 1 | Very soft gray slightly organic clay with sand pockets and streaks (CH) | 97 | 47 | 127 | 98 | 0.11 @ 0.09 | 0.22 |
| 10 | 100 | | | 2 | Very soft gray slightly organic clay (CH) (organic content 10%) | 103 | 44 | | | 0.1 @ 0.15 | 0.18 |
| 15 | 100 | | | 3 | Very soft gray slightly organic clay with sand pockets (CH) | 116 | 42 | 108 | 77 | 0.06 @ 0.2 | 0.56 |
| 15 | 100 | | | 4 | Very soft gray slightly organic clay (CH) | 82 | 50 | | | 0.1 @ 0.26 | 0.58 |
| 20 | 100 | | | 5 | Very soft gray slightly organic clay with sand pockets and streaks (CH) | 86 | 54 | | | 0.1 @ 0.32 | 0.08 |
| 20 | 100 | | | 6 | Very soft gray slightly silty clay (CL) | 46 | 74 | 49 | 26 | 0.08 @ 0.38 | 0.18 |
| 25 | 100 | | | 7 | Very soft gray clay with silt traces (CL) | 57 | 68 | | | 0.07 @ 0.43 | 0.18 |
| 25 | 100 | | | 8 | Very soft gray clay with silt pockets and shells (CL) | 45 | 72 | | | 0.09 @ 0.49 | 0.16 |
| 25 | 100 | | | 9 | Very soft gray slightly silty clay (CH) | 44 | 70 | | | 0.12 @ 0.55 | 0.18 |
| 30 | 100 | | | 10 | Very soft gray clay with silt pockets and shells (CH) | 52 | 71 | 55 | 33 | 0.11 @ 0.69 | 0.32 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNR P:1616715086\GINT167150800 LOGS.GPJ GEENGINEERS.GDT 6/12/09

LOG OF BORING B-9

Louis J. CAPOZZOLI a subsidiary of GeoEngineers and Associates

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

Sheet 1 of 2

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|----------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | | | | | | | | | | | | |
| -30 | | 100 | | | 11 |  | 65 | 61 | | | 0.19 @ 0.84 | 0.28 |
| -35 | | 100 | | | 12 |  | 78 | 61 | | | 0.22 @ 0.98 | 0.26 |
| -40 | | 100 | | | 13 |  | 26 | 97 | 38 | 17 | 1.13 @ 1.13 | 0.56 |

LOG OF BORING LADNR, P:\16715008\GINT\1671500800_LOGS.CPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-9 (continued)

Louis J
CAPOZZOLI a subsidiary of GeoEngineers
 and Associates

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/18/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 50 | Surface Elevation (ft) | 7.2 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°36'17.54" W92°17'15.28" |

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | | |
|------------------|--------------|----------|---------------|----------------|--|----------------|-------------|------------------|-------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | | Sample Number | Graphic Log | Water Content, % | Dry Unit Weight, Lb/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 0 | | | | | Zero (0) is at top of casing | | | | | | | |
| 5 | | | | | 2 feet from top of casing to barge deck | | | | | | | |
| 5 | | | | | 3 feet from barge deck to water surface | | | | | | | |
| 10 | | | | | 5 feet from water surface to mudline | | | | | | | |
| -5 | | | | | Mudline | | | | | | | |
| -5 | | | | | No sample recovered | | | | | | | |
| -5 | | | | | No sample recovered | | | | | | | |
| -15 | 75 | | | | 1 Very soft gray slightly organic clay (CH) (organic content 5.4%) | | 99 | 44 | | | 0.08 @ 0.15 | 0.14 |
| -10 | 71 | | | | 2 Very soft gray slightly organic clay (CH) | | 103 | 44 | 127 | 96 | 0.02 @ 0.2 | 0.08 |
| -10 | 100 | | | | 3 Very soft gray clay with 1 inch sandy clay layer (CH) | | 26 | 82 | | | 0.1 @ 0.26 | 0.12 |
| -20 | 100 | | | | 4 Very soft gray very sandy clay with shell fragments (CL) | | 38 | 87 | 31 | 16 | 0.16 @ 0.32 | 0.16 |
| -15 | 100 | | | | 5 Loose gray clayey sand with shells (SC) | | 31 | 92 | | | 0.3 @ 0.38 | 0.34 |
| -25 | 100 | | | | 6 Very soft gray very sandy clay with shells (CL) | | 29 | 96 | | | 0.2 @ 0.43 | 0.28 |
| -20 | 100 | | | | 7 Loose gray clayey sand with shells (SC) | | 32 | 93 | 24 | 5 | 0.24 @ 0.49 | 0.14 |
| -30 | 100 | | | | 8 Very soft gray very sandy clay with shells (CL) | | 34 | 92 | 30 | 16 | 0.21 @ 0.55 | 0.26 |
| -25 | 100 | | | | 9 Very soft gray silty clay (CL) | | 34 | 88 | 37 | 19 | 0.15 @ 0.69 | 0.32 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LDNR P 1671500700 LOGS.GPJ GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-10

Louis J. CAPOZZOLI
and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-007-00

Sheet 1 of 2

LOG OF BORING LDNR P:1616715007/GINT11671500700 LOGS.CPJ GEOENGINEERS.GDT 6/12/09

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|---|---|---------------------|-------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | Graphic Log | | Moisture Content, % | Dry Unit Weight, Lb/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 35 | | | | | | | | | | | | |
| -30 | | | | | | | | | | | | |
| -40 | 37-39 | 100 | | 10 |  | Soft gray clay with silt pockets and streaks (CH) | 57 | 66 | | 0.4 @ 0.84 | 0.48 | |
| -35 | | | | | | | | | | | | |
| -45 | 41-43 | 100 | | 11 |  | Soft gray clay with silt pockets (SLS) (CH) | 44 | 70 | 99 | 74 | 0.42 @ 0.98 | 0.16 |
| -40 | | | | | | | | | | | | |
| -50 | 47-49 | 100 | | 12 |  | Medium gray very silty clay (CH) | 30 | 78 | | | 0.97 @ 1.13 | 0.52 |

LOG OF BORING B-10 (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/25/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 60 | Surface Elevation (ft) | 0 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°35'04.22" W92°18'26.95" |

| Elevation (feet) | Depth (feet) | SAMPLES | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|--------------------------------------|
| | | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Containing Pressure (TSF) |
| 0 | 0 | | | | | | | | | | |
| | 88 | | | 1 | Very soft gray clay with shells (CH) | 62 | 60 | | | 0.15 @ 0.06 | 0.04 |
| -5 | 83 | | | 2 | Very soft gray clay (CH) | 59 | 61 | | | 0.17 @ 0.15 | 0.12 |
| | | | | | No sample recovered | | | | | | |
| -10 | 83 | | | 3 | Very soft gray slightly organic clay (CH) | 81 | 53 | 89 | 60 | 0.14 @ 0.26 | 0.04 |
| | 100 | | | 4 | Very soft gray slightly organic clay with sand pockets (CH) | 112 | 42 | | | 0.11 @ 0.32 | 0.14 |
| | 100 | | | 5 | Very soft gray organic clay (CH) | 123 | 39 | | | 0.18 @ 0.38 | 0.16 |
| -15 | 100 | | | 6 | Very soft gray organic clay with sand streaks (CH) | 129 | 38 | | | 0.09 @ 0.43 | 0.06 |
| | 100 | | | 7 | Gray slightly organic clay (CH) | 100 | | 102 | 72 | | 0.02 |
| | 100 | | | 8 | Very soft gray slightly organic clay with shells (CH) | 102 | 45 | | | 0.08 @ 0.55 | 0.02 |
| -20 | 71 | | | 9 | Soft gray clay (CH) | 105 | 47 | | | 0.12 @ 0.69 | |
| | 100 | | | 10 | Very soft gray clay (CH) | 54 | 70 | 97 | 68 | 0.2 @ 0.84 | 0.16 |
| -35 | 73 | | | 11 | Very soft gray clay with sand pockets and streaks (CH) | 56 | 69 | | | 0.13 @ 0.98 | 0.08 |

LOG OF BORING LADNR_P11616715008GINT1671500800_LOGS.GPJ_GEOENGINEERS.GDT_6/12/09

LOG OF BORING B-11

Louis J. CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-008-00

Sheet 1 of 2

| Elevation (feet) | Depth (feet) | SAMPLES | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|--------------------------------------|----------------|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|
| | | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| -35 | 35 | | | | | | | | | | |
| -40 | 40 | 96 | | 12 | Soft gray slightly organic clay (CH) | 75 | 56 | 64 | 39 | 0.26 @ 1.13 | 0.04 |
| -45 | 45 | 100 | | 13 | Soft gray slightly organic clay (CH) | 74 | 57 | | | 0.33 @ 1.27 | 0.2 |
| -50 | 50 | 100 | | 14 | Very soft gray clay (CH) | 56 | 66 | | | 0.18 @ 1.41 | 0.04 |
| -55 | 55 | 100 | | 15 | Soft gray clay (CH) | 70 | 54 | | | 0.42 @ 1.56 | 0.12 |
| -60 | 60 | 100 | | 16 | Medium gray sandy clay (CL) | 26 | 94 | | | 0.56 @ 1.7 | 0.16 |

LOG OF BORING LADNR_P:1616715008\GINT\1671500800_LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-11 (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

Sheet 2 of 2

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|-------------------|
| Date(s) Drilled | 11/26/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 60 | Surface Elevation (ft) | 0 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: | N29°35'11.73" |
| | | | | Longitude: | W92°18'06.12" |

| Elevation (feet) | Depth (feet) | SAMPLES | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|---|----------------|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|
| | | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 0 | 0 | 33 | | 1 | Very soft gray slightly organic clay (CH) | 87 | 47 | | | 0.08 @ 0.03 | 0.26 |
| | 79 | | | 2 | Very soft gray slightly organic clay (CH) | 99 | 50 | 117 | 87 | 0.11 @ 0.09 | 0.1 |
| -5 | 5 | 54 | | 3 | Very soft gray slightly organic clay (CH) | 108 | 48 | | | 0.07 @ 0.15 | 0.04 |
| | 79 | | | 4 | Very soft gray slightly organic clay (CH) | 102 | 45 | 95 | 69 | 0.09 @ 0.2 | 0.14 |
| | 75 | | | 5 | Soft gray slightly organic clay (CH) | 96 | 44 | | | 0.37 @ 0.26 | 0.16 |
| -10 | 10 | | | | No sample recovered | | | | | | |
| | 100 | | | 6 | Very soft gray organic clay (CH) | 125 | 38 | 130 | 101 | 0.12 @ 0.38 | 0.08 |
| -15 | 15 | 67 | | 7 | Very soft gray slightly organic clay (CH) | 113 | 41 | | | 0.09 @ 0.43 | 0.16 |
| | 100 | | | 8 | Gray slightly organic clay (CH) | 109 | | | | | 0.06 |
| | 100 | | | 9 | Very soft gray slightly organic clay (CH) | 95 | 47 | | | 0.11 @ 0.55 | 0.04 |
| -20 | 20 | | | | | | | | | | |
| | 100 | | | 10 | Very soft gray organic clay (CH) | 133 | 36 | | | 0.11 @ 0.69 | 0.06 |
| -25 | 25 | | | | | | | | | | |
| | 71 | | | 11 | Very soft gray slightly silty clay (CL) | 38 | 77 | 49 | 25 | 0.12 @ 0.81 | 0.3 |
| -30 | 30 | | | | | | | | | | |
| | 100 | | | 12 | Very soft gray slightly silty clay (CL) | 55 | 67 | | | 0.12 @ 0.98 | 0.1 |
| -35 | 35 | | | | | | | | | | |

LOG OF BORING LADNR P:1616715008GINT1671500800 LOGS.GPJ GCEENGINEERS.GDT 8/12/09

LOG OF BORING B-12

Louis J CAPOZZOLI a subsidiary of GeoEngineers and Associates

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | | |
|------------------|--------------|----------|---------------|----------------|----------------------|---------------------------|-------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | | Sample Number | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| -35 | | | | | | | | | | | | |
| -40 | | 100 | | | 13 | Soft gray clay (CH) | 45 | 70 | | | 0.29 @ 1.13 | 0.16 |
| -45 | | 100 | | | 14 | Soft gray clay (CH) | 67 | 62 | | | 0.37 @ 1.27 | 0.06 |
| -50 | | 63 | | | 15 | Soft gray clay (CH) | 70 | 60 | | | 0.42 @ 1.41 | 0.08 |
| -55 | | 100 | | | 16 | Soft gray clay (CH) | 65 | 62 | | | 0.37 @ 1.56 | 0.14 |
| -60 | | 100 | | | 17 | Soft gray sandy clay (CL) | 26 | 91 | | | 0.38 @ 1.7 | 0.08 |

LOG OF BORING: LDNR_P1161671500800_LOGS.GPJ_GEOENGINEERS.GDT_6/7/209

LOG OF BORING B-12 (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|-------------------|
| Date(s) Drilled | 11/25/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 40 | Surface Elevation (ft) | 0 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: | N29°34'50.26" |
| | | | | Longitude: | W92°18'07.39" |

| Elevation (feet) | Depth (feet) | SAMPLES | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | | |
|------------------|--------------|----------|---------------|----------------|----------------------|--|-------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | | Interval | Recovered (%) | SPT Blows/foot | | Sample Number | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSP) |
| 0 | 0 | | | | | | | | | | | |
| | 46 | | | | 1 | Soft gray clay (CH) | 57 | 65 | 114 | 91 | 0.34 @ 0.03 | 0.28 |
| | 67 | | | | 2 | Very soft gray clay (CH) | 61 | 63 | | | 0.24 @ 0.09 | 0.32 |
| -5 | 83 | | | | 3 | Very soft gray clay (CH) | 69 | 61 | | | 0.14 @ 0.15 | 0.16 |
| | 71 | | | | 4 | Very soft gray slightly organic clay (CH) | 113 | 46 | 120 | 87 | 0.1 @ 0.2 | 0.16 |
| | | | | | | No sample recovered | | | | | | |
| -10 | 100 | | | | 5 | Very soft gray organic clay (CH) | 122 | 39 | | | 0.13 @ 0.32 | 0.08 |
| | 100 | | | | 6 | Very soft gray organic clay (CH) | 126 | 37 | | | 0.13 @ 0.38 | 0.16 |
| -15 | 100 | | | | 7 | Very soft gray organic clay with sand pockets and streaks (CH) | 113 | 40 | 120 | 93 | 0.09 @ 0.43 | 0.12 |
| | 100 | | | | 8 | Very soft gray slightly organic clay (CH) | 61 | 57 | | | 0.05 @ 0.49 | 0.12 |
| | 88 | | | | 9 | Very soft gray slightly organic clay (CH) | 91 | 48 | | | 0.08 @ 0.55 | 0.06 |
| -20 | | | | | | | | | | | | |
| | 100 | | | | 10 | Very soft gray slightly organic clay with sand pockets (CH) | 126 | 43 | 106 | 77 | 0.05 @ 0.69 | 0.12 |
| -25 | | | | | | | | | | | | |
| | 88 | | | | 11 | Very soft gray slightly organic clay with sand pockets (CH) | 111 | 40 | | | 0.11 @ 0.84 | 0.08 |
| -30 | | | | | | | | | | | | |
| | 79 | | | | 12 | Soft slightly silty gray clay (CH) | 37 | 82 | | | 0.26 @ 0.98 | 0.22 |
| -35 | | | | | | | | | | | | |

LOG OF BORING LADNR, P:1671500800, LOGS.GPJ, GEOENGINEERS.GDT, 6/7/2009

LOG OF BORING B-13

Louis J. CAPOZZOLI and Associates
 a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

LOG OF BORING LADNR_P11616715008IGINT11671500800_LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

| Elevation (feet) | Depth (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|----------|---------------|----------------|---------------|---|----------------|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|
| | | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| -35 | 35 | | | | | | | | | | | |
| -40 | 40 | 100 | | | 13 | Soft gray clay with silt streaks and pockets (CH) | 54 | 67 | | | 0.27 @ 1.13 | 0.34 |

LOG OF BORING B-13 (continued)

Louis J
CAPOZZOLI a subsidiary of GeoEngineers
 and Associates

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|-------------------|
| Date(s) Drilled | 11/16/2008 - 11/17/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 69 | Surface Elevation (ft) | 6.9 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: | N29°35'10.21" |
| | | | | Longitude: | W92°17'51.38" |

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|-----------------------|---------------|----------------|---------------|---|----------------|------------------|--------------------------|----------------------|--------------------------|--------------------------------------|
| | Depth (feet) Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Containing Pressure (TSF) |
| 0 | | | | | Zero (0) feet is at top of casing | | | | | | |
| 5 | | | | | 2 feet from top of casing to barge deck | | | | | | |
| 5 | | | | | 3½ feet from barge deck to water surface | | | | | | |
| 0 | | | | | 3 feet from water surface to mudline Mudline | | | | | | |
| 10 | | | | | No sample recovered | | | | | | |
| -5 | 67 | | | 1 | Very soft brown organic clay (CH) (organic content 10.4%) | 122 | 40 | 138 | 108 | 0.1 @ 0.09 | 0.06 |
| 15 | 100 | | | 2 | Very soft gray organic clay (CH) | 123 | 39 | | | 0.09 @ 0.15 | 0.04 |
| 15 | 100 | | | 3 | Very soft gray organic clay (CH) | 136 | 87 | 113 | 84 | 0.07 @ 0.2 | 0.12 |
| -10 | 100 | | | 4 | Very soft gray organic clay with 1 inch sand layer (CH) | 117 | 40 | | | 0.08 @ 0.26 | 0.12 |
| 20 | 100 | | | 5 | Very soft gray slightly organic clay with sand streaks (CH) | 102 | 43 | | | 0.14 @ 0.32 | 0.1 |
| -15 | 100 | | | 6 | Very soft gray clay with shells (CH) | 66 | 63 | 60 | 37 | 0.12 @ 0.38 | 0.04 |
| 25 | 100 | | | 7 | Very soft gray sandy clay (CL) | 36 | 76 | | | 0.13 @ 0.41 | 0.12 |
| -20 | 69 | | | 8 | Very soft gray sandy clay with shells (CL) | 40 | 78 | 40 | 21 | 0.12 @ 0.49 | 0.12 |
| -20 | 100 | | | 9 | Very soft gray sandy clay with shells (CL) | 33 | 82 | | | 0.16 @ 0.55 | 0.12 |
| -25 | | | | | | | | | | | |
| -25 | 100 | | | 10 | Soft gray clay with sand streaks (CH) | 60 | 67 | 56 | 34 | 0.31 @ 0.69 | 0.12 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNRP_P1161671500700_LOGGS.GPJ_GEOENGINEERS.GDT_6/12/08

LOG OF BORING B-14A

Louis J. CAPOZZOLI
and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-007-00

Sheet 1 of 2

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|---|----------------|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | | | | | | | | | | | |
| -30 | | 100 | | 11 | Very soft gray clay with sand streaks (CH) | 63 | 62 | | | 0.19 @ 0.84 | 0.12 |
| -35 | | 100 | | 12 | Soft gray slightly organic clay (CH) | 86 | 54 | | | 0.37 @ 0.95 | 0.14 |
| -40 | | 100 | | 13 | Very soft gray slightly organic clay (CH) | 70 | 59 | 80 | 58 | 0.38 @ 1.13 | 0.14 |
| -45 | | 100 | | 14 | Soft gray slightly organic clay (CH) | 77 | 56 | | | 0.26 @ 1.27 | 0.12 |
| -50 | | 100 | | 15 | Very soft gray slightly organic clay (CH) | 78 | 58 | 104 | 74 | 0.23 @ 1.41 | 0.08 |
| -55 | | 100 | | 16 | Very soft gray clay (CH) | 29 | 88 | | | 0.16 @ 1.56 | 0.2 |
| -60 | | 100 | | 17 | Medium gray clay with sand pockets and streaks (CH) | 31 | 90 | | | 0.79 @ 1.7 | 0.16 |

LOG OF BORING LADNR P:1616715007\GINT\1671500700_LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-14A (continued)

Louis J CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/14/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 49 | Surface Elevation (ft) | 8.2 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°34'27.44" W92°17'58.35" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|----------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| -5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| -10 | | | | | | 4 feet from water surface to mudline | | | | | | |
| -10 | | | 82 | | 1 | Very soft gray slightly organic clay (CH) | 81 | 55 | 98 | 71 | 0.17 @ 0.03 | 0.12 |
| -10 | | | | | | No sample recovered | | | | | | |
| -15 | | | 100 | | 2 | Very soft gray slightly organic clay (CH) | 102 | 44 | | | 0.24 @ 0.15 | 0.06 |
| -15 | | | 100 | | 3 | Very soft gray slightly organic clay (CH) (organic content 12.1%) | 115 | 42 | 129 | 98 | 0.1 @ 0.2 | 0.1 |
| -15 | | | 100 | | 4 | Very soft gray slightly organic clay (CH) | 98 | 47 | | | 0.07 @ 0.26 | 0.08 |
| -20 | | | 100 | | 5 | Very soft gray slightly organic clay (CH) | 98 | 46 | | | 0.09 @ 0.32 | 0.12 |
| -20 | | | 100 | | 6 | Very soft gray clay (CH) | 48 | 77 | 53 | 33 | 0.1 @ 0.38 | 0.12 |
| -25 | | | 100 | | 7 | Very soft gray slightly organic clay with sand pockets (CH) | 92 | 50 | | | 0.13 @ 0.43 | 0.06 |
| -25 | | | 100 | | 8 | Very soft gray slightly organic clay with sand pockets (CH) | 98 | 53 | | | 0.09 @ 0.49 | 0.14 |
| -25 | | | 100 | | 9 | Very soft gray clay with sand pockets (CH) | 51 | 66 | 81 | 55 | 0.11 @ 0.55 | 0.08 |
| -30 | | | 100 | | 10 | Very soft gray clay with sand pockets and streaks (CH) | 47 | 78 | | | 0.12 @ 0.69 | 0.12 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNR P 16715008 GINT11671500800 LOGS.GPJ GEOENGINEERS.GDT 6/1/2009

LOG OF BORING B-15

Louis J. CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Marsh Creation Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-008-00

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|--|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 35 | | | | | | | | | | | |
| -30 | 30-35 | 100 | | 11 | Very soft gray sandy clay with silt pockets and streaks (CL) | 55 | 67 | 41 | 19 | 0.21 @ 0.84 | 0.12 |
| -40 | 35-40 | | | | Very soft gray clay with sand lenses (CH) | | | | | | |
| -35 | 40-45 | 83 | | 12 | | 42 | 72 | | | 0.24 @ 0.98 | 0.14 |
| -45 | 45-50 | 100 | | 13 | Very soft gray clay with sand traces (CH) | 76 | 61 | | | 0.18 @ 1.13 | 0.12 |

LOG OF BORING LADNR_P:11616715008\GINT\1671500800_LOGS.GPJ_GEOENGINEERS.GDT_6/12/09

LOG OF BORING B-15 (continued)

Louis J
CAPOZZOLI a subsidiary of GeoEngineers
 and Associates

Project: Freshwater Bayou Marsh Creation Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-008-00

Sheet 2 of 2

| | | | | | |
|---------------------|--|------------------------|-----------------|----------------------------|--------------------------------|
| Date(s) Drilled | 11/14/2008 | Logged By | OS | Checked By | CLE |
| Drilling Contractor | Louis J. Capozzoli and Associates/GeoEngineers | Drilling Method | Rotary Wet Bore | Sampling Methods | Shelby |
| Auger Data | N/A | Hammer Data | N/A | Drilling Equipment | Barge Mounted Rig |
| Total Depth (ft) | 70 | Surface Elevation (ft) | 8.2 (Est.) | Groundwater Elevation (ft) | Not Measured |
| Vertical Datum | MLG | Datum/System | NAD 27 | Latitude: Longitude: | N29°34'11.63" W92°18'07.39" |

| Elevation (feet) | SAMPLES | | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|----------|---------------|----------------|---------------|---|----------------|------------------|--------------------------------------|----------------------|--------------------------|-------------------------------------|
| | Depth (feet) | Interval | Recovered (%) | SPT Blows/foot | Sample Number | | Graphic Log | Water Content, % | Dry Unit Weight, Lbs/ft ³ | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) |
| 0 | | | | | | Zero (0) feet is at top of casing | | | | | | |
| | | | | | | 2 feet from top of casing to barge deck | | | | | | |
| -5 | | | | | | 3 feet from barge deck to water surface | | | | | | |
| -10 | | | | | | 5 feet from water surface to mudline | | | | | | |
| -10 | | | | | | Mudline | | | | | | |
| -10.5 | | | 13 | | 1 | Very soft gray slightly sandy clay (CL) | 62 | | | | 0.09 @ 0.09 | 0.06 |
| -11.5 | | | 45 | | 2 | Very soft gray clay with ferrous nodules (CH) | 52 | 70 | | | 0.09 @ 0.09 | 0.38 |
| -13.5 | | | 100 | | 3 | Very soft gray slightly organic clay (CH) | 90 | 52 | 114 | 80 | 0.04 @ 0.15 | 0.14 |
| -14.5 | | | 100 | | 4 | Very soft gray slightly organic clay (CH) | 101 | 48 | | | 0.07 @ 0.2 | 0.08 |
| -15.5 | | | 100 | | 5 | Very soft gray slightly organic clay (CH) | 96 | 50 | 116 | 83 | 0.04 @ 0.26 | 0.06 |
| -16.5 | | | 100 | | 6 | Very soft gray slightly organic clay (SLS) (CH) | 83 | 54 | | | 0.06 @ 0.32 | 0.1 |
| -17.5 | | | 100 | | 7 | Very soft gray slightly organic clay with silt streaks (CH) | 97 | 51 | 81 | 57 | 0.05 @ 0.38 | 0.18 |
| -18.5 | | | 100 | | 8 | Very soft gray slightly organic clay (CH) | 88 | 52 | 104 | 76 | 0.04 @ 0.43 | 0.2 |
| -19.5 | | | 100 | | 9 | Very soft gray slightly organic clay with silt traces (CH) | 86 | 56 | | | 0.04 @ 0.49 | 0.16 |
| -20.5 | | | 100 | | 10 | Very soft gray slightly organic clay with silt traces (CH) | 80 | 56 | | | 0.05 @ 0.55 | |
| -24.5 | | | 92 | | 11 | Very soft gray silty clay (CH) | 63 | 65 | | | 0.15 @ 0.69 | 0.1 |

Note: Surface elevation is measured at the top of casing.

LOG OF BORING LADNR P:11816715007GINT\1671500700 LOGS.GPJ_GEOENGINEERS.GDT 6/12/09

LOG OF BORING B-16

Louis J. CAPOZZOLI and Associates
a subsidiary of GeoEngineers

Project: Freshwater Bayou Shoreline Protection Project - LDNR
Project Location: Vermilion Parish, Louisiana
Project Number: 16715-007-00

Sheet 1 of 2

| Elevation (feet) | SAMPLES | | | | MATERIAL DESCRIPTION | CLASSIFICATION | | | | SHEAR STRENGTH | |
|------------------|--------------|------------------------|----------------|---------------|---|------------------|--------------------------|----------------------|--------------------------|-------------------------------------|-----------------|
| | Depth (feet) | Interval Recovered (%) | SPT Blows/foot | Sample Number | | Water Content, % | Dry Unit Weight, Lbs/cft | Liquid Limit (LL), % | Plasticity Index (PI), % | UU (KSF) @ Confining Pressure (TSF) | Mini Vane (KSF) |
| 35 | | | | | | | | | | | |
| -30 | 30-35 | 100 | | 12 | Very soft gray clay with sand pockets (CH) | 62 | 64 | 96 | 71 | 0.07 @ 0.84 | |
| -35 | 35-40 | 100 | | 13 | Very soft gray clay with sand pockets and lenses (CH) | 34 | 83 | 57 | 35 | 0.14 @ 0.98 | 0.3 |
| -40 | 40-45 | 100 | | 14 | Very soft gray clay with sand streaks (CH) | 55 | 68 | | | 0.16 @ 1.13 | 0.18 |
| -45 | 45-50 | 100 | | 15 | Very soft gray clay with sand streaks (CH) | 68 | 63 | | | 0.13 @ 1.27 | 0.3 |
| -50 | 50-55 | 100 | | 16 | Very soft gray clay with sand streaks (CH) | 68 | 61 | 96 | 71 | 0.15 @ 1.41 | 0.16 |
| -55 | 55-60 | 100 | | 17 | Very soft gray clay (CH) | 68 | 61 | | | 0.14 @ 1.56 | 0.02 |
| -60 | 60-65 | 100 | | 18 | Medium gray very sandy clay (CH) | 23 | 100 | | | 0.71 @ 1.7 | 0.1 |
| -65 | | | | | | | | | | | |
| -70 | | | | | | | | | | | |

LOG OF BORING LADNR P.11616715007.GINT\16715007\LOGS.GPJ GEOENGINEERS GDT 8/12/09

LOG OF BORING B-16 (continued)

Louis J
CAPOZZOLI a subsidiary of GeoEngineers
 and Associates

Project: Freshwater Bayou Shoreline Protection Project - LDNR
 Project Location: Vermilion Parish, Louisiana
 Project Number: 16715-007-00

Sheet 2 of 2