

ADVERTISEMENT FOR BIDS

TANGIPAHOA PARISH GOVERNMENT
TANGIPAHOA PARISH, LOUISIANA
LAKE PONTCHARTRAIN SHORELINE PROTECTION

General Notice

Tangipahoa Parish Government (Owner) is requesting Bids for the construction of the following Project:

Lake Pontchartrain Shoreline Protection

Bids for the construction of the Project will be received at the TPC Chambers located at 206 E. Mulberry Street, Amite, LA, until Monday, May 22 at 10 am local time. At that time the Bids received will be publicly opened and read.

The Project includes the following Work:

Project is to construct breakwaters in Lake Pontchartrain near the Tangipahoa Parish shoreline. The Project includes a base bid and three additive alternate bids. Work includes mobilization/demobilization; pre-construction hazard surveying; optional dredging and backfilling of temporary flotation/access channels; placement of geotextile materials, encapsulated lightweight aggregate, and graded riprap armor stone; installation of warning signs, lighted daybeacons, and settlement plates; bathymetric and topographic surveys for measurement, payment substantiation and work acceptance purposes; aerial photography; and all other subsidiary work.

Bids are requested for the following Contract: Lake Pontchartrain Shoreline Protection

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be obtained at the following designated website:

www.centralbidding.com

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a Bidding Documents holder, even if Bidding Documents are obtained from a third-party plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with Addenda, lists of registered Bidding Documents holders, reports on the Site, and other information relevant to submitting a Bid for the Project. All official notifications, Addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including Addenda, if any, obtained from sources other than the designated website.

Pre-bid Conference

A mandatory pre-bid conference for the Project will be held on Friday, May 5 at 10 am via Teams at <https://bit.ly/3UbuYpF>. Bids will not be accepted from Bidders that do not attend the mandatory pre-bid conference.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

This Advertisement is issued by:

Owner: Tangipahoa Parish Government

By: Donna Domiano

Title: Purchasing Agent

Date: April 20, 2023

INSTRUCTIONS TO BIDDERS

FOR CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1— Defined Terms.....	1
Article 2— Bidding Documents.....	1
Article 3— Qualifications of Bidders.....	2
Article 4— Pre-Bid Conference.....	3
Article 5— Site and Other Areas; Existing Site Conditions; Examination of Site; Owner’s Safety Program; Other Work at the Site.....	3
Article 6— Bidder’s Representations and Certifications.....	4
Article 7— Interpretations and Addenda.....	4
Article 8— Bid Security.....	5
Article 9— Contract Times.....	6
Article 10— Substitute and “Or Equal” Items.....	6
Article 11— NOT USED.....	6
Article 12— Preparation of Bid.....	6
Article 13— Basis of Bid.....	7
Article 14— Submittal of Bid.....	8
Article 15— Modification and Withdrawal of Bid.....	8
Article 16— Opening of Bids.....	9
Article 17— Bids to Remain Subject to Acceptance.....	9
Article 18— Evaluation of Bids and Award of Contract.....	9
Article 19— Bonds and Insurance.....	10
Article 20— Signing of Agreement.....	10
Article 21— Sales and Use Taxes.....	10

ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use, nor does it grant or confer ownership or any property interest in the Bidding Documents and other documents distributed for the Project. Authorization to download documents, or other distribution, includes the right for Bidding Documents holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the Bidding Documents holder pays all costs associated with printing or reproduction. Paper or other types of printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a Bidding Documents holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered Bidding Documents holders will receive Addenda issued by Owner or Issuing Office.
- 2.04 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as Bidding Documents holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms or other such sources (such as other prospective bidders), or for a Bidder's failure to obtain Addenda from a plan room.
- 2.05 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to prospective Bidders as Electronic Documents in the manner specified.
1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version [insert version number] or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly

representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor any bidder's or the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within 14 days of Owner's or Engineer's request, Bidder must submit the following information:
 - A. A written statement that Bidder is authorized to do business in Louisiana, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract. Such statement or certification, as applicable, shall be signed by the same officer of Bidder's company that signed the Bid.
 - B. Bidder's Louisiana contractor license number.
 - C. Subcontractor and Supplier qualification information.
 - D. Other required information regarding qualifications.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidders shall be experienced in the kind of Work to be performed, shall be able to obtain construction equipment necessary for the Work, and shall possess sufficient capital to properly perform the Work within the time allowed. Bids received from Bidders who have previously failed to complete work within the time required, or who have previously performed similar work in an unsatisfactory manner, may be rejected. A Bid may be rejected if Bidder cannot show and document to Owner's satisfaction that Bidder has the necessary ability, facilities, equipment, and resources to commence the Work at the time prescribed and thereafter to prosecute and complete the Work at the rate or within the times specified. A Bid may be rejected if Bidder is

already obligated for the performance of other work which would delay the commencement, prosecution or completion of the Work.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bids will not be accepted from Bidders who do not attend the conference. It is each Bidder's responsibility to sign in at the pre-bid conference to verify its participation. Bidders must sign in using the name of the organization that will be submitting a Bid. A list of Bidders that attended the pre-bid conference and are, on that basis alone, eligible to submit a Bid for this Project, will be issued in an Addendum.
- 4.02 Information presented at the pre-bid conference does not alter the Bidding Documents. Owner or Issuing Office will issue Addenda to make any changes to the Bidding Documents that result from discussions at the pre-bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents, including in Specifications Section 01 11 00—Summary of Work. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. *Geotechnical Boring Logs:* The Bidding Documents contain a Geotechnical Boring Logs.
 - a. The Baseline Conditions in the Geotechnical Boring Logs are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on these logs. Bids should be based on a comprehensive approach that includes an independent review and analysis of the Geotechnical Boring Logs, all other Contract Documents, other available information, and observable surface conditions. Not all potential subsurface conditions are included.
 - b. Nothing in the Geotechnical Boring Logs is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

5.03 *Site Visit and Testing by Bidders*

- A. Bidder is recommended to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. Bidders visiting the Site are required to arrange their own transportation to the Site.

ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will complete and submit contains express representations regarding the Bidder’s examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Successful Bidder (as Contractor) will make similar express representations and certifications when it signs the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
 - A. Submit questions via email to HDR Engineering, Inc. at dana.miller@hdrinc.com.
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all Bidding Documents holders registered with the Issuing Office. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Bidding Documents.
- 7.05 Addenda that engineer judges to have a material or significant effect on Bidders’ preparation of pricing and other requirement element of the Bid will be transmitted via Addendum for Bidders’ receipt not less than three days prior to the scheduled date for receipt of the Bids. Clarifications or modifications that Engineer deems will not have a material or substantial effect on the

preparation of Bids may be transmitted for Bidders' receipt later, for receipt prior to the deadline for receipt of Bids.

ARTICLE 8—BID SECURITY

8.01 *Required Form and Amount of Bid Security*

- A. A Bid must be accompanied by bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions.
- B. Such bid bond will be issued in the form included in the Bidding Documents.

8.02 *Bid Security of Successful Bidder*

- A. The Bid security of the apparent Successful Bidder will be retained until Owner awards the Contract to such Bidder, and such Bidder has signed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Successful Bidder's bid security will be released.
- B. If the Successful Bidder fails to sign and deliver the Contract and furnish the required Contract security within the number of days, indicated in Paragraph 20.01 of these Instructions to Bidders, after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the bid security of that Bidder will be forfeited.
- C. Upon Successful Bidder's default:
 - 1. When the bid security is a penal sum bid bond, the entire penal sum amount of the bid bond will be forfeit and due Owner.
 - 2. When the bid security is a damages form of bid bond, to the extent of Owner's damages will be forfeit and due Owner.
 - 3. If a type of bid security other than a bid bond is allowed and is furnished, the amount that will be forfeit and due Owner will be the same as for the form of bid bond included in the Bidding Documents. Owner will so notify the defaulting Bidder in writing of the annulment and the amount of the forfeiture, with documentation of the amount forfeited.
- D. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 *Bid Security of Bidders other than the Successful Bidder*

- A. The bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon bid security furnished by such Bidders will be released.
- B. Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the bid opening.
- C. Release of Bid Security: Owner may release any Bidder's bid security by returning such bid security to the associated Bidder. When bid security is in the form of a bid bond, Owner may dispose of or destroy the bid bond and so advise the associated Bidder in writing that the bid bond has been released.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed is set forth in the Agreement.
- 9.02 Provisions for liquidated and special damages, if any, for failure to timely attain Substantial Completion are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials, equipment, and procedures specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items or procedures. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment or procedure, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, and will perform the Work in accordance with procedures indicated in the Bidding Documents, as supplemented by Addenda, if any. Assumptions regarding the possibility of post-bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11—NOT USED

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
 - A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8.5-inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be signed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

- 12.05 A Bid by a limited liability company must be signed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be signed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be indicated on the Bid Form.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in Louisiana, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 The Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Base Bid with Alternates*

- A. Bidders must submit a Bid on a unit price basis for the base Bid and include a separate price for each alternate item described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to the base Bid if Owner selects the alternate.
- B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.

13.02 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each item of Unit Price Work will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and final Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate, unbound copy of the Bid Form, and, where required, the Bid Bond Form and other supplements to the Bid Form. The unbound copy of the Bid Form and supplements (if any) is to be completed and submitted with the Bid security and the other documents required with the Bid by Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery method, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement or invitation to bid.
- 14.03 Bids received after the date and time prescribed for the opening of Bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened. Owner accepts no responsibility for delays in returning Bids submitted or delivered to the incorrect location.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly signed in the same manner that a Bid must be signed and delivered to the place where Bids are to be submitted, prior to the date and time established in the Bidding Documents for the receipt of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 of this Article and submit a new Bid prior to the date and time for established in the Bidding Documents the receipt of Bids.
- 15.03 If, within [24] hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its

Bid, and the bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the Advertisement or invitation to bid and, unless obviously non-responsive, will be read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. Owner may reject the Bid of any Bidder that fails to demonstrate appropriate qualifications, experience, and resources for the Work, in accordance with Article 3 of these Instructions to Bidders.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 *Basis for Award of Contract*
- A. If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest-priced, responsive Bid that has not otherwise been disqualified.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or elsewhere in the Bidding Documents, or prior to the Notice of Award.
- B. *Based Bid with Alternates:* In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all Bidders, present at the opening of Bids, a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening the Bids; Bidders not present for the opening of Bids may obtain the announced budget amount from Owner or Engineer. For comparison purposes, alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions to Bidders, the award may be made to said Successful Bidder on its base Bid and any combination of its

additive alternate bid prices for which Owner determines funds will be available at the time of award.

- C. *Unit Price Work*: For the determination of the apparent low-price Bid when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price bid for that item, together with amount(s) of lump sum items (if any).
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications, experience, and resources of the Bidder and may consider the qualifications, experience, and resources of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner, with or without Engineer's assistance, may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Paragraph 2.01 and Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, set forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the signed Agreement to Owner (or Owner's representative), it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8 ("Bid Security") of these Instructions to Bidders addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unsigned counterparts of the Agreement, along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and required bonds and insurance documentation (as required by the Contract Documents) to Tangipahoa Parish Government [Owner's representative, as indicated in the Notice of Award]. Within 10 days thereafter, Owner will deliver one fully signed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

- 21.01 Owner is exempt from Louisiana state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. 72-6001371). Said taxes must not be included in the Bid. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: **Tangipahoa Parish Government**
206 E. Mulberry Street, Amite LA 70422

BID FOR: **Lake Pontchartrain Shoreline Protection**
Tangipahoa Parish, Louisiana

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: HDR Engineering, Inc. and dated: April 4, 2023.

Contract time shall be 155 days for Base Bid, 20 additional days for Alternate No. 1, 15 additional days for Alternate No. 2, and 10 additional days for Alternate No. 3.

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 Phase 1 Continuation for the sum of:

_____ Dollars (\$ _____)

Alternate No. 2 Add Phase 2 for the sum of:

_____ Dollars (\$ _____)

Alternate No. 3 Add Phase 2 Continuation 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 FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* 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.

** A **CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public

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

The following documents shall also be included: 1. **Conflict of Interest Form**; 2. **Affidavit**; 3. **Tangipahoa Parish Government Attestation Clause**; 4. **Bidder's Non-Collusion Affidavit**

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: Tangipahoa Parish Government
206 E. Mulberry Street, Amite LA 70422

BID FOR: Lake Pontchartrain Shoreline Protection
Tangipahoa Parish, Louisiana

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.#	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
A-1		1	Lump Sum		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Topographic and Bathymetric Surveying			
A-2		1	Lump Sum		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Pre-Construction Hazard Survey			
A-3		1	Lump Sum		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Aerial Photography			
A-4		1	Lump Sum		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Optional Access and Flotation Channels			
A-5		1	Lump Sum		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Geotextile Composite			
A-6		5,900	Linear Foot		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Armor Stone			
A-7		44,000	Ton		
DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.#	Settlement Plates			
A-8		5	Each		

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: Tangipahoa Parish Government
206 E. Mulberry Street, Amite LA 70422

BID FOR: Lake Pontchartrain Shoreline Protection,
Tangipahoa Parish, Louisiana

DESCRIPTION:		<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# _____ Lighted Daybeacons UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
A-9	4	Each			
DESCRIPTION:		<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# _____ Encapsulated Lightweight Aggregate UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
A-10	8,400	Cubic Yard			
DESCRIPTION:		<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Topographic and Bathymetric Surveying UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-1	1	Lump Sum			
DESCRIPTION:		<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Pre-Construction Hazard Survey UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-2	1	Lump Sum			
DESCRIPTION:		<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Aerial Photography UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-3	1	Lump Sum			
DESCRIPTION:		<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Optional Access and Flotation Channel UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-4	1	Lump Sum			
DESCRIPTION:		<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Geotextile Composite UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-5	1,400	Linear Foot			
DESCRIPTION:		<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Armor Stone UNIT OF MEASURE:		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-6	11,000	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.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: Tangipahoa Parish Government
206 E. Mulberry Street, Amite LA 70422

BID FOR: Lake Pontchartrain Shoreline Protection
Tangipahoa Parish, Louisiana

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 Settlement Plates			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-7	2	Each		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Lighted Daybeacons			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-8	1	Each		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 1 Encapsulated Lightweight Aggregate			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
B-9	1,800	Cubic Yard		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Topographic and Bathymetric Surveying			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C-1	1	Lump Sum		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Pre-Construction Hazard Survey			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C-2	1	Lump Sum		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Aerial Photography			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C-3	1	Lump Sum		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Optional Access and Flotation Channel			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C-4	1	Lump Sum		
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Geotextile Composite			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C-5	3,100	Linear Foot		

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: **Tangipahoa Parish Government**
 206 E. Mulberry Street, Amite LA 70422

BID FOR: **Lake Pontchartrain Shoreline Protection,**
Tangipahoa Parish, Louisiana

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.# 2 Armor Stone	UNIT OF MEASURE:	UNIT PRICE
C-6		13,000 Ton	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Settlement Plates		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
C-7	3	Each	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 2 Lighted Daybeacons		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
C-8	3	Each	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Topographic and Bathymetric Surveying		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-1	1	Lump Sum	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Pre-Construction Hazard Survey		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-2	1	Lump Sum	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Aerial Photography		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-3	1	Lump Sum	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Optional Access and Flotation Channel		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-4	1	Lump Sum	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Geotextile Composite		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-5	1,600	Linear Foot	UNIT PRICE EXTENSION (Quantity times Unit Price)

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: Tangipahoa Parish Government
 206 E. Mulberry Street, Amite LA 70422

BID FOR: Lake Pontchartrain Shoreline Protection
 Tangipahoa Parish, Louisiana

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.		UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Armor Stone		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-6	6,000	Tons	
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Settlement Plates		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
D-7	2	Each	
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# 3 Lighted Daybeacons		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE EXTENSION (Quantity times Unit Price)
D-8	1	Each	
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# N/A		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
N/A	N/A	N/A	N/A
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# N/A		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE EXTENSION (Quantity times Unit Price)
N/A	N/A	N/A	N/A
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# N/A		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
N/A	N/A	N/A	N/A
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# N/A		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE EXTENSION (Quantity times Unit Price)
N/A	N/A	N/A	N/A
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# N/A		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE
N/A	N/A	N/A	N/A
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# N/A		
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE EXTENSION (Quantity times Unit Price)
N/A	N/A	N/A	N/A

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.

Conflict of Interest Form

Name of Bidder and Name of Authorized Signatory of Bidder

Lake Pontchartrain Shoreline Protection
Project

Please sign, date and return this certification to the Contracting Officer.

With respect to the Lake Pontchartrain Shoreline Protection Project, I certify that:

I have read and understand 2CFR 200.318(c)(1), which states that no employee, officer or agent may participate in the selection, award or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated above, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. As an officer, employee or agent, I may neither solicit nor accept gratuities, favors or anything of monetary value from contractors or parties to subcontract.

I am not aware of any circumstances which would impair my exercise of independent judgment or my impartiality with respect to my duties in support of the above cited acquisition.

I understand that I have a continuing obligation to disclose any circumstances that may create an actual or apparent conflict of interest. In the event that I become aware of any such conflict of interest, I agree to immediately report this fact to the designated Contracting Officer and take no further action concerning the procurement pending receipt of any instructions which he or she may give me in this matter.

Signature, Title

Date

8. AFFIDAVIT

STATE OF LOUISIANA

PARISH OF TANGIPAHOA

Before Me, the undersigned authority, duly commissioned and qualified within and for the state and parish or county aforesaid, personally came and appeared

_____ representing _____ Who, being by me first duly sworn deposed and said that he or she has read and signed this Affidavit and he/she does hereby attest, under oath, as follows:

- (1) That affiant and his or her firm is registered and participates in a status verification system to verify that all employees in the State of Louisiana are legal citizens of the United States or are legal aliens.
- (2) That affiant and his or her firm will continue, during the term of any contract with the Tangipahoa Parish Government, to utilize a status verification system to verify that legal status of all new employees in the State of Louisiana; and
- (3) That affiant and his or her firm will require all subcontractors to submit to them and/or their employer a sworn Affidavit verifying compliance with paragraphs (1) and (2) of this Affidavit.

Prospective bidder or representative to sign and type or print name below signature.

Affiant – Signature

Print Name

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 20____

NOTARY PUBLIC

TANGIPAOHA PARISH GOVERNMENT

ATTESTATION CLAUSE REQUIRED BY LA. R.S. 38:2227
(PAST CRIMINAL CONVICTIONS OF BIDDERS) SHALL BE RETURNED BY THE BIDDER WITHIN 10 DAYS OF THE BID OPENING TIME TO THE TANGIPAOHA PARISH GOVERNMENT'S PURCHASING DEPARTMENT (Failure to do so shall result in rejection of the bid response on the basis of non-responsiveness)

Appearer, as a Bidder on the below-entitled Public Works Project does hereby attest that:

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)
- b) Corrupt Influencing (R.S. 14:120)
- c) Extortion (R.S. 14:66)
- d) Money Laundering (R.S. 14:23)

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)
- b) Identity Theft (R.S. 14:67.16)
- c) Theft of a business record (R.S. 14:67.20)
- d) False accounting (R.S. 14:70)
- e) Issuing worthless checks (R.S. 14:71)
- f) Bank fraud (R.S. 14:71.1)
- g) Forgery (R.S. 14:72)
- h) Contractors; misapplication of payments (R.S. 14:202)
- i) Malfeasance in office (R.S. 14:134)

PROJECT IDENTIFICATION _____

BID OPENING DATE _____

Business Name of Bidder _____

Name of Authorized Signatory of Bidder _____

Title of Authorized Signatory of Bidder _____

Signature of Authorized Signatory of Bidder _____

Date _____

BIDDERS'S NON - COLLUSION AFFIDAVIT

(FURNISH WITH BID PACKAGE)

**STATE OF LOUISIANA
PARISH OF TANGIPAHOA**

Before me, the undersigned authority, personally came and appeared _____, who after being by me duly sworn, deposed and said that he is the _____, and duly authorized representative of the firm of _____, (Herein after referred to as "BIDDER") the party who submitted a bid for _____ which bid was received by TANGIPAHOA PARISH, on _____ and said affiant further said:

1. That bidder employed no person, corporation, firm, asocial, or other organization either directly or indirectly, to secure public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction, alteration, of demolition of the public building or project or in securing the public contract were in the regular course of their duties for bidder, and
2. That no part of the contract price received by bidder 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 bidder.
3. Said bidder is genuine and the bidder has not colluded, conspired or agreed directly or indirectly with any other bidder to offer a sham or collusive bid.
4. Said bidder has not in any manner directly or indirectly agreed with any other person to fix the bid price of affiant or any other bidder, or to fix any overhead profit or cost element of said bid price, of that of any other bidder, or to induce any other person to refrain from bidding.
5. Said bid is not intended to secure an unfair advantage of benefit from Ascension Parish, Louisiana or in favor of any persons interested in the proposed contract.

6. All statements contained in said bid are true and correct.
7. Neither affiant nor any member of his company has divulged information regarding said bid or any data relative thereto to any person, firm, or corporation.

By: _____
(Signature)

(Type or Print Name)

(Type or Print Title)

SWORN TO AND SUBSCRIBED BEFORE ME, This _____ day of _____, 202_.

By: _____
Notary Public

BID BOND (PENAL SUM FORM)

<p>Bidder</p> <p>Name: [Full formal name of Bidder]</p> <p>Address (<i>principal place of business</i>): [Address of Bidder's principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address (<i>principal place of business</i>): [Address of Surety's principal place of business]</p>
<p>Owner</p> <p>Name: Tangipahoa Parish Government</p> <p>Address (<i>principal place of business</i>): 206 E. Mulberry Street Amite, LA 70422</p>	<p>Bid</p> <p>Project (<i>name and location</i>): Lake Pontchartrain Shoreline Protection Tangipahoa Parish, Louisiana</p> <p style="text-align: right;">Bid Due Date: May 22, 2023</p>
<p>Bond</p> <p>Penal Sum: [Amount]</p> <p>Date of Bond: [Date]</p>	
<p>Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.</p>	
<p>Bidder</p> <p style="text-align: center;"><i>(Full formal name of Bidder)</i></p> <hr/> <p>By: _____</p> <p style="text-align: center;"><i>(Signature)</i></p> <p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p> <p>Title: _____</p> <p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p> <p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p> <p>Title: _____</p>	<p>Surety</p> <p style="text-align: center;"><i>(Full formal name of Surety) (corporate seal)</i></p> <hr/> <p>By: _____</p> <p style="text-align: center;"><i>(Signature) (Attach Power of Attorney)</i></p> <p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p> <p>Title: _____</p> <p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p> <p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p> <p>Title: _____</p>
<p><i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i></p>	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between Tangipahoa Parish Government ("Owner") and [name of contracting entity] ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: breakwaters in Lake Pontchartrain off the Tangipahoa Parish shoreline

ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Lake Pontchartrain Shoreline Protection

ARTICLE 3—ENGINEER

- 3.01 The Owner has retained HDR Engineering, Inc. ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by Engineer.

ARTICLE 4—CONTRACT TIMES

- 4.01 *Time is of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Days*
- A. The Work will be substantially complete within [number] days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [number] days after the date when the Contract Times commence to run.
- 4.03 *Liquidated Damages*
- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also

recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion*: Contractor shall pay Owner \$1,000 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.
- 4.04 Owner reserves the right to withhold from payments due Contractor under the Contract amounts for liquidated damages (if any), special damages (if any), and performance damages (if any) in accordance with the Contract.

ARTICLE 5—CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:
- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

- 6.01 *Submittal and Processing of Payments*
- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.
- 6.02 *Progress Payments; Retainage*
- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the [ordinal number, such as 5th] day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. 95 percent of the value of the Work completed (with the balance being retainage).
 - B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by

Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:

1. This Agreement.
2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
3. General Conditions.
4. Supplementary Conditions.
5. Wage Determination Schedule.
6. Statutory and Funding-Financing Entity Requirements.
7. Specifications as listed in the table of contents of the project manual.
8. Drawings.
9. Addenda (numbers [number] to [number], inclusive).

10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

- a. Notice to Proceed.
- b. Work Change Directives.
- c. Change Orders.
- d. Field Orders.
- e. Warranty Bond, if any.

- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

- C. There are no Contract Documents other than those listed above in this Article 7.

- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 Contractor's Representations

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on [indicate date on which Contract becomes effective] (which is the Effective Date of the Contract).

(typed or printed name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

Designated Representative:
Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

Phone: _____

Email: _____

(If [Type of Entity] is a corporation, attach evidence of authority to sign. If [Type of Entity] is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

Contractor:

(typed or printed name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

(If [Type of Entity] is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

Designated Representative:
Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

Phone: _____

Email: _____

License No.: _____
(where applicable)

State: _____

PERFORMANCE BOND

<p>Contractor</p> <p>Name: [Full formal name of Contractor]</p> <p>Address (<i>principal place of business</i>): [Address of Contractor's principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address (<i>principal place of business</i>): [Address of Surety's principal place of business]</p>
<p>Owner</p> <p>Name: [Full formal name of Owner]</p> <p>Mailing address (<i>principal place of business</i>): [Address of Owner's principal place of business]</p>	<p>Contract</p> <p>Description (<i>name and location</i>): [Owner's project/contract name, and location of the project]</p> <p>Contract Price: [Amount from Contract]</p> <p>Effective Date of Contract: [Date from Contract]</p>
<p>Bond</p> <p>Bond Amount: [Amount]</p> <p>Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: [Describe modification or enter "None"]

PAYMENT BOND

<p>Contractor</p> <p>Name: [Full formal name of Contractor]</p> <p>Address (<i>principal place of business</i>): [Address of Contractor's principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address (<i>principal place of business</i>): [Address of Surety's principal place of business]</p>
<p>Owner</p> <p>Name: [Full formal name of Owner]</p> <p>Mailing address (<i>principal place of business</i>): [Address of Owner's principal place of business]</p>	<p>Contract</p> <p>Description (<i>name and location</i>): [Owner's project/contract name, and location of the project]</p> <p>Contract Price: [Amount, from Contract]</p> <p>Effective Date of Contract: [Date, from Contract]</p>
<p>Bond</p> <p>Bond Amount: [Amount]</p> <p>Date of Bond: [Date]</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____	_____
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: [Describe modification or enter “None”]

STANDARD GENERAL CONDITIONS
OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1—Definitions and Terminology.....	1
1.01 Defined Terms.....	1
1.02 Terminology.....	6
Article 2—Preliminary Matters.....	7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance.....	7
2.02 Copies of Documents.....	7
2.03 Before Starting Construction.....	7
2.04 Preconstruction Conference; Designation of Authorized Representatives.....	8
2.05 Acceptance of Schedules.....	8
2.06 Electronic Transmittals.....	8
Article 3—Contract Documents: Intent, Requirements, Reuse.....	9
3.01 Intent.....	9
3.02 Reference Standards.....	9
3.03 Reporting and Resolving Discrepancies.....	10
3.04 Requirements of the Contract Documents.....	10
3.05 Reuse of Documents.....	11
Article 4—Commencement and Progress of the Work.....	11
4.01 Commencement of Contract Times; Notice to Proceed.....	11
4.02 Starting the Work.....	11
4.03 Reference Points.....	11
4.04 Progress Schedule.....	12
4.05 Delays in Contractor’s Progress.....	12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions.....	13
5.01 Availability of Lands.....	13
5.02 Use of Site and Other Areas.....	14
5.03 Subsurface and Physical Conditions.....	15
5.04 Differing Subsurface or Physical Conditions.....	16
5.05 Underground Facilities.....	17

5.06	Hazardous Environmental Conditions at Site	19
Article 6—Bonds and Insurance.....		21
6.01	Performance, Payment, and Other Bonds	21
6.02	Insurance—General Provisions.....	22
6.03	Contractor’s Insurance.....	24
6.04	Builder’s Risk and Other Property Insurance	25
6.05	Property Losses; Subrogation	25
6.06	Receipt and Application of Property Insurance Proceeds	27
Article 7—Contractor’s Responsibilities		27
7.01	Contractor’s Means and Methods of Construction	27
7.02	Supervision and Superintendence	27
7.03	Labor; Working Hours	27
7.04	Services, Materials, and Equipment	28
7.05	“Or Equals”	28
7.06	Substitutes	29
7.07	Concerning Subcontractors and Suppliers	31
7.08	Patent Fees and Royalties	32
7.09	Permits	33
7.10	Taxes	33
7.11	Laws and Regulations.....	33
7.12	Record Documents.....	33
7.13	Safety and Protection.....	34
7.14	Hazard Communication Programs	35
7.15	Emergencies.....	35
7.16	Submittals	35
7.17	Contractor’s General Warranty and Guarantee	38
7.18	Indemnification	39
7.19	Delegation of Professional Design Services	39
Article 8—Other Work at the Site.....		40
8.01	Other Work	40
8.02	Coordination	41
8.03	Legal Relationships.....	41
Article 9—Owner’s Responsibilities		42

9.01	Communications to Contractor	42
9.02	Replacement of Engineer	42
9.03	Furnish Data	42
9.04	Pay When Due.....	42
9.05	Lands and Easements; Reports, Tests, and Drawings	43
9.06	Insurance.....	43
9.07	Change Orders	43
9.08	Inspections, Tests, and Approvals.....	43
9.09	Limitations on Owner’s Responsibilities	43
9.10	Undisclosed Hazardous Environmental Condition.....	43
9.11	Evidence of Financial Arrangements.....	43
9.12	Safety Programs	43
Article 10—Engineer’s Status During Construction		44
10.01	Owner’s Representative.....	44
10.02	Visits to Site.....	44
10.03	Resident Project Representative.....	44
10.04	Engineer’s Authority	44
10.05	Determinations for Unit Price Work	45
10.06	Decisions on Requirements of Contract Documents and Acceptability of Work	45
10.07	Limitations on Engineer’s Authority and Responsibilities	45
10.08	Compliance with Safety Program.....	45
Article 11—Changes to the Contract		46
11.01	Amending and Supplementing the Contract	46
11.02	Change Orders	46
11.03	Work Change Directives	46
11.04	Field Orders.....	47
11.05	Owner-Authorized Changes in the Work.....	47
11.06	Unauthorized Changes in the Work.....	47
11.07	Change of Contract Price	47
11.08	Change of Contract Times.....	49
11.09	Change Proposals.....	49
11.10	Notification to Surety.....	50
Article 12—Claims.....		50

12.01	Claims	50
Article 13—Cost of the Work; Allowances; Unit Price Work		51
13.01	Cost of the Work	51
13.02	Allowances	55
13.03	Unit Price Work	55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work		56
14.01	Access to Work	56
14.02	Tests, Inspections, and Approvals	56
14.03	Defective Work	57
14.04	Acceptance of Defective Work	58
14.05	Uncovering Work	58
14.06	Owner May Stop the Work	58
14.07	Owner May Correct Defective Work	59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period		59
15.01	Progress Payments	59
15.02	Contractor’s Warranty of Title	62
15.03	Substantial Completion	62
15.04	Partial Use or Occupancy	63
15.05	Final Inspection	64
15.06	Final Payment	64
15.07	Waiver of Claims	65
15.08	Correction Period	66
Article 16—Suspension of Work and Termination		67
16.01	Owner May Suspend Work	67
16.02	Owner May Terminate for Cause	67
16.03	Owner May Terminate for Convenience	68
16.04	Contractor May Stop Work or Terminate	68
Article 17—Final Resolution of Disputes		69
17.01	Methods and Procedures	69
Article 18—Miscellaneous		69
18.01	Giving Notice	69
18.02	Computation of Times	69
18.03	Cumulative Remedies	70

18.04	Limitation of Damages	70
18.05	No Waiver	70
18.06	Survival of Obligations	70
18.07	Controlling Law	70
18.08	Assignment of Contract	70
18.09	Successors and Assigns	70
18.10	Headings.....	70

STANDARD GENERAL CONDITIONS

OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. 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.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
1. does not conform to the Contract Documents;
 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of 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.
 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings*: The Supplementary Conditions identify:
1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
 2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
 3. Technical Data contained in such reports and drawings.
- B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria:* Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.
- D. *Payment Becomes Due*
1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.
- E. *Reductions in Payment by Owner*
1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 Waiver of Claims

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 Computation of Times

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1— Definitions and Terminology.....	1
Article 2— Preliminary Matters	1
Article 3— Contract Documents: Intent, Requirements, Reuse	2
Article 4— Commencement and Progress of the Work	2
Article 5— Site, Subsurface and Physical Conditions, Hazardous Environmental Conditions.....	3
Article 6— Bonds and Insurance.....	4
Article 7— Contractor’s Responsibilities	10
Article 8— Other Work at the Site	11
Article 9— Owner’s Responsibilities	12
Article 10— Engineer’s Status During Construction	12
Article 11— Changes to the Contract	14
Article 12— Claims	14
Article 13— Cost of Work; Allowances, Unit Price Work.....	14
Article 14— Tests and Inspections; Correction, Removal, or Acceptance of Defective Work	16
Article 15— Payments to Contractor, Set Offs; Completions; Correction Period	16
Article 16— Suspension of Work and Termination	16
Article 17— Final Resolutions of Disputes	16
Article 18— Miscellaneous	18

SUPPLEMENTARY CONDITIONS

OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms, if any, used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The paragraph address system used in these Supplementary Conditions is the same as the paragraph address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

SC-1.01.A.40 Add the following to Paragraph 1.01.A.40:

Trucking, shipping, delivery firms, consultants, and entities performing testing or inspection retained by Contractor or any Subcontractor are considered to be Subcontractors.

SC-1.01.A.44 Add the following to Paragraph 1.01.A.44:

Entities that rent construction equipment or machinery, but are not incorporated into the Work, are considered to be Suppliers. If such rental entity furnishes both equipment and one or more personnel to operate and maintain the equipment, such entity is a Subcontractor.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

- B. *Evidence of Contractor's Insurance:* When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A to read as follows:

Owner shall furnish to Contractor one copy in electronic portable document format (PDF) of the Contract Documents (including one fully signed counterpart of the Agreement).

2.06 *Electronic Transmittals*

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

SC-3.01 Delete Paragraph 3.01.C in its entirety.

SC-3.01 Add the following new paragraphs immediately after Paragraph 3.01.E:

- F. The Specifications and other verbal components of the Contract Documents may vary in form, format, and style. Some Specification sections are written in varying degrees of streamlined or declarative style and some Specifications sections may, in comparison, employ a more-narrative style. Omissions of such words and phrases as "Contractor shall," "in conformity with," "as shown," or "as specified" are intentional in streamlined language in the Contract Documents. Omitted words and phrases are incorporated by inference. Similar types of provisions may appear in various parts of a Specifications section or elsewhere in the Contract Documents. Contractor shall not attempt to take advantage of any variation of form, format or style in Change Proposal(s) and Claim(s).
- G. Cross referencing of Specification sections in a Specifications section's heading "Related Sections includes, but are not necessarily limited to: "and elsewhere within each Specifications section is provided as an aid and convenience to Contractor. Contractor shall not rely on cross referencing indicated and is responsible for coordinating the entire Work and providing a complete Project whether or not cross referencing is provided in each Specifications section or whether or not cross referencing is complete.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.05 *Delays in Contractor's Progress*

SC-4.05.C Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: (1) that weather conditions were abnormal for the period of time in which the delay occurred, (2) that such weather conditions could not have been reasonably anticipated, and (3) that such weather conditions had an adverse effect on the Work on the critical path at the time of the delay.
- b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:
 - 1) Contractor shall anticipate the number of foreseeable bad weather days per month indicated in Table SC-4.05-C-1—Foreseeable Bad Weather Days.
 - 2) In each month, every bad weather day exceeding the number of foreseeable bad weather days established in Table SC-4.05.C-1—Foreseeable Bad Weather Days, will be considered as "abnormal weather conditions." The existence of abnormal weather conditions will not relieve Contractor of the obligation to

demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor's then-current Progress Schedule's critical path for the Project.

Table SC-4.05.C-1—Foreseeable Bad Weather Days

Month	Monthly Anticipated Adverse Weather Calendar Days ¹
January	5
February	5
March	4
April	4
May	4
June	5
July	7
August	7
September	5
October	3
November	3
December	4

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.04.A Add the following new paragraph immediately after Paragraph 5.04.A.4:

5. Contractor encounters human remains, recognizes the existence of burial markers, archaeological sites, historical sites, artifacts of potential archaeological or historical interest, or wetlands not shown or indicated in the Contract Documents, Contractor shall immediately cease operations that may disturb such area(s) and secure the adjacent Work; and Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations (Contractor shall continue to suspend such operations until otherwise instructed by Owner but shall continue with all other operations that do not affect those remains or features);

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely: There are no such reports.

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely: There are no such drawings.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition).

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.B:

1. After Substantial Completion, Contractor shall furnish a warranty bond issued in the form of EJCDC® C-612, Warranty Bond (2018). The warranty bond must be in a bond amount of 10 percent of the final Contract Price. The warranty bond period will extend to a date two years after Substantial Completion of the Work. Contractor shall deliver the fully executed warranty bond to Owner prior to or with the final Application for Payment, and in any event not later than 11 months after Substantial Completion.
3. The warranty bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.

6.02 *Insurance—General Provisions*

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.H.2 of the General Conditions:

3. For the following Subcontractors, Suppliers, or categories of Subcontractor or Supplier, Contractor shall require the following specified insurance, with policy limits as stated:

[Identify Subcontractors, Suppliers, or categories of same, and insert specific insurance requirements and policy limits]

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: None other persons or entities to be included as additional insureds. See GC-6.03.C.]
- E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	\$500,000
Bodily injury by disease—aggregate	\$500,000
Employer's Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$1,000,000

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
 6. Any limitation or exclusion based on the nature of Contractor's work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$1,000,000
Products—Completed Operations Aggregate	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04.A and insert the following in its place:

- A. Owner shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

SC-6.04 Supplement Paragraph 6.04 with the following provisions:

- F. *Builder's Risk Requirements:* The builder's risk insurance must:
1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).

- a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
 - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
 4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier). If this coverage is subject to a sublimit, such sublimit will be a minimum of \$[amount].
 5. extend to cover damage or loss to insured property while in transit. If this coverage is subject to a sublimit, such sublimit will be a minimum of \$[amount].
 6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
 7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
 8. include performance/hot testing and start-up, if applicable.
 9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
 10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
 - a. [Here list by legal name (not Project role or classification) other persons or entities to be insured on the builder's risk policy; see the "HDR Guidance Note" at the start of SC-6.04.F, above). It is generally recommended to list the insured's full legal/contractual name, address, contact person, telephone, and e-mail address.

Include only persons or entities that have property at the Site that is to be insured by the builder's risk insurance. If applicable, separately identify any mortgagee or lender required to be named as a loss payee.]

11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
 - a. [Here list or provide cross-reference to specific items of Owner-furnished (or third-party furnished) equipment, and purchase value; do not list items whose value is already included in the Contract Price (as is the case when an equipment procurement contract is assigned to the Contractor). Contact HDR's ENG MSS team for guidance on this matter when necessary.]
12. If debris removal in connection with repair or replacement of insured property is subject to a coverage sublimit, such sublimit will be a minimum of \$[amount].
13. In addition to the coverage sublimits stated above, the following coverages are also subject to sublimits, as follows:
 - a. [Here list a specific coverage, or cause of loss, that has been determined to be likely to be subject to a sublimit. If not applicable, then delete Paragraph SC-6.04.F.13 in its entirety.] If this coverage is subject to a sublimit, such sublimit will be a minimum of \$[amount].

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provision:

- G. *Coverage for Completion Delays:* The builder's risk policy will include, for the benefit of Owner, loss of revenue and soft cost coverage for losses arising from delays in completion that result from covered physical losses or damage. Such coverage will include, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, compensation for loss of net revenues, rental costs, and attorneys' fees and engineering or other consultants' fees, if not otherwise covered.

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

- H. *Builder's Risk and Other Property Insurance Deductibles:* The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.
 1. The builder's risk policy (or if applicable the installation floater) will be subject to a deductible amount of not more than \$[number] for direct physical loss in any one occurrence.

SC-6.04 Delete Paragraph 6.04.A and substitute the following in its place:

A. *Installation Floater*

1. Contractor shall provide and maintain installation floater insurance on a broad form or "all risk" policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work ("Covered Property"). Coverage under the Contractor's installation floater will include loss from covered "all risk" causes (perils) to Covered Property:

- a. of the Contractor, and Covered Property of others that is in Contractor's care, custody, and control;
 - b. while in transit to the Site, including while at temporary storage sites;
 - c. while at the Site awaiting and during installation, erection, and testing;
 - d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.
2. The installation floater coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable.
 3. The installation floater coverage will be in an amount sufficient to protect Contractor's interest in the Covered Property. The Contractor will be solely responsible for any deductible carried under this coverage.
 4. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.02 *Supervision and Superintendence*

SC-7.02 Add the following to Paragraph 7.01, following Paragraph 7.02.B:

- C. Unless Owner otherwise agrees in writing, the superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

7.03 *Labor; Working Hours*

SC-7.03 Delete Paragraph 7.03.C in its entirety, and insert the following:

- C. In the absence of any Laws or Regulations to the contrary, Contractor may perform the Work on holidays, during any or all hours of the day, and on any or all days of the week, at Contractor's sole discretion.

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.C:

- D. Contractor shall be responsible for the cost of overtime (premium) pay and other expense incurred by Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

SC-7.03 Add the following new subparagraph immediately after Paragraph SC-7.03.D:

1. For purposes of administering the foregoing requirement, additional overtime costs are defined as [Here insert parameters for compensated overtime hours].

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- A. Owner is exempt from payment of sales and compensating use taxes of the State of Louisiana and of cities and counties thereof on all materials to be incorporated into the Work.
 - 1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of materials and equipment to be incorporated into the Work.
 - 2. Owner's exemption does not apply to construction tools or machinery, construction equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

7.11 *Laws and Regulations*

SC-7.11 Add the following new paragraph immediately after Paragraph 7.10.C:

- D. Refer to Article SC-19, for Laws and Regulations that, by terms of said Laws and Regulations, are to be included in the Contract Documents. The failure to include in Article SC-19 any Law or Regulation applicable to the performance of the Work does not diminish Contractor's responsibility to comply with all Laws and Regulations applicable to the performance of the Work.

7.13 *Safety and Protection*

SC-7.13 Insert the following after the second sentence of Paragraph 7.13.G:

The following Owner safety programs are applicable to the Work: [Here expressly identify by title and/or date, any such Owner safety programs. If Owner's safety programs are included in or addressed in the Specifications, SC-7.13 may be used to provide a cross-reference to the Specification section].

7.14 *Hazard Communication Programs*

SC-7.14 Add the following new paragraph immediately after Paragraph 7.14.A:

- B *Single Prime Contract:* Contractor shall be responsible for coordinating exchange of safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws and Regulations. Contractor shall provide a centralized location for the maintenance of the safety data sheets or other hazard communication information required to be made available by any employer on the Site. Location of the material safety data sheets or other hazard communication information shall be readily accessible to the employees of employers on the Site.

ARTICLE 8—OTHER WORK AT THE SITE

8.02 *Coordination*

ARTICLE 9—OWNER’S RESPONSIBILITIES

9.13 *Owner’s Site Representative*

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

9.13 *Owner’s Site Representative*

- A. Owner will furnish an “Owner’s Site Representative” (OSR) to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. Owner’s Site Representative will be [here identify individual or entity]. The authority and responsibilities of Owner’s Site Representative follow: [Here describe the duties and activities of the Owner’s Site Representative.]

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor’s safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR’s own personal safety while at the Site.
 3. *Liaison*
 - a. Serve as Engineer’s liaison with Contractor. Working principally through Contractor’s authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor’s proper execution of the Work.
 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.

- b. Observe whether any Work in place appears to be defective. This does not impose on either RPR or Engineer any obligation to find all, or any specific element of, defective Work, for which Contractor remains solely responsible.
- b. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to (1) code-required tests and special inspections, and (2) those performed by public or other agencies having jurisdiction over the Work.
 - b. Observe specific tests, inspections, and other field quality control required by the Contract Documents and performed by Contractor, Subcontractor, Supplier, or by testing or laboratories retained by any of them, .
 - c. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
6. *Payment Requests:* Review Applications for Payment with Contractor and advise Contractor regarding quantities or extent of the Work eligible for payment.

7. *Completion*

- a. Participate in Engineer's visits regarding inspection for Substantial Completion.
- b. Assist in the augmenting or amending the punch list of items to be completed or corrected prior to final inspection.
- c. *Final Inspection:* Participate in Engineer's visit to the Site, in the company of Owner and Contractor, regarding completion of the Work, and prepare a final punch list (if any) of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.
- d. *Record Documents:* Periodically during the Work, review with Contractor the status of Contractor's record documents required by the Contract Documents and advise Contractor on whether such record documents appear to comply with the Contract's requirements for record documents. Review final record documents submitted by Contractor.

D. The RPR will not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials, equipment (including "or-equal" items), or procedures or sequences indicated in the Contract Documents.
- 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
- 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
- 4. Advise on, issue directions relative to, or assume control or responsibility over any aspect of the means, methods, techniques, sequences or procedures of construction.
- 5. Advise on, issue directions regarding, or assume control over security protection, or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 *Cost of the Work*

SC-13.01.B.5.c.(1) Supplement Paragraph 13.01.B.5.c.(1) by adding the following subparagraphs:

- a) Prior to commencing Work at the Site, submit to Owner, through Engineer, copies of the equipment rental agreements for Owner's approval.
- b) Should Contractor perform Work using rented construction equipment or machinery without Owner's written approval of the associated rental agreement and the parties subsequently disagree on the applicable rental rates, use of such construction equipment and machinery will be compensated on the basis of the rental rate book indicated in Paragraph SC-13.01.B.5.c.(2).
- c) When the rental rate book is used basis for determining compensation for construction equipment and machinery leased from a rental firm, the hourly rate for such equipment shall be determined in accordance with Paragraph 13.01.B.5.(2) of the General Conditions.

SC-13.01.B.5.c.(2) Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of [name of equipment rental rate book].

SC-13.01.B.5.c Supplement Paragraph 13.01.B.5.c by adding the following subparagraphs:

- 4) *Inactive Equipment and Machinery*: Rental of construction equipment and machinery shall cease when the use thereof is no longer necessary for the Work. Periods of inactivity for such construction equipment or machinery will not be compensable unless agreed upon in writing by Owner, unless the costs of disassembly, removal, transportation, reassembly, and remobilization, as submitted to and accepted by Owner (with advice of Engineer) would exceed the cost of continuing to rent the item(s) during the period(s) of inactivity. Contractor is responsible for obtaining Owner's written approval for compensation for construction equipment and machinery for periods of inactivity. Owner is not responsible for retroactively approving such inactivity. "Period of inactivity" for such items includes periods when

the construction equipment or machinery is not used or necessary for the logical and efficient progression of the Work, or when other, available equipment or machinery is suitable for performing the given task.

- 5) *Condition of Equipment and Machinery*: Construction equipment and machinery will be compensable only for serviceable construction equipment and machinery capable of efficiently performing its intended function at the Site. Construction equipment and machinery not in compliance with this Paragraph SC-13.01.B.5.c.5) is not eligible for compensation.
- 6) *Capped Compensation*: Compensation paid Contractor for a given item of Contractor-owned construction equipment or machinery will be capped at, and shall not exceed, the comparable purchase price of such item of equal or comparable capacity and capability.

SC-13.01.C.2 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

a. For purposes of this paragraph, "small tools and hand tools" means items in one or more of the following categories: (1) Items that are ordinarily required for the performing worker's job function, including but not limited to equipment which ordinarily has no associated licensing, insurance, or substantive storage costs; such as hammers, wrenches, socket tools, manual saws, power saws, chainsaws, common power tools, impact drills, threaders, benders, transits and theodolites and related equipment, and other tools transportable by hand, regardless of ownership of such items; (2) Items such as gang-boxes, ladders, hand carts and similar wheeled items manually operated by workers, extension cords, and similar items; (3) common testing equipment such as insulation testers (megger-testing equipment), amp meters, gas detectors, pressure gauges, and similar items; (4) A purchase price (if purchased new, at retail) of \$500, although such limit is not absolute, and certain items may be deemed by Owner or Engineer as "small tools or hand tools" (and not eligible for compensation) even though such item may have a purchase price greater than the amount indicated in this Paragraph 13.01.C.2.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to 25 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

E. Adjustments in Unit Price

1. Contractor or Owner shall be entitled to an adjustment in the unit price if the quantity on an individual bid item extends or fails to achieve 75 percent of the estimated quantity at the time of Contract formation plus any additions or deletions included in change orders to the contract.
2. The adjusted unit price will apply only to all units installed for that bid item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

No Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.03 *Substantial Completion*

SC-15.03.B Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined by Engineer not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer or other entity retained by Owner, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 *Arbitration*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

SC-17.02 *Arbitration*

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by [the American Arbitration Association] in accordance with [its Construction Industry Arbitration Rules] (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with [the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration]. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be concurrently sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or, if no specified time is applicable, within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when

institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.

- C. The arbitration will be held in [indicate location, such as “the same locality as the Site” or “the same municipality as the Owner’s principal office location”, or other, as directed by the Owner].
- D. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the [Construction Arbitration Rules] that contemplate in-person hearings. The arbitrator(s) will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- E. The Arbitrator(s) will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- F. The award of the arbitrator(s) must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- G. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- H. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer’s consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - 1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
 - 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 - 4. the consolidation or joinder is in compliance with the arbitration administrator’s procedural rules.
- I. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- J. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior

written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 *Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

SC-17.03 *Attorneys' Fees*

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

SC-18.12 Add a new paragraph immediately after Paragraph 18.11, to read as follows:

SC-18.12 *Publicity*

- A. Contractor shall not disclose to any third party the nature of its Work on the Project, nor engage in publicity or public media disclosures with respect to the Project without the prior written consent of Owner.

SECTION A
ADDITIONAL FEDERAL PROVISIONS
COMPLIANCE PROVISIONS for CONSTRUCTION
CONTRACTS

(These provisions must be included in all construction contracts)

CONTENTS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)
2. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY- CONSTRUCTION CONTRACT SPECIFICATIONS
3. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
4. CERTIFICATION OF NONSEGREGATED FACILITIES
5. CIVIL RIGHTS
6. SECTION 109 OF THE HOUSING AND COMMUNITY DEVELOPMENT ACT OF 1974
7. SECTION 3 OF THE HOUSING AND URBAN DEVELOPMENT ACT OF 1968 -COMPLIANCE IN THE PROVISION OF TRAINING, EMPLOYMENT AND BUSINESS OPPORTUNITIES
8. SECTION 503 OF THE REHABILITATION ACT OF 1973 (29 USC 793)
9. SECTION 504 OF THE REHABILITATION ACT OF 1973, AS AMENDED
10. AGE DISCRIMINATION ACT OF 1975
11. CERTIFICATION OF COMPLIANCE WITH AIR AND WATER ACTS
12. SPECIAL CONDITIONS PERTAINING TO HAZARDS, SAFETY STANDARDS AND ACCIDENT PREVENTION
13. FLOOD DISASTER PROTECTION
14. ACCESS TO RECORDS - MAINTENANCE OF RECORDS
15. INSPECTION
16. REPORTING REQUIREMENTS
17. CONFLICT OF INTEREST

18. ACTIVITIES AND CONTRACTS NOT SUBJECT TO EXECUTIVE ORDER 11246, AS AMENDED

19. PATENTS

20. COPYRIGHT

21. TERMINATION FOR CAUSE

22. TERMINATION FOR CONVENIENCE

23. ENERGY EFFICIENCY

24. SUBCONTRACTS

25. DEBARMENT, SUSPENSION, AND INELIGIBILITY

26. PROTECTION OF LIVES AND HEALTH

27. BREACH OF CONTRACT TERMS

28. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

29. CHANGES

30. PERSONNEL

31. ANTI-KICKBACK RULES

32. ASSIGNABILITY

33. INTEREST OF CONTRACTOR

34. POLITICAL ACITIVITY

35. COMPLIANCE WITH THE OFFICE OF MANAGEMENT AND BUDGET

36. DISCRIMINATION DUE TO BELIEFS

37. CONFIDENTIAL FINDINGS

38. LOBBYING

39. PROCUREMENT OF RECOVERED MATERIALS

40. FEDERAL LABOR STANDARDS PROVISIONS

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause) [80 FR 54975, Sept. 11, 2015] (applicable to contracts and subcontracts above \$10,000)

During the performance of this contract, the Contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided

in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

2. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (applicable to contracts and subcontracts above \$10,000)

A. As used in these specifications:

- (1) "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- (2) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- (3) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- (4) "Minority" includes:
 - (a) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (b) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South America or other Spanish Culture or origin, regardless of race);
 - (c) Asian and Pacific Islander (all persons having origins in any of the original people of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (d) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

B. When the Contractor, or any subcontractor, at anytime, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract, in excess of \$10,000, the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

C. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

- D. The Contractor shall implement the specific affirmative action standards provided in paragraphs G(1) through G(16) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing contracts in geographical areas where they do not have a federal or federally-assisted construction contract shall apply the minority and female goals established for the geographic area where the contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
- E. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- F. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- G. The Contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
- (1) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - (2) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - (3) Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - (4) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement have not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly includes minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under G(2) above.

(6) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on a bulletin board accessible to all employees at each location where construction work is performed.

(7) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

(9) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

(11) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

(12) Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

(13) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

(14) Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

(15) Document and maintain a record of all solicitations of offers for subcontracts from minority and

female construction contractors and suppliers, including circulation of solicitation to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

- H. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (G(1) through G(16)). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under G(1) through G(16) of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation shall not be a defense for the Contractor's non-compliance.
- I. A single goal for minorities and a separate single goal for women has been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- J. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any persons because of race, color, religion, sex, or national origin.
- K. The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to E.O. 11246.
- L. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to E.O. 11246, as amended.
- M. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph G of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- N. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee, the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number where assigned, social security number, race, sex, status (e.g., mechanic, apprenticeship trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing

records satisfy this requirement, Contractors shall not be required to maintain separate records.

- O. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application or requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

3. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION

(applicable to contracts and subcontract over \$10,000)

- A. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
- B. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation: *(see table below)*

Goals for female participation: 6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goals established for such geographic area where the work is actually performed.

With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction. The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a) and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

MINORITY PARTICIPATION GOALS

PARISH	MIN. GOAL (%)	PARISH	MIN. GOAL (%)	PARISH	MIN. GOAL (%)	PARISH	MIN. GOAL (%)
Acadia	24.1	E. Baton Rouge	26.1	Madison	27.9	St. Landry	24.1
Allen	17.8	East Carroll	27.9	Morehouse	27.9	St. Martin	24.1
Ascension	26.1	East Feliciana	30.4	Natchitoches	29.3	St. Mary	24.1
Assumption	27.7	Evangeline	24.1	Orleans	31.0	St. Tammany	31.0
Avoyelles	29.3	Franklin	27.9	Ouachita	22.8	Tangipahoa	27.7
Beauregard	17.8	Grant	25.7	Plaquemines	27.7	Tensas	27.9
Bienville	29.3	Iberia	24.1	Pointe Coupee	30.4	Terrebonne	27.7
Bossier	29.3	Iberville	30.4	Rapides	25.7	Union	27.9
Caddo	29.3	Jackson	27.9	Red River	29.3	Vermilion	24.1
Calcasieu	19.3	Jefferson	31.0	Richland	27.9	Vernon	17.8
Caldwell	27.9	Jefferson Davis	17.8	Sabine	29.3	Washington	27.7
Cameron	17.8	Lafayette	20.6	St. Bernard	31.0	Webster	29.3
Catahoula	27.9	Lafourche	27.7	St. Charles	27.7	W. Baton Rouge	26.1
Claiborne	29.3	LaSalle	27.9	St. Helena	30.4	West Carroll	27.9
Concordia	30.4	Lincoln	27.9	St. James	27.7	West Feliciana	30.4
De Soto	29.3	Livingston	26.1	St. John the Baptist	27.7	Winn	29.3

- C. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the sub-contract; and the geographical area in which the contract is to be performed.
- D. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is *(insert description of the geographical areas where the contract is to be performed, giving the State, parish, and city, if any)*:

4. CERTIFICATION OF NONSEGREGATED FACILITIES

(applicable to contracts and subcontracts over \$10,000)

By the submission of this bid, the bidder, offeror, applicant or subcontractor certifies that he/she does not maintain or provide for his/her establishments, and that he/she does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. He/she certifies further that he/she will not maintain or provide for employees any segregated facilities at any of his/her establishments, and he/she will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. The bidder, offeror, applicant or subcontractor agrees that a breach of this certification is a violation of the equal opportunity clause of this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms, and other

storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason.

He/she further agrees that (except where he/she has obtained for specific time periods) he/she will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the equal opportunity clause; that he/she will retain such certifications in his/her files; and that he/she will forward the following notice to such proposed subcontractors (except where proposed subcontractors have submitted identical certifications for specific time periods).

5. CIVIL RIGHTS

The Contractor shall comply with the provisions of Title VI of the Civil Rights Act of 1964. No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

6. SECTION 109 OF THE HOUSING AND COMMUNITY DEVELOPMENT ACT OF 1974

The Contractor shall comply with the provisions of Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall on the grounds of race, color, national origin, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title. Section 109 further provides that discrimination on the basis of age under the Age Discrimination Act of 1975 or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, as amended, is prohibited.

7. SECTION 3 OF THE HOUSING AND URBAN DEVELOPMENT ACT OF 1968 COMPLIANCE IN THE PROVISION OF TRAINING, EMPLOYMENT AND BUSINESS OPPORTUNITIES

- A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each, and the name and location of the

person(s) taking applications for each of the positions, and the anticipated date the work shall begin.

- D. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with Section 3 covered Indian housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).

8. SECTION 503 OF THE REHABILITATION ACT OF 1973 (29 USC 793)
(applicable to contracts and subcontracts over \$10,000)

- A. The contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is otherwise qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.
- B. The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
- C. In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
- D. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.
- E. The Contractor will notify each labor union or representative of workers with which it has a collective

bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative action to employ and advance in employment physically and mentally handicapped individuals.

- F. The Contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to Section 503 of the Act, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

9. SECTION 504 OF THE REHABILITATION ACT OF 1973, AS AMENDED

The Contractor agrees that no otherwise qualified individual with disabilities shall, solely by reason of his disability, be denied the benefits, or be subjected to discrimination including discrimination in employment, any program or activity that receives the benefits from the federal financial assistance.

10. AGE DISCRIMINATION ACT OF 1975

The Contractor shall comply with the provisions of the Age Discrimination Act of 1975. No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving federal financial assistance.

11. CERTIFICATION OF COMPLIANCE WITH AIR AND WATER ACTS

(applicable to contracts and subcontracts exceeding \$100,000)

The Contractor and all subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended.

In addition to the foregoing requirements, all nonexempt contractors and subcontractors shall furnish to the owner, the following:

- A. A stipulation by the Contractor or subcontractors, that any facility to be utilized in the performance of any nonexempt contract or subcontract, is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR Part 15, as amended.
- B. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857 c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
- C. A stipulation that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized, or to be utilized for the contract, is under consideration to be listed on the EPA List of Violating Facilities.
- D. Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements

in paragraph (1) through (4) of this section in every nonexempt subcontract and requiring that the Contractor will take such action as the government may direct as a means of enforcing such provisions.

12. SPECIAL CONDITIONS PERTAINING TO HAZARDS, SAFETY STANDARDS AND ACCIDENT PREVENTION

A. Lead-Based Paint Hazards (include in contracts for construction or rehabilitation of residential structures) The construction or rehabilitation of residential structures is subject to the HUD Lead-Based Paint regulations, 24 CFR Part 35. The Contractor and subcontractors shall comply with the provisions for the elimination of lead-based paint hazards under Subpart B of said regulations. The Owner will be responsible for the inspections and certifications required under Section 35.14 (f) thereof.

B. Use of Explosives (Modify as required)

When the use of explosives is necessary for the prosecution of the work, the Contractor shall observe all local, state and federal laws in purchasing and handling explosives. The Contractor shall take all necessary precaution to protect completed work, neighboring property, water lines, or other underground structures. Where there is danger to structures or property from blasting, the charges shall be reduced and the material shall be covered with suitable timber, steel or rope mats.

The Contractor shall notify all owners of public utility property of intention to use explosives at least 8 hours before blasting is done close to such property. Any supervision or direction of use of explosives by the engineer does not in any way reduce the responsibility of the Contractor or his Surety for damages that may be caused by such use.

C. Danger Signals and Safety Devices (Modify as Required)

The Contractor shall make all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain in good condition, sufficient red or warning lights at night, suitable barricades and other devices necessary to protect the public. In case the Contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charge the cost of this work to the Contractor. Such action by the Owner does not relieve the Contractor of any liability incurred under these specifications or contract.

13. FLOOD DISASTER PROTECTION

This contract is subject to the requirements of the Flood Disaster Protection Act of 1973 (P.L. 93-234). Nothing included as a part of this contract is approved for acquisition or construction purposes as defined under Section 3(a) of said

Act, for use in an area identified by the Secretary of HUD as having special flood hazards which is located in a community not then in compliance with the requirements for participation in the National Flood Insurance Program pursuant to Section 201(d) of said Act; and the use of any assistance provided under this contract for such acquisition for construction in such identified areas in communities then participating in the National Flood Insurance Program shall be subject to the mandatory purchase of flood insurance requirements or Section 102(a) of said Act.

Any contract or agreement for the sale, lease, or other transfer of land acquired, cleared or improved with assistance provided under this Contract shall contain, if such land is located in an area identified by the Secretary as having special flood hazards and in which the sale of flood insurance has been made available under the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 et

seq., provisions obligating the transferee and its successors or assigns to obtain and maintain, during the ownership of such land, such flood insurance as required with respect to financial assistance for acquisition or construction purposes under Section 102(a) of Flood Disaster Protection Act of 1973.

14. ACCESS TO RECORDS - MAINTENANCE OF RECORDS

The State of Louisiana, the Department of Housing and Urban Development, the Comptroller General of the United States, the US Department of Treasury, or any of their duly authorized representatives, shall have access to any books, documents, papers and records of the Contractor which are directly pertinent to this specific contract, for the purpose of audits, examinations, and making excerpts and transcriptions. All records connected with this contract will be maintained in a central location by the unit of local government Tangipahoa Parish and will be maintained for a period of five (5) years from the official date of the U.S. Department of Treasury final closeout of the grant.

15. INSPECTION

The authorized representative and agents of the State of Louisiana and the Department of Housing and Urban Development shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.

16. REPORTING REQUIREMENTS

The Contractor shall complete and submit all reports, in such form and according to such schedule, as may be required by the Owner.

17. CONFLICT OF INTEREST

- A. No officer or employee of the local jurisdiction or its designees or agents, no member of the governing body, and no other public official of the locality who his/her tenure or for one year thereafter, shall have any interest, direct or indirect, in any contract or subcontract, or the proceeds thereof, for work to be performed. Further, the Contractor shall cause to be incorporated in all subcontracts the language set forth in this paragraph prohibiting conflict of interest.
- B. No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

18. ACTIVITIES AND CONTRACTS NOT SUBJECT TO EXECUTIVE ORDER 11246, AS AMENDED (applicable to contracts and subcontracts of \$10,000 and under)

During the performance of this contract, the Contractor agrees as follows:

- A. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

- B. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by Contracting Officer setting forth the provisions of this non-discrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- C. Contractors shall incorporate foregoing requirements in all subcontracts.

19. PATENTS

- A. The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract including its use by the Owner, unless otherwise specifically stipulated in the Contract Document.
- B. License or Royalty Fees: License and/or Royalty Fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized license, direct by the Owner and not by or through the Contractor.
- C. If the Contractor uses any design device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the owner of such patented or copyrighted design device or material. It is mutually agreed and understood, that without exception the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copy-right in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense, or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

20. COPYRIGHT

No materials, to include but not limited to reports, maps, or documents produced as a result of this contract, in whole or in part, shall be available to the Contractor for copyright purposes. Any such materials produced as a result of this contract that might be subject to copyright shall be the property of the Owner and all such rights shall belong to the Owner.

21. TERMINATION FOR CAUSE

If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner his obligations under this contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this contract, the Owner shall thereupon have the right to terminate this contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. In such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the Contractor under this contract shall, at the option of the Owner, become the Owner's property and the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder. Notwithstanding the above, the Contractor shall not be relieved of liability to the Owner for damages sustained by the Owner by virtue of any breach of the contract by the Contractor, and the Owner may withhold any payments to the Contractor for the purpose of set-off until such time as the exact amount of damages due the Owner from the

Contractor is determined.

22. TERMINATION FOR CONVENIENCE

The Owner may terminate this contract at any time by giving at least ten (10) days notice in writing to the Contractor. If the contract is terminated by the Owner as provided herein, the Contractor will be paid for the time provided and expenses incurred up to the termination date.

23. ENERGY EFFICIENCY

The Contractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).

24. SUBCONTRACTS

- A. The Contractor shall not enter into any subcontract with any subcontractor who has been debarred, suspended, declared ineligible, or voluntarily excluded from participating in contracting programs by any agency of the United States Government or the State of Louisiana.
- B. The Contractor shall be as fully responsible to the Owner for the acts and omissions of the Contractor's subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by the Contractor.
- C. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractor to the Contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.
- D. Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

25. DEBARMENT, SUSPENSION, AND INELIGIBILITY

The Contractor represents and warrants that it and its subcontractors are not debarred, suspended, or placed in ineligibility status under the provisions of 24 CFR 24 (government debarment and suspension regulations).

26. PROTECTION OF LIVES AND HEALTH

The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the worksite, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes, in addition to specific safety and health regulations described by Chapter XIII, Bureau of Labor Standards, Department of Labor, Part 1518, Safety and Health Regulations for Construction, as outlined in the Federal Register, Volume 36, No. 75, Saturday, April 17, 1971, Title 29 - LABOR, shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the Owner may determine to be reasonably necessary.

27. BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the Contractor or the Contractor's subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this contract. The duties and obligations imposed by the contract documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

28. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

29. CHANGES

The Owner may, from time to time, request changes in the scope of the services of the Contractor to be performed hereunder. Such changes, including any increase or decrease in the amount of the Contractor's compensation which are mutually agreed upon by and between the Owner and the Contractor, shall be incorporated in written and executed amendments to this Contract.

30. PERSONNEL

The Contractor represents that it has, or will secure at its own expense, all personnel required in performing the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the Owner.

All the services required hereunder will be performed by the Contractor or under its supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under State and local law to perform such services.

No person who is serving sentence in a penal or correctional institution shall be employed on work under this Contract.

31. ANTI-KICKBACK RULES

Salaries of personnel performing work under this Contract shall be paid unconditionally and not less often than once a month without payroll deduction or rebate on any account except only such payroll deductions as are mandatory by law or permitted by the applicable regulations issued by the Secretary of Labor pursuant to the "Anti-Kickback Act" of June 13, 1934 (48 Stat. 948; 62 Stat. 740; 63 Stat. 108; Title 18 U.S.C. 874; and Title 40 U.S.C. 276c). The Contractor shall comply with all applicable "Anti-Kickback" regulations and shall insert appropriate provisions in all subcontracts covering work under this contract to insure compliance by the subcontractors with such regulations, and shall be responsible for the submission of affidavits required of subcontractors thereunder except as the Secretary of Labor may specifically provide for variations of or exemptions from the requirements thereof.

32. ASSIGNABILITY

The Contractor shall not assign any interest in this Contract, and shall not transfer any interest in the same (whether by assignment or novation) without prior written approval of the Owner provided that claims for money due or to become due the Contractor from the Owner under this Contract may be assigned to a bank, trust company, or other financial institution, or to a Trustee in Bankruptcy, without such approval. Notice of any such assignment or transfer shall be furnished promptly to the Owner.

33. INTEREST OF CONTRACTOR

The Contractor covenants that he presently has no interest and shall not acquire any interest direct or indirect in the above described project or any parcels therein or any other interest which would conflict in any manner or degree with the performance of his services hereunder. The Contractor further covenants that in the performance of this Contract no person having any such interest shall be employed.

34. POLITICAL ACTIVITY

The Contractor will comply with the provisions of the Hatch Act (5 U.S.C. 1501 et seq.), which limits the political activity of employees.

35. COMPLIANCE WITH THE OFFICE OF MANAGEMENT AND BUDGET

The parties agree to comply with the regulations, policies, guidelines, and requirements of the Office of Management and Budget, Circulars A-95, A-102, A-133, and A-54, as they relate to the use of Federal funds under this contract.

36. DISCRIMINATION DUE TO BELIEFS

No person with responsibilities in operation of the project to which this grant relates will discriminate with respect to any program participant or any applicant for participation in such program because of political affiliation or beliefs.

37. CONFIDENTIAL FINDINGS

All of the reports, information, data, etc., prepared or assembled by the Contractor under this Contract are confidential, and the Contractor agrees that they shall not be made available to any individual or organization without prior written approval of the Owner.

38. LOBBYING

The Contractor certifies, to the best of his or her knowledge and belief that:

1. No federally appropriated funds have been paid or will be paid, by or on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan,

or cooperative agreement.

2. If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the contractor shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

39. PROCUREMENT OF RECOVERED MATERIALS

Tangipahoa Parish Government shall comply with Section 6002 of the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, which include procuring only items designated in guidelines of the EPA at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery, and establishing an affirmative procurement program for procurement of recovered materials identified in EPA guidelines.

40. FEDERAL LABOR STANDARDS PROVISIONS

The Contractor shall abide by the requirements of the Federal Labor Standards Provisions (form HUD-4010) as follows, including Davis-Bacon:

41. BUY AMERICA ACT PROVISIONS, PREFERENCES AND WAIVERS

As appropriate and to the extent consistent with the law, the contractor/supplier should to the greatest extent practicable, under a federal award, provide a preference for the purchase, acquisition, or use of goods, products and materials produced in the United States, including iron, aluminum, steel, cement, and other manufactured products, unless a preference or waiver is in effect from the Restore federal funding program at the time of the public bid.

**Federal Labor Standards Provisions
U.S. Department of Housing and Urban Development
Office of Labor Relations**

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

- (1)** The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2)** The classification is utilized in the area by the construction industry; and
- (3)** The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the

amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 12150140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) **If the contractor does not make payments to a trustee or other third person, the contractor may consider as part** of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3.(i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR

5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than

the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

1 **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

2 **Compliance with Davis-Bacon and Related Act Requirements.**

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and

7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

form HUD-4010 (06/2009)
Previous edition is obsolete.
ref. Handbook 1344.1

THE FOLLOWING TECHNICAL SPECIFICATIONS WERE
PREPARED BY HDR ENGINEERING, INC.

TECHNICAL SPECIFICATIONS

APRIL 4, 2023

Prepared By



HDR Engineering, Inc.
1 Galleria Blvd, Suite 1920
Metairie, LA 70001
Project No. 10167164



Erin Rooney
4-4-23

TECHNICAL SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS

- Section 01 00 00 – Special Conditions
- Section 01 11 00 – Summary of the Work
- Section 01 20 00 – Measurement and Basis of Payment
- Section 01 41 00 – Environmental Protection Measures
- Section 01 41 26 – Permits

DIVISION 2 – EXISTING CONDITIONS

- Section 02 21 13 – Construction Surveying

DIVISION 31 – EARTHWORK

- Section 31 05 16 – Lightweight Aggregate
- Section 31 05 19 – Geotextiles
- Section 31 37 00 – Riprap

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION

- Section 35 01 50 – Access and Flotation Channels
- Section 35 12 73 – Lighted Daybeacons
- Section 35 59 53 – Settlement Plates

DIVISION 1 – GENERAL REQUIREMENTS

DIVISION 01 – GENERAL REQUIREMENTS**SECTION 01 00 00 – SPECIAL CONDITIONS****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

Refer to Specification Section 01 11 00 – Summary of the Work.

1.02 EXAMINATION OF SITE

Respondents should visit the site and be thoroughly familiar with job conditions before submitting a bid. Failure to properly consider these conditions when preparing bids will not constitute grounds for additional compensation. Refer to EJCDC C-200, "Instructions to Bidders," Article 5, "Site and Other Areas; Existing Site Conditions; Examination of Site; Owner's Safety Program; Other Work at the Site."

1.03 INQUIRIES

All inquiries regarding the contract documents, including any apparent discrepancies thereto, shall be directed to Engineer:

HDR Engineering, Inc.
Attn: Erin Rooney, PE
1 Galleria Blvd, Suite 1920
Metairie, LA 70001
Phone: (504) 218-1231
E-Mail: erin.rooney@hdrinc.com

1.04 INTENT OF THE CONTRACT DOCUMENTS

- A. The intent of the contract documents is to include all of the work for the contract price and within the contract time. Contract documents are to be considered as cooperative. All work not specified or not shown on the construction drawings but which is necessary for the completion or functioning and operation of the project shall be understood and implied as part of the contract to be performed by Contractor for the contract price. Such work shall be executed by Contractor in the same manner and with the same character of material as other portions of the contract without extra compensation.
- B. The contract documents are cooperative and they shall be interpreted so that what is called for by one shall be as binding as if called for by all. Should Contractor observe conflicts in or omission from the contract documents, Contractor shall bring them to Engineer's attention for decision, inclusion, or revision as soon as possible after originally observed. Regardless, such work shall be performed and furnished by Contractor in accordance with accepted construction industry practices. In the event of duplications or conflicts in the contract documents after the contract has been executed, the greater quality and the most expensive method of work, materials, and equipment shall be construed as the requirement, with a credit for all costs saved accruing to Owner in the event the least expensive method of work is directed. Duplication of work is not intended by the contract documents and any duplication specified shall not become a basis for extra cost to Owner. Technical specifications shall take precedence over conflicting construction drawings. Explanatory notes on the construction drawings shall take precedence over conflicting drawn-out indications. Large-scale details will take precedence over small-scale drawings and figured dimensions to scale measurements. Where figures are lacking, scale measurements may be followed, but in all cases, the measurements are to be checked from the work in place. Should variations be found, they must be referred to Engineer for instructions before proceeding with the work.

1.05 PERMITS AND LAWS

- A. Refer to Specification Section 01 41 26 – Permits for Owner-obtained permits.

- B. If such laws, rules, regulations, or ordinances conflict with the contract documents, then such laws, rules, regulations, or ordinances shall govern instead of the contract documents, except in such cases where the contract documents exceed them in quality of materials or labor, then the contract documents shall be followed.

1.06 SUPPLEMENTAL INSURANCE COVERAGE

- A. Delete Subparagraphs 6.04 of EJCDC C-800 Supplementary Conditions. Builder's Risk insurance coverage is not required for this project.
- B. Contractor shall provide the following supplemental insurance coverage:
1. U.S. Longshore and Harbor Workers' Insurance – Statutory amount in compliance with the United States Longshore and Harbor Workers' Act.
 2. Maritime Employers Liability Insurance – Any employees who may fall under the Death on High Seas Act, Jones Act, or any other federal or state acts relating to maritime employment must be covered by Maritime Employers Liability Insurance of not less than \$500,000.00. Such coverage will include but not be limited to transportation, wages, maintenance, and cure, as well as any other liabilities arising under such maritime employment.

1.07 SUBMITTALS

The Contractor shall review all submittals for compliance with the requirements of the contract before 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 before beginning the associated work. The contract time shall not be extended based on incorrect or incomplete submittals.

Engineer's approval of shop drawings or any aspects of the work shall not act to transfer Contractor's responsibility for, nor relieve Contractor from the performance of any of Contractor's duties set forth in the contract documents.

Refer to EJCDC C-700, "Standard General Conditions of the Construction Contract," Article 7.16, "Submittals" for additional requirements regarding shop drawings and samples.

1.08 QUALITY ASSURANCE

- A. Construction Observation: Owner and Engineer will periodically observe the construction progress, procedures, and materials of Contractor. Contractor shall offer full cooperation to facilitate these observation activities and shall be responsive to questions regarding methods, equipment, materials, and intentions in pursuing the work or any particular thereof. Such observation by Owner or Engineer is for the express purpose of verifying compliance by Contractor with the contract documents and shall not be construed as construction supervision nor an indication of approval of the manner or location in which the work is being performed as being a safe practice or place. The safety of the workers on the site is the responsibility of Contractor. By entering the site, Contractor and its employees relieve Owner and Engineer of any responsibility for their safety and accept complete responsibility for any unsafe acts or procedures which may cause anyone harm.

- B. Rejection of Work: If Owner or Engineer rejects work or materials incorporated into the work, Contractor shall bear all expenses associated with testing to prove compliance with the contract documents, including but not limited to engineering expenses associated with such testing. Any and all such expenses that are paid directly by Owner will be deducted or withheld from subsequent payment(s) to Contractor.

1.09 PROGRESS PAYMENTS

Refer to Article 15 of EJCDC C-700, "Standard General Conditions of the Construction Contract" and to specification Section 01 20 00 – Measurement and Basis of Payment.

1.10 CONTRACT NOTICE-TO-PROCEED AND COMPLETION

- A. Contract Period: This contract must be completed within the specified number of days beginning on the date cited in the Notice-to-Proceed letter. Unless specifically stated as "working day," the term "day" or "calendar day" shall mean every day of the calendar year. Along with the work progress schedule, Contractor shall submit a schedule for normal working days.
- B. Notice-to-Proceed: Contractor shall mobilize and begin work as noted on the Notice-to-Proceed letter from Owner.
- C. Liquidated Damages: Owner has determined that the completion of the work in this contract is critical to fulfill legal obligations related to project funding, and Contractor's failure to complete the work within such time will cause damage to Owner. Since exact damages are difficult to determine or forecast, the sum of **\$1,000.00** per calendar day is hereby established by the parties as a reasonable estimate of just compensation to Owner for the failure of Contractor to complete the work by the time set forth in the contract or authorized extension thereto. Said sum will be deducted from the money due or to become due to Contractor, not as a penalty but as liquidated damages from the added expense, including administrative and inspection costs, for each and every calendar day the work or any portion thereof remains incomplete after the expiration of the time limit set in the contract or authorized extension. Charges for liquidated damages will begin accumulating on the first calendar day following the final contract completion date and continue until the date of final acceptance as established by Owner. Final acceptance will not be issued until all punch list items have been completed.

1.11 CONSTRUCTION SITE AND JOB CONDITIONS

- A. Supervision: Contractor's Superintendent shall be on-site at all times that work is in progress. Contractor shall not allow any unsafe or unsanitary conditions to develop as a result of Contractor's operations.
- B. Site Maintenance: Contractor shall not allow trash or debris to accumulate on the site. Contractor shall clean the entire area of any litter resulting from Contractor's operations on a daily basis. Contractor shall maintain the premises as clean and presentable as good construction practices will allow at all times.
- C. Utilities: Water and electrical power will not be furnished by Owner. Any temporary connections or appurtenances shall be provided by Contractor at no cost to Owner and removed from the premises at the conclusion of the contract.
- D. Temporary Toilets: Contractor shall provide and maintain in neat, sanitary condition toilets and other necessary accommodations for employees' use to comply with the regulations of the State Department of Health and other applicable jurisdictions.
- E. Fire Protection: Contractor shall take stringent precautions against fire. Open fires are not allowed unless approved in writing by Owner.

1.12 OCCUPATIONAL SAFETY AND HEALTH STANDARDS

The work and Contractor's operational activities shall comply with the applicable provisions of the U.S. Department of Labor Occupational Safety and Health Administration's (OSHA) safety and health regulations for construction and with applicable Occupational Safety and Health Standards.

1.13 PROTECTION OF PUBLIC

Contractor shall be responsible for public safety at the construction site. All temporary fencing, barricades, warning lights, signs, and flagmen shall be provided and maintained by Contractor as needed. Contractor shall maintain security of the construction site.

1.14 SITE PHYSICAL DATA

Information furnished below is for Contractor's review. However, it is expressly understood that Owner and Engineer are not responsible for any interpretation or conclusion drawn therefrom by Contractor. Owner and Engineer also are not responsible for any lack of information herein pertaining to physical conditions at the site. Contractor shall make every effort possible to become familiar with and research the conditions to be expected at the site.

- A. Tidal Conditions: Under ordinary conditions, the site is subject to tidal fluctuations. The tide elevation is largely dependent on the speed, direction, and duration of the wind. Strong winds may raise or lower the water surface.
- B. Marine Conditions: In addition to tidal fluctuations and current velocities mentioned herein, the water at the project site may be rough at times. Project site is in Lake Pontchartrain and is subject to boat/barge traffic and associated wakes/waves and waves due to adverse weather conditions. Contractor shall become familiar with the daily and extreme conditions that might be expected throughout the duration of this project. Impact and rework of partially completed work components shall not be just cause for increased compensation.
- C. Current: Strong currents may exist at and near the project site at times. Project site is in Lake Pontchartrain near tidal passes and rivers and is subject to boat and barge traffic and associated currents from wakes and waves.
- D. Groundwater: Subsurface groundwater conditions and elevations may change. Changes in groundwater elevations shall not be just cause for increased compensation.
- E. Surface Debris: In addition to natural timber debris, areas of work may be cluttered with debris, trash, etc. Before starting work, Contractor shall remove debris from the footprint of all work areas. Debris shall not be covered up, buried, pushed into adjacent areas, or incorporated into the earthwork of the project. Debris shall be hauled away from the project site and disposed of in accordance with applicable federal, state, and municipal laws, rules, regulations, and ordinances.

1.15 PROTECTION OF SITE

- A. Contractor is hereby notified that construction will occur near active public recreational facilities, private property, and environmentally sensitive areas. Contractor is hereby notified that adverse working conditions may exist and the necessary allowances and precautions shall be made to avoid damaging public and private property and sensitive vegetation. Unauthorized damage to any existing utilities, building facilities, structures, or plant life shall be repaired by Contractor at no expense to Owner.
- B. Utility locations have not been field verified. Pipelines or other existing underground installations and structures may be present at or near the project site. Contractor shall make every effort to locate all underground obstacles and pipelines by prospecting in advance of all excavation. Any damage to pipelines, including any resulting environmental contamination, caused by the construction activities shall be repaired and cleaned-up by Contractor. Any delay or extra cost to Contractor shall not constitute a claim for extra work, additional payment, or damages.

- C. Contractor shall protect all vegetation adjacent to and within the construction site. If Contractor's work requires removal of vegetation, Contractor shall obtain approval of Owner before removal. Contractor shall be held liable for removal of vegetation without Owner's prior approval.
- D. The construction drawings show the locations of known surface structures pertinent to the work. The locations of surface and subsurface features shown on the construction drawings are not exact. In the case of underground or underwater obstructions such as existing water, sewer, storm sewer, gas, electrical lines, piling, debris, or partial structures that are not shown on the construction drawings, their location is not guaranteed. Owner assumes no responsibility for failure to show any or all of these structures on the construction drawings or to show them in their exact location. Failure to show will not be considered a basis for claims for additional compensation for extra work in any manner whatsoever unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades or requires the building of special work for which no provision is made. Minor changes and variations of the work specified and shown on the construction drawings shall be expected by Contractor and allowed for as incidental to the satisfactory completion of a whole and functioning work or improvement.

1.16 MISPLACED MATERIAL

Should Contractor lose, dump, throw overboard, sink, or misplace any material, plant, machinery or appliance, which in the opinion of Owner or Engineer may be dangerous to or obstruct navigation, Contractor shall recover and remove the same with the utmost dispatch. Contractor shall give immediate notice, with description and location of such obstructions, until the same are removed. Should Contractor refuse, neglect, or delay compliance with the above requirements, such obstructions may be removed by Owner and the cost of such removal may be deducted from any money due or to become due to Contractor. The liability of Contractor for the removal of a vessel wrecked or sunk without fault or negligence shall be limited to that provided in Sections 15, 19, and 20 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C 410 et seq).

1.17 SIGNAL LIGHTS

Contractor shall display signal lights and conduct operations in accordance with the general regulations of the Department of the U.S. Army and of the U.S. Coast Guard. These general regulations govern lights and day signals on towing vessels with tows, vessels working on wrecks, dredges, vessels engaged in laying cables or pipe, dredge pipelines, vessels of more than 65 feet in length moored or anchored in a fairway or channel, and floating plant working in navigable channels, as set forth in Commandant U.S. Coast Guard Instruction M16672.2, Navigation Rules: International – Inland (COMDTINST M16672.2) or 33 CFR 81 Appendix A (International) and 33 CFR 84 through 89 (Inland) as applicable.

1.18 DREDGING AIDS

Contractor shall obtain applicable permit(s) from the U.S. Coast Guard for all dredging aid markers, including the temporary warning signs specified on the construction drawings and any additional temporary navigation aids, dredging aids, warning signs, buoys, and lights that may be required before starting construction. The permit application shall state the position, color, and dates to be installed and removed for all temporary markers. Dredging aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with permanent navigation aids. Copies of the application and permit shall be submitted to Owner and Engineer at least seven (7) days before starting dredging operations.

1.19 NOTICE TO MARINERS

At least 30 days before starting work on this contract, Contractor shall notify the U.S. Coast Guard, Eighth District – Marine Information at D8MarineInfo@uscg.mil of Contractor's intended operations and request that it be published in the Local Notice to Mariners. This notification must be given in sufficient time so that it appears in the Notice to Mariners at least seven (7) days before starting dredging operations. Contractor shall provide a copy of the USACE Permit and permit drawings to the U.S. Coast Guard. Contractor shall provide a copy of the notification to the Owner and Engineer.

1.20 VESSEL TRAFFIC

Contractor shall conduct the work in such a manner as to not endanger commercial and recreational navigation. Contractor shall visit the site before submitting the proposal and understand the conditions to be expected. After completion of the work, Contractor shall promptly remove the plant, including ranges, buoys, piles, other markers, or temporary structures placed under the contract.

1.21 LAYOUT OF WORK AND SURVEYS

Contractor shall establish baselines and benchmarks, if applicable, for the limits of the project. Contractor shall also be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the construction drawings. The Contractor shall maintain and preserve all stakes and other marks before their authorized removal.

1.22 CLEAN-UP

At the completion of the job, Contractor shall remove all waste products, debris, packaging, trash, paint marks, grease containers, and other deleterious materials and marks from the site. Contractor shall remove all of the Contractor's plant, equipment, and materials from the project site. Contractor is not permitted to abandon pipelines, cables, pipeline supports, pontoons, or other equipment or materials. Any stakes or other markers placed by the Contractor must be removed. Refer to individual specification sections for special cleaning required by those sections.

1.23 RECORD DRAWINGS

- A. Contractor shall maintain a record of all changes made during construction on a separate set of the Contract Documents. Contractor shall be responsible for keeping these records and neatly noting all changes with colored pencil or ink. Progress payments will not be made to Contractor unless such records are maintained.
- B. Record Drawings shall be submitted to Engineer at the completion of the project. Final payment will not be made until Record Drawings have been received and accepted by Engineer.

1.24 WAGE DETERMINATIONS

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 are subject to modification by the United States Department of Labor. Contractor is responsible for using the most current Prevailing Wage Determination Schedule. These documents can be downloaded from the following link: <https://sam.gov/content/wage-determinations>.

1.25 WORK PLAN

The intent of the Work Plan is for Contractor to document the plan for the work in detail for Owner and Engineer review. The Work Plan shall include all work items, the sequence of work, shop drawings, and all other items pertinent to the successful completion of the work. Engineer's receipt of the Work Plan shall not be interpreted as approval or acceptance of Contractor's planned means and methods for construction. Construction means and methods are the sole responsibility of Contractor. The following items shall be included in the Work Plan.

- A. Mobilization/demobilization plan for all major equipment (i.e., cranes, barges, etc.).
- B. Survey plan (described in Section 02 21 13 – Construction Surveying).

- C. Shop drawings and submittals as required by these contract documents. A summary of the required submittals and shop drawings to be included in the Work Plan is shown below. The list below is not necessarily all-inclusive. Refer to individual specification sections for detailed and additional submittal requirements.
1. Manufacturer's product data and installation instructions for geotextile fabrics (see Section 31 05 19 - Geotextiles)
 2. Manufacturer's product data and installation instructions for geogrid (see Section 31 05 19 - Geotextiles)
 3. Material certifications for treated timber post, aluminum plate signage, hardware, reflective tape, and signal lights (see Section 35 12 73 - Lighted Daybeacon)
 4. Shop drawings (see Section 35 12 73 - Lighted Daybeacon)
- D. The Work Plan shall describe the sequence and intended methods of all construction activities, including the following:
1. Transportation of materials to the project site
 2. Surveying
 3. Excavation and Backfill for optional flotation/access channels
 4. Geotextile composite (geotextile fabric and geogrid)
 5. Armor stone
 6. Encapsulated lightweight aggregate
 7. Settlement plates
 8. Lighted daybeacon
- E. Daily Progress Report template (described in paragraph 1.26)
- F. Barge Displacement Tables (described in Section 31 37 00 - Riprap)
- G. LWAC Construction Plan (described in Section 31 05 16 – Lightweight Aggregate)

1.26 DAILY PROGRESS REPORTS

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

- A. Date and signature of the report author
- B. Dollar amount and measurement 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 aids (i.e. warning signs, lighted daybeacons) 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

The daily progress reports shall be submitted to the Engineer by noon the following day in 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.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS**SECTION 01 11 00 – SUMMARY OF THE WORK****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

A. General:

The project is located adjacent to and offshore of the northwestern coast of Lake Pontchartrain within Tangipahoa Parish and consists of constructing a breakwater. Work is divided into Base Bid and Additive Alternate Bids and will be conducted from the water (no land access at project site) adjacent to the Lake Pontchartrain shoreline. Work includes mobilization/demobilization, pre-construction hazard surveying, optional dredging and backfilling of temporary flotation/access channels, placement of geotextile materials, encapsulated lightweight aggregate, and graded riprap, installation of warning signs, lighted daybeacons, and settlement plates, bathymetric and topographic surveys for measurement, payment substantiation, and work acceptance purposes, aerial photography, and all other subsidiary work.

Terminology for breakwater portions used throughout the contract documents is listed below.

Phase 0 or Site 0 or Existing – Existing breakwaters between Pass Manchac and Tangipahoa River. Phase 0 breakwaters are not part of this contract.

Phase 1 or Site 1 – Breakwaters to be constructed under this contract between Pass Manchac and the Phase 0 breakwaters.

Phase 2 or Site 2 – Breakwaters to be constructed under this contract between the Tangipahoa River and the Tangipahoa/St Tammany Parish boundary.

- B. Work: The work includes all labor, materials, tools, equipment, plant, supplies, superintendence, insurance, incidentals, and services necessary or required to fully complete the work for LAKE PONTCHARTRAIN SHORELINE PROTECTION, Tangipahoa Parish Government. The scope of work is defined in the contract documents listed below.

1. Specifications:

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 00 00 – Special Conditions
 Section 01 11 00 – Summary of the Work
 Section 01 20 00 – Measurement and Basis of Payment
 Section 01 41 00 – Environmental Protection Measures
 Section 01 41 26 – Permits

DIVISION 2 – EXISTING CONDITIONS

Section 02 21 13 – Construction Surveying

DIVISION 31 – EARTHWORK

Section 31 05 16 – Lightweight Aggregate
 Section 31 05 19 – Geotextiles
 Section 31 37 00 – Riprap

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION

Section 35 01 50 – Access and Flotation Channels
 Section 35 12 73 – Lighted Daybeacons
 Section 35 59 53 – Settlement Plates

2. Construction Drawings:

G01	Cover Sheet and Index
G02	General Notes and Legend
C01	Existing Site Plan
C02	Enlarged Existing Site Plan I
C03	Enlarged Existing Site Plan II
C04	Project Layout
C05	Enlarged Project Layout I – Phase 1
C06	Enlarged Project Layout II – Phase 1
C07	Enlarged Project Layout III – Phase 2
C08	Enlarged Project Layout IV – Phase 2
C09	Enlarged Project Layout V – Phase 2
C10	Location Point Tables
C11	Sections and Details I
C12	Sections and Details II – Phase 1
C13	Sections and Details III – Phase 2
C14	Sections and Details IV
C15-C31	Cross Sections 1 Thru 17

3. Appendices:

A	Geotechnical Boring Logs
B	USACE Permit
C	Map of Visible Natural Timber Debris

C. Work Items:

1. Mobilize and set-up equipment as required for construction of the specified work, including but not limited to surveying vessels, mechanical excavators, or other equipment suitable for supporting the plant for excavation and maneuvering in very soft soils.
2. Conduct a pre-construction hazard survey (i.e., magnetometer or similar) to locate pipelines and other potential submerged/underground hazards before dredging and other construction activities.
3. Conduct construction surveying, including initial, interim, and final surveys of specified locations.
4. Excavate by mechanical dredging, stockpile, and backfill soil from the lake bottom to construct optional access and flotation channels. Coordinate with the U.S. Coast Guard to furnish, install, maintain, and remove required temporary warning signage, if any.
5. Before placement of geotextile composite, clear the breakwater footprint of protruding natural timber debris as required in the contract documents.
6. Furnish, install, and maintain material for the construction of the breakwater.
7. Furnish, install, and maintain Settlement Plates.
8. Furnish, install, and maintain Lighted Daybeacons.
9. Provide monthly oblique aerial photographs and professionally rectified and georeferenced aerial photographs of the completed work.
10. Perform cleanup and demobilization.
11. Provide all other items required to complete the work fully.

1.02 SEQUENCE OF CONSTRUCTION

- A. General: The Contractor shall determine the construction sequence, unless otherwise restricted by the contract documents. Construction shall be continuous from start to finish with no appreciable shut-down periods.
- B. Restrictions: The following construction sequence restrictions shall apply to the work for this project:
 1. Before starting any construction activities, the pre-construction hazard survey shall be conducted and submitted as described in the contract documents. Survey extents shall include all project

- areas where excavation and other construction activities may occur.
2. Before starting any construction activities, the initial survey shall be conducted and submitted as described in the contract documents including overall project areas where excavation and other construction activities may occur.
 3. Contractor shall not begin excavation or other construction activities until after Engineer has approved final alignment points after review of initial survey results. Engineer may modify alignment point locations based on initial survey results.
 4. Debris shall be removed from the breakwater footprint before breakwater construction.
 5. Phase 1 breakwaters shall be constructed before Phase 2 breakwaters and shall be constructed from the terminal next to the Phase 0 breakwaters southwest towards Pass Manchac.
 6. Phase 2 breakwaters shall be constructed after the completion of Phase 1 breakwaters and shall be constructed from the Tangipahoa River northeast towards the Tangipahoa/St. Tammany Parish boundary.
 7. Interim surveying shall be conducted to document in-place elevations of each component, including after placement of encapsulated lightweight aggregate and immediately after placement of armor stone.
 8. Settlement plates shall be placed at the specified locations after placement of the geotextile composite and before placement of the encapsulated lightweight aggregate or armor stone at that location.
 9. Encapsulated lightweight aggregate shall be placed as described in Section 31 05 16 – Lightweight Aggregate.
 10. Graded riprap shall be placed as described in Specification Section 31 37 00 – Riprap.
 11. Lighted daybeacon locations shall be coordinated with Engineer before installation.
 12. Optional flotation and access channels shall be backfilled after associated breakwater sections have been accepted.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS**SECTION 01 20 00 – MEASUREMENT AND BASIS OF PAYMENT****PART 1 – GENERAL**

1.01 SUMMARY

The extended prices stated on the Contractor's Bid Form will be considered maximum contract prices with unit price provisions where applicable. These prices shall be full compensation for furnishing all labor, materials, tools, equipment, plant supplies, superintendence, insurance, incidentals, services, overhead, and profit necessary to complete the construction of the various items of work. It is not the intent of the basis of payment herein to itemize each and every labor, material, or incidental requirement. Any requirement, explicit or implied, as determined by Owner for project completion and not specifically listed on Bid Form shall be included in items with which they are considered subsidiary. Any item not specifically identified as an alternate bid shall be considered as part of the base bid, unless specified otherwise.

1.02 QUANTITIES AND MEASUREMENTS

- A. Quantities: All quantities of work stated on Bid Form are nominal estimates computed by the Engineer and based on the contract documents. Before bidding, Contractor shall verify these quantities by preparing estimates. In any case, prices stated shall reflect all work required by the contract documents. No quantity adjustment shall be made for work performed outside the specified lines and grades or for work completed within its specified tolerance.
- B. Measurements:
1. Quantity Computations: The methodology for quantity computations shall be conventional mathematics using physical measurements (length, area, or volume), such as the known unit weight for water at the project site, and average-end-area method computation techniques based on actual surveying transects. Less precise, approximate quantity measurement methods, such as load size/counts and production rate/time, shall not be valid measurement techniques.
 2. Barge Measurements: Barge measurements shall be applied for quantity computations (Tons) of GRR armor stone. See Section 31 37 00 – Riprap for measurement instructions of armor stone and bedding stone using barge displacement.
 3. In-Place Measurements:
 - i. Geotextile Composite: Interim surveys shall be used for quantity computations (Linear Feet) of geotextile composite. The quantity shall be computed as the length along the breakwater centerline covered by geotextile composite and shall be inclusive of all materials required to meet the specified dimensions.
 - ii. Encapsulated Lightweight Aggregate Core: Initial and interim surveys shall be used for quantity computations (Cubic Yards). Refer to Section 31 05 16 – Lightweight Aggregate and Section 02 21 13 – Construction Surveying.
 4. Except for barge measurements as described in Paragraph 1.02 B 2, measurements of temporary material stockpiles and any other material not yet placed within the specified lines and grades are for informational purposes only and shall not be considered a basis of payment.
- C. Quantity Adjustments: The Owner reserves the right to adjust the quantities of work stated on the Bid Form as it deems appropriate. Quantity deductions (reduction of the contract payment quantity) shall be made for work performed outside the specified lines, grades, and tolerances shown on the construction drawings. Overbuilding the specified templates for these items could negatively affect the project performance and the overall structure stability. Quantity (cubic yard) of excess armor stone

or encapsulated lightweight aggregate placed will be quantified by comparison of initial and interim surveys. Graded riprap (GRR) armor stone or encapsulated lightweight aggregate placed beyond the tolerances specified on the drawings shall be considered excessive. Engineer will be the sole judge and make the final decision in determining if such quantities are considered excessive and if removal and/or penalties will apply. The conversion factor for these contract quantity deductions shall be 1.6 tons equals 1.0 cubic yards of GRR armor stone. Adjustments must be in the form of a change order to the contract.

Contractor shall notify Owner and Engineer immediately if it appears that materials required to meet the requirements of the contract documents may be in excess of quantities listed on the Bid Form. Notification must occur before installing materials in excess of quantities listed on the Bid Form. Owner will choose whether or not to increase material quantities and modify the project as needed. Payment in excess of maximum contract prices is not guaranteed unless modifications are approved by the Owner via change order before installation.

If the Owner adjusts quantities of work, the cost or credit to the Owner shall be computed in accordance with stated unit prices on the Bid Form.

- D. Payment Substantiation: All progress payments shall be substantiated by topographic/bathymetric surveys, plots, and quantity computations in accordance with Specification Section 02 21 13 – Construction Surveying.

1.03 BASIS OF PAYMENT

1. Mobilization and Demobilization: Prices stated on the Bid Form for Mobilization/Demobilization shall not exceed ten percent (10%) of the total of all non-mobilization items in the Base Bid. Payment for mobilization will not exceed seventy percent (70%) of the amount stated for Mobilization/Demobilization. This lump sum amount shall include all costs in connection with the mobilization and demobilization of all plant and equipment necessary to perform the work.
2. Optional Access and Flotation Channels: All costs associated with optional access and flotation channels, including costs associated with the installation and maintenance of temporary warning signs, will be paid for at the contract lump sum prices stated on the Bid Form. Payment for excavation/dredging will not exceed seventy percent (70%) of the amount stated for Optional Access and Flotation Channels. Payment for the remaining amount of Optional Access and Flotation Channels will be made after backfilling of such channels as verified by surveys.
3. Armor Stone: For Bid Item "Armor Stone," barge measurements shall be used for quantity computations (Tons) for installed armor stone conforming to the requirements of the contract documents. Refer to Specification Section 31 37 00 – Riprap, Paragraph 3.03 "Barge Displacement Table."
4. Encapsulated Lightweight Aggregate: For Bid Item "Encapsulated Lightweight Aggregate," interim surveys shall be used for quantity computations (cubic yard). The quantity shall be computed using the end-area method based on interim survey transects. The quantity shall be inclusive of all materials required to meet the specified dimensions.
5. Geotextile Composite: For Bid Item "Geotextile Composite," interim surveys shall be used for quantity computations (square yard) for installed geotextile composite. The quantity shall be computed as the distance between breakwater alignment points multiplied by the width of the geotextile composite perpendicular to the breakwater centerline. The quantity shall be inclusive of all materials required to meet the specified dimensions.
6. Lump Sum/Progress Payments: Lump sum work items listed on the Bid Form will be paid for according to the estimated percentage of work completed for each item. This amount shall be full compensation for completed in-place work. Engineer will be the sole judge and will make the final decision as to the percentage complete of each item and the monetary amount for progress payments to Contractor. Engineer's review for progress payment will be based on review of Contractor's surveys

and material submittals and Engineer's field observations. Any work not identified on the Bid Form shall be considered subsidiary to the applicable lump sum work items. Refer to EJCDC C-520 "Agreement" Article 6 for additional requirements.

7. Payment for Items with Unit of Measure Each: Individual items listed on the Bid Form with a unit of measure of Each will be paid for completed in-place work per item conforming to the requirements of the contract documents.
8. During the progress of the work, the Contractor shall maintain completed work items until Owner and Engineer accept the work and approve it for inclusion in the next progress payment. Before this interim acceptance, Contractor shall repair, replace, or restore at Contractor's cost any and all damage and deficiencies to work items for any reason. Damage or deficiencies include shoaling, erosion, fire, weather, vandalism, and loss of temporary stockpiles or partially installed items.

1.04 ACCEPTANCE

The work is considered complete when all project components are installed as described in the contract documents and when the optional access and flotation channels have been backfilled as indicated in the contract documents. Surveys shall be submitted to verify that all materials have been installed and that excavated areas have been backfilled. Acceptance shall be based on Engineer's review of gradation and quality tests, surveys, and the other requirements of the contract documents, and Engineer's site observations during construction.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS**SECTION 01 41 00 – ENVIRONMENTAL PROTECTION MEASURES****PART 1 – GENERAL****1.01 DESCRIPTION OF WORK**

This section covers the prevention of environmental pollution and damage as the result of construction operations under this contract and for those measures set forth in other technical provisions of these specifications. For this specification, environmental pollution and damage are defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare, unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utility of the environment for aesthetic, cultural, or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy, radioactive materials, and other pollutants. The environment shall be protected, and all natural resources shall be preserved during construction. All Federal, State, and local laws and regulations shall be complied with during construction.

1.02 LOCATION OF FIELD OFFICES, STORAGE, AND OTHER CONTRACTOR FACILITIES

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be on a floating barge or at an offsite facility coordinated by Contractor. Contractor work-boats, floating barges, and other equipment must not restrict access and use of Pass Manchac or Tangipahoa River by others. Disposal areas shall not be located in any wetlands, water body, or stream bed. Fuel and lubricate equipment in a manner that protects against spills and evaporation. Provide a berm around fuel and liquid chemical storage tanks to contain the tank contents in the event of a leak or spill.

1.03 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the environmental protection of all items set forth herein. The Contractor shall record on daily reports any problems in complying with laws, regulations, and ordinances and corrective action taken. Any damage caused by the Contractor during construction shall be repaired, replaced, or restored to the satisfaction of the Owner and Engineer. The Contractor shall maintain all erosion and sediment control devices in good working order. If a repair is necessary, Contractor shall conduct repair at the earliest date possible, but no later than seven (7) days after the surrounding exposed ground has dried sufficiently to minimize further damage from heavy equipment. Areas adjacent to creeks and drainage ways shall have priority.

1.04 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (vegetative covers and instruments required for monitoring) to ensure adequate and continuous environmental pollution control.

1.05 VOLATILE ORGANIC COMPOUNDS (VOC)

Contractors are required to comply with the Local, State, and Federal VOC laws and regulations and shall have an acceptable VOC compliance plan. The plan shall demonstrate that the use of paints, solvents, adhesives, and cleaners comply with local VOC laws and regulations governing VOC materials and that all required permits have been obtained or will be obtained before starting work involving VOC's in the air quality district in which the work will be performed. An acceptable compliance plan shall contain, as a minimum, a listing of each material subject to restrictions in the air quality management district in question, the rule governing its use, a description of the actions which the Contractor will take, a description of the actions that the Contractor will use to comply with the laws and regulations, and any changes in the status of compliance during the life of the contract. Alternatively, the compliance plan shall state if no materials are subject to the restrictions in the air quality management district where the work will be performed or if

there are no restrictions.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.01 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire contract period. The Contractor shall confine activities to areas defined by the contract documents.

3.02 PROTECTION OF LAND RESOURCES

Before starting any construction, the Contractor shall identify all land resources. The Contractor shall not remove, cut, deface, injure, or destroy land resources, including trees, shrubs, vines, grasses, topsoil, and landforms, without special permission from the Owner. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized by Owner or Engineer. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times.

3.03 PROTECTION OF WATER RESOURCES

Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract. As soon as possible, the Contractor shall clear all waterways of temporary embankments, temporary bridges, matting, falsework, debris, or other obstructions placed during construction operations that are not part of the finished work. The Contractor is responsible for maintaining area drainage during construction. Water shall not be allowed to pond on any roadway surface. Runoff from adjacent properties shall not be impeded by project work. A stormwater pollution prevention plan (SWPPP) shall be submitted to Engineer at the pre-construction meeting.

3.04 PROTECTION OF FISH AND WILDLIFE RESOURCES

Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. Before starting construction operations, the Contractor shall list species that require specific attention and describe measures for their protection.

A. Endangered Species: Contractor shall be aware that the endangered West Indian manatee (*Trichechus manatus*) could be found within the vicinity of the project area. The US Fish and Wildlife Service (USFWS) has record of a historic manatee sighting in Pass Manchac. The West Indian manatee uses coastal water and streams of Louisiana, most often during the warmer months (i.e. June through September). The USFWS has records that indicate manatee may also be present outside of that time frame, when the average water temperature is warm enough (i.e. April through November).

1. All personnel associated with the project shall be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. The Contractor is hereby advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
2. All work, equipment, and vessel operation shall cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the 50 foot buffer zone on its own accord (manatees must not be herded or harassed into leaving) and after 30 minutes have

passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s) and under idle/no wake speeds for vessel operations

3. All vessels shall operate at idle/no wake speeds whenever a manatee is spotted outside of the 50 foot buffer zone, but within 100 yards of the active work zone
4. All vessels shall follow routes of deep water whenever possible and operate at idle/no wake speeds while in water where the draft of the vessel provides less than a four-foot clearance from the bottom
5. Siltation or turbidity barriers, if used, shall be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement
6. Temporary signs concerning manatees shall be posted before and during all in-water project activities and removed upon project completion. One temporary sign shall be posted in a location easily visible to vehicle operator and shall read *Caution: Boaters* in conspicuous letters. Another sign measuring at least 8.5" by 11" shall be posted in a location prominently visible to all personnel engaged in water-related activities and explain the special requirements of vessel operation at idle/no wake speeds if manatee(s) are spotted; vessel operation at idle/no wake speeds when there is less than four foot bottom clearance; and the necessary shut-down of all in- water operations when manatee(s) are within 50 feet of the work area
7. Collisions with, injury to, or sightings of manatees shall be immediately reported to the USFWS's Louisiana Ecological Services Office (337/291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225/765-2821). Contractor shall provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

3.05 PROTECTION OF AIR RESOURCES

Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by Contractor in accomplishing the specified construction shall be in strict accordance with all State and Federal emission and performance laws and standards. National Ambient Air Quality Standards (NAAQS) set by the Environmental Protection Agency shall be maintained for those construction operations and activities specified in this section. Special management techniques as set out below shall be implemented to control air pollution by the construction activities that are included in the contract.

3.06 PARTICULATES CONTROL

The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, excavated areas, borrow areas, demolition areas, and all other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards mentioned in paragraph 3.05 above to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated at such intervals as to keep the disturbed area damp at all times. The Contractor must have sufficient competent equipment available to accomplish this task. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. If sand-blasting, Contractor shall provide tarp drop cloths and windscreens under and around blasting operations to confine and collect dust, sand, paint, and other debris.

3.07 CONTROL AND DISPOSAL OF HAZARDOUS WASTES

Hazardous wastes are defined in 40 CFR 261. Hazardous wastes that are produced as a result of performing work under this contract shall be handled, stored, transported, and disposed of according to 40

CFR 262, where applicable. Prevent hazardous wastes from entering the ground, drainage areas, and surface waters. Immediately notify the Engineer and Owner of hazardous material spills.

3.08 SANITARY WASTE

All sanitary waste shall be collected by a licensed sanitary waste management contractor from the portable units as necessary or as required by local regulations.

3.09 CONSTRUCTION DEBRIS

The Contractor shall collect and properly dispose of all trash and construction debris in accordance with all local and state solid waste management regulations and practices. The Contractor shall store all waste materials in approved metal dumpsters or other containers approved by the Engineer. The dumpster shall be emptied as necessary or as required by local and State regulations and the contents hauled away for proper disposal. No construction waste material shall be buried within the project limits.

3.10 POST CONSTRUCTION CLEAN UP

The Contractor shall clean up areas used for construction to the satisfaction of the Owner and Engineer.

3.11 RESTORATION OF DAMAGE

The Contractor shall restore all features damaged or destroyed during construction operations inside and outside the limits of the approved work areas. Such restoration shall be in accordance with the plan submitted to the Owner and Engineer for approval. This work will be accomplished at the Contractor's expense without compensation.

3.12 CULTURAL RESOURCES

Contractor shall immediately notify the USACE New Orleans District, Owner, and Engineer if any historic or archeological remains are discovered.

END OF SECTION

DIVISION 01 – GENERAL REQUIREMENTS

SECTION 01 41 26 – PERMITS

PART 1 – GENERAL

1.01 OWNER-OBTAINED PERMITS

A. The Owner has obtained the following permits:

1. U.S. Army Corps of Engineers (USACE) Permit (See Appendix B)
2. LA Department of Natural Resources Coastal Use Permit/Consistency Determination (See Appendix B)

B. The Contractor shall comply with all provisions contained in these permits. Where dimensions or configurations conflict between the construction drawings and the permit drawings, the dimensions or configurations shown on the construction drawings shall govern.

C. Before beginning construction, Contractor shall notify the State Land Office of when construction will commence. Contractor shall contact the Administrator of the State Land Office or their representative at 225-342-4578 before beginning construction.

1.02 CONTRACTOR-OBTAINED PERMITS

Any necessary permits not mentioned in paragraph 1.01 shall be the responsibility of Contractor. For all Contractor-obtained permits, Contractor shall prepare and submit an application for and pay for any necessary permit fees, temporary or permanent utility interruption(s), and re-location fees.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

DIVISION 2 – EXISTING CONDITIONS

DIVISION 02 – EXISTING CONDITIONS**SECTION 02 21 13 – CONSTRUCTION SURVEYING****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

The work includes furnishing materials, labor, and equipment for topographic, bathymetric, and magnetometer surveying of work items in accordance with these specifications and applicable construction drawings.

1.02 RELATED SECTIONS

Section 01 00 00 – Special Conditions
Section 01 11 00 – Summary of Work
Section 01 20 00 – Measurement and Basis of Payment
Section 31 05 16 – Lightweight Aggregate
Section 31 05 19 – Geotextiles
Section 31 37 00 – Riprap
Section 35 01 50 – Access and Flotation Channels
Section 35 12 73 – Lighted Daybeacons
Section 35 59 53 – Settlement Plates

1.03 REFERENCES

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Photogrammetry and Remote Sensing (ASPRS)

ASPRS Positional Accuracy Standards for Digital Geospatial Data (Edition 1, Version 1.0 – November 2014)

U.S. Army Corps of Engineers Publications:

EM 1110-2-1003 Hydrographic Surveying

Coastal Protection and Restoration Authority (CPRA) Publication:

A Contractor's Guide to the Standards of Practice for CPRA Contractors Performing GPS Surveys and Determining GPS Derived Orthometric Heights within the Louisiana Coastal Zone (2016)

1.04 SUBMITTALS

Submittals to the Engineer under this section include the following:

1. Name and affiliation of licensed Professional Land Surveyor (Paragraph 1.05 A)
2. Surveying Plan (Paragraph 1.05 B)
3. Survey Notification (Paragraph 1.06)
4. Survey Submittal Log (Paragraph 3.03 C)
5. Pre-Construction Hazard Survey (Paragraph 3.04)
6. Initial Survey Drawings (Paragraph 3.05)
7. Interim Survey Drawings (Paragraph 3.07)
8. Final Survey Drawings (Paragraph 3.08)
9. Name and affiliation of aerial photographer (Paragraph 3.10)
10. Aerial Photography (Paragraph 3.10)

1.05 QUALITY ASSURANCE

- A. General: All survey plots submitted to Engineer shall be sealed by a professional land surveyor licensed in the State of Louisiana having experience in bathymetric surveying and familiar with the

hydrographic guidelines in EM 1110-2-1003. Professional Land Surveyor shall not be an employee of Contractor and shall operate under a company. Additionally, if survey work is performed by employees of Contractor, PLS shall be on site to observe all work. Before starting surveying activities, Contractor shall provide the name and affiliation of the professional surveyor to be used on the project (for information only).

- B. **Surveying Plan:** Contractor shall provide a written description of general methods, equipment, and schedule to be applied for required surveys as well as quality control and quality assurance (QA/QC) procedures to be applied. In particular, the plan shall document an approach that is appropriate for accurate topographic/bathymetric surveying in very soft soils. Refer to EM 1110-2-1003 for QA/QC guidelines.
- C. **Transducer Frequency:** Where fathometers/echo sounders are applied for bathymetric surveys, transducer frequency shall be consistent between initial, interim, and final surveys.
- D. All surveys shall follow the recommendations and guidelines stated in *A Contractor's Guide to the Standards of Practice for CPRA Contractors Performing GPS Surveys and Determining GPS Derived Orthometric Heights within the Louisiana Coastal Zone* (CPRA, 2017).

1.06 NOTIFICATION BEFORE SURVEYING EVENTS

Contractor shall notify Engineer by email at least 5 days before the beginning of each surveying event so that Engineer may have the opportunity to accompany the survey crew and witness the work.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.01 GENERAL

Contractor shall provide initial, interim, and final surveys for measurement and acceptance of work items. Plots showing initial, interim and final lines and grades and quantity computations shall accompany monthly payment requisitions. Refer to Table 1 for a general summary of the required surveys.

Table 1. Summary of Required Surveys		
Survey	Intended Purpose	Submittal Schedule
Initial	To verify existing conditions and for review by Engineer in assessing need for adjustments to alignment points	Before beginning construction activities
Interim	To document conformance of completed portions of work and to document progress for interim payment	With monthly invoices
Final	To document final elevations of project features and backfilled areas	After completion of all construction activities and before final payment
Light-Loading Area (Only Applicable if Contractor Chooses to Light-Load Barges) (Side-Scan Sonar Survey and Single Beam Echosounder Bathymetric Survey)		
Initial	To document existing conditions before light-loading activities.	Before beginning light-loading activities.
Final	To document conditions after light-loading activities	After completion of light-loading activities and before final payment.

3.02 SURVEYING ACCURACY

Minimum vertical and horizontal accuracies for all surveying equipment shall be within ± 0.3 feet and 0.5 feet RMS, respectively. GPS-based systems shall not be applied without establishing a local base station.

3.03 SURVEY PLOTS

- A. General: All construction surveys submitted to Engineer shall be in the form of plan-view and cross-section plots. Surveys drawings shall be formatted for 22" x 34" and submitted as half-size (11" x 17") PDF drawings. Drawings shall be prepared in AutoCAD. Settlement plate time history submittal shall be provided in Excel format. All survey data shall be referenced to the project datums shown on the construction drawings. Sealed plots shall be submitted as hard copies and transmitted electronically in Adobe PDF and AutoCAD formats. All plots shall legibly and clearly display the following information:
1. Owner name
 2. Project name
 3. Professional Land Surveyor's seal, signature, and affiliation (All PDF copies shall include signed seal)
 4. Date(s) surveys were performed and legend to distinguish different survey dates
 5. Location and description of survey control
 6. Vertical and horizontal datums
 7. Sheet name and number
 8. Survey description (i.e., Initial Survey, Interim Survey 1, Interim Survey 2, Final Survey, etc.)
 9. Name of Contractor
 10. Graphic Scale Bars
 11. Transducer frequency (for fathometers/echo sounders)
- B. Plots (Drawings): Plots shall comprise a well-organized stand-alone set of drawings that does not include any outdated or superseded information that may have been submitted for interim surveys, except as noted in paragraph 7 below. Plots shall include the following:
1. Plan sheets clearly documenting locations, limits, and dimensions of work performed and locations where cross-sections were taken.
 2. Cross-section sheets of the breakwater, excavation areas, and temporary stockpile providing an overlay of initial, interim, and final survey transects along with specified templates. Provide cross-sectional area (in square feet) for encapsulated lightweight aggregate, armor stone, and excavation at each cross-section. Label each material type (encapsulated lightweight aggregate and armor stone).
 3. Initial survey drawings shall show initial cross-sections superimposed over survey data shown in the construction drawings and the design template.
 4. Pre-Construction Hazard Survey data shall be plotted over the project layout shown in the construction drawings.
 5. Interim survey cross-sections shall be plotted over initial survey data and the design template.
 6. A time history of settlement plate elevations shall be plotted for each settlement plate. Submittal shall include a table of settlement plate elevation shots and plots of time history.
 7. Final survey plots shall show as-built cross-sections superimposed over interim (encapsulated lightweight aggregate) and initial cross-sections. Final survey submittal shall include plan views with as-built survey data plotted over georeferenced acceptance aerial photography required under Paragraph 3.11.

8. Plots for the light-loading area shall include:
- A. Plan sheets that clearly document locations, limits, and elevation contours of survey area. All anomalies shall be clearly identified and labeled on plan view sheets.
 - B. An additional sheet shall be included with a list of anomalies, approximate length and width of anomalies, and associated coordinates.
 - C. Final surveys shall also document survey tracks used in mechanical debris survey and shall include all obstructions identified in the mechanical debris survey.
- C. Digital Data: All survey submittals shall also include digital data. Digital data shall include the following:
1. A submittal log documenting surveys submitted to date with general descriptors for survey dates and locations in a format that can be opened in Microsoft Word or Excel
 2. AutoCAD files (formatted for 11"x17" drawings)
 3. PDF files (formatted for 11"x17" printing)
 4. Excel file of settlement plate time history
 5. ASCII files including:
 - i. Point number
 - ii. Northing
 - iii. Easting
 - iv. Elevation
 - v. Description (ex. natural grade, encapsulated lightweight aggregate, armor stone, etc.)
 6. For Light-Loading Surveys Only: 3D ASCII files containing northing, easting, elevation, and anomaly ID for each anomaly detected during survey of light-loading area
 7. For Final Surveys Only: An additional ASCII file shall be submitted with the same information listed in Item 5 above, but with coordinates and elevations in the datums listed below.
 - i. Horizontal: UTM Zone 15, meters
 - ii. Vertical: NAVD 88 GEOID 12B, feet
- D. Surveying Report: In addition to plots, surveys of the light-loading area shall include a surveying report. Survey report shall document methodology, equipment used, and all anomalies. Anomaly documentation shall include coordinates, approximate size of anomalies, and identification of anomalies. Final survey of light-loading area shall compare anomalies with those detected in initial survey.

3.04 PRE-CONSTRUCTION HAZARD SURVEY

A hazard survey (i.e., magnetometer or other supplemental method) shall be performed, at a minimum, along the same survey transects described in Paragraph 3.05, B. Contractor shall be responsible for determining the actual hazard survey methodologies, locations, transect spacing, and extents to identify all pipelines and other obstructions. All pipelines or other obstructions shall be probed in coordination with the pipeline/obstruction owner and appropriately marked throughout construction according to United States Coast Guard (USCG) standards. Submittal for hazard survey shall clearly show all transects, 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. A report documenting the hazard survey results along with a summary of associated interpretations and recommendations shall be submitted to Engineer. In addition, all potential hazards or obstructions shall be plotted on the initial survey drawing submittal. It is recommended that Contractor perform a hazard survey within ingress/egress routes, proposed mooring locations, and light-loading areas. Contractor is solely responsible for identifying and avoiding pipelines and other anomalies.

3.05 INITIAL SURVEY

- A. The initial survey shall be conducted along the transects described below. Breakwater cross-section, access channel centerline, and access channel cross-section transects shall be surveyed within a single five-day (max) period and results submitted to Engineer for review at least 14 days before alignment review and staking (see Paragraph 3.06). After alignment review and staking, breakwater centerline transects shall be surveyed within a single five-day (max) period. Initial survey submittal shall be revised to include results from both initial survey events. Results of the initial survey shall be submitted to the Engineer at least 14 days before starting any construction activities.
- B. Survey Transects: Survey shots along transects shall be taken at all significant grade breaks and at a maximum horizontal spacing of 20 ft.
1. Breakwater Cross Sections: Survey transects shall be perpendicular to the breakwater centerline and shall reoccupy those survey data transects shown in the construction drawings. Additional survey transects shall be included so that transect spacing is a maximum of 250 feet. Additional transects shall also be surveyed at the center of each breakwater gap and at each terminal. At a minimum, transects shall extend from the current +1.0 ft NAVD88 contour to 350 feet seaward of the breakwater centerline.
 2. Access Channel Centerline: Survey transects shall be taken along the centerline of all access channels and associated stockpile locations and extend from the +1.0 ft NAVD88 contour to the -6.5 ft NAVD88 contour.
 3. Access Channel Cross-Sections: Survey transects shall be taken perpendicular to the access channel centerline between the breakwater centerline and the -6.5 ft NAVD88 contour. Transects shall have a maximum spacing of 250 ft and at least 2 transects per access channel.
 4. Breakwater Centerline: Survey transects shall be taken along the breakwater centerline, including through breakwater gaps.
- C. Light Loading Area (Only Applicable if Contractor Chooses to Light-Load Barges): A side-scan sonar survey and a single beam echosounder bathymetric survey shall be performed over the area that the Contractor plans to light-load or transfer graded riprap, or other material between barges. For each Phase 1 and Phase 2, the Contractor shall designate an area between 300 feet x 400 feet (minimum) and 800 feet x 800 feet (maximum) within which all light-loading activities will be conducted. Contractor shall submit a plan view drawing and coordinates of proposed light-loading area before conducting survey. Survey shall be dense enough so that the entire lake bottom in the designated area is captured and anomalies can be identified. Necessary survey transect spacing may depend on water depth. Contractor is responsible for determining survey transect spacing to accurately capture the area with a maximum transect spacing of 50 feet. Anomalies are defined as protrusions or disturbances of the lake bottom. The initial survey shall be submitted to Engineer at least seven days before starting any light-loading activities. The initial survey shall be conducted within a three-day (max) period.

3.06 ALIGNMENT REVIEW AND STAKING

Initial surveys will be reviewed by Engineer to update breakwater alignment to account for erosion since the collection of survey data shown in the construction drawings. After Engineer's review of initial survey submittal, Engineer will provide updated alignment points to Contractor. Before starting excavation or breakwater construction, stakes shall be installed at each updated alignment point along the breakwater centerline and at the breakwater toes. Stakes shall be labeled with the alignment point, e.g. A1. After staking, Engineer will review staking and verify or adjust alignment. Any adjustments made in the field by Engineer shall be documented in Contractor's daily report and include coordinates of adjusted alignment points.

Contractor shall include adequate time to allow for Engineer's review of initial surveys and review of alignment staking. Contractor shall not begin any excavation without written concurrence from Engineer regarding alignment points. Contractor shall maintain the stakes until breakwater construction at the alignment point begins.

3.07 INTERIM SURVEYS

- A. Interim surveys shall be performed to document the progression of work and as substantiation for monthly payment. Interim surveys shall be performed to provide the following:
1. To verify excavation limits of optional access and flotation channels.
 2. To document the elevation of settlement plates during and after construction.
 3. To verify limits, slopes, and elevations of encapsulated lightweight aggregate and GRR armor stone.
 4. To verify limits and elevations of stockpile and backfill.
 5. For the interim acceptance of all other work for progress payments
- B. Interim Survey Transects: Interim survey transects shall reoccupy all initial survey transect locations. Interim survey plots shall show interim survey transects superimposed over initial survey transects. The following list describes additional requirements for interim survey transects.
1. Access and Flotation Channel and Stockpile Transects: Transects shall be perpendicular to access or flotation channel. Transects shall be performed after dredging of the associated transect location but before backfill. Survey transects shall extend at least 10 feet on both sides of the dredging and stockpile limits and shall include benches between dredging and stockpile limits. Survey shots along transects shall be taken at all significant grade breaks and a maximum horizontal spacing of 5 ft.
 2. LWA Transects: Perform after encapsulated lightweight aggregate placement but before armor stone placement. Survey transects shall extend perpendicular to the breakwater centerline from the landward edge of geotextile composite to seaward edge of geotextile composite. Survey shall also include a centerline transect along the entire breakwater centerline. Centerline transect is not to be used for pay volume calculations, but will be used to verify that elevations are consistent between the perpendicular transects. Survey shots along transects shall be taken at all significant grade breaks and a maximum horizontal spacing of 5 ft. Survey shall denote seaward and landward limits of geotextile composite and encapsulated lightweight aggregate.
 3. GRR Transects: Perform after placement of each GRR lift. Survey transects shall extend at least 10 feet from the breakwater toe on both sides. Survey shots along transects shall be taken at all significant grade breaks and a maximum horizontal spacing of 5 ft. If GRR is placed in more than one lift more than 3 days apart, interim surveys for GRR shall be taken within 7 days of placement of the first lift of material, but before placement of the second lift of material in each transect location. Interim surveys for GRR shall be taken again within 7 days of placement of each additional lift of material.
 4. Backfill Transects: Perform after backfilling of any locations where dredging previously occurred. Survey transects shall extend to the limits required for Access and Flotation Channel and Stockpile Transects. Survey shots along transects shall be taken at all significant grade breaks and a maximum horizontal spacing of 5 ft. Access and Flotation Channels shall not be backfilled until the associated breakwater has been accepted.
 5. Settlement Plates: Perform immediately after: (1) installation of settlement plate (before placement of encapsulated lightweight aggregate in Phase 1 or armor stone in Phase 2), (2) placement of lightweight aggregate, if applicable, (before placement of armor stone), (3) placement of the first layer of armor stone, (4) placement of each additional layer of armor stone, if applicable, and (5) weekly thereafter for at least four weeks (28 days) after completion of

constructed breakwater at settlement plate location. Survey shots shall be taken at the top of pipe and at grade or top of constructed material elevation at the settlement plate.

6. Lighted Daybeacons: Perform after installation of each lighted daybeacon. Survey shots shall be taken at the adjacent grade, sign location, and sign elevation of the lighted daybeacon.

3.08 FINAL SURVEY

- A. After construction is completed, Contractor shall perform a final survey to document conditions of the completed work and for verification of final backfilling of dredged areas. The final survey shall be conducted within a single 14-day period. Data obtained during interim surveys shall not be considered part of the final survey unless otherwise approved by Engineer.
- B. Final Survey Transects: Final survey transects shall reoccupy initial survey transects. Survey shots shall also be taken at each of the installed settlement plates (top of pipe and top of breakwater elevation at the settlement plate). Transect survey shots shall be taken at all significant grade breaks and at a maximum horizontal spacing of 10 ft.
- C. Light Loading Area (Only Applicable if Contractor Chooses to Light-Load Barges): After completion of all light-loading activities, a final survey shall be performed of the entire light-loading area as described in Section 3.05 C. The final survey shall be conducted within a three-day (max) period.

3.09 SURVEY EVALUATION

Engineer reserves the right to take up to seven (7) calendar days after receiving survey submittals from Contractor to review survey results and, if applicable, provide direction regarding interference or discrepancies encountered. Survey evaluation shall not suspend the contract time nor be construed as Standby Time.

3.10 AERIAL PHOTOGRAPHY

- A. Aerial photographs shall be submitted to verify the progress of work and for final acceptance.
- B. Monthly Photography (For Information Only): For each month during which dredging or breakwater construction is actively underway, low-altitude oblique aerial photography shall be submitted that shows the progress of the work. Submittal shall include a high-resolution aerial photograph(s) in digital format (TIF or JPG). Each photograph submitted shall include metadata describing the horizontal limits displayed and the date photo was taken.
- C. Acceptance Aerial Photograph (For Information Only): After completion of all construction activities, a color vertical aerial photograph of the entire work area shall be submitted. The photograph shall be professionally rectified and geo-referenced in compliance with the standards described in the ASPRS Positional Accuracy Standards for Digital Geospatial Data (ASPRS Standards). The photograph shall be referenced to the project horizontal datum shown on the construction drawings. Root mean square error shall be calculated using the method described in the ASPRS Standards, reported in the accompanying metadata, and shall not exceed 2.0 ft. Submittal shall include a high-resolution aerial photograph in digital (TIF) format (with world file in ASCII format) and metadata specified in the ASPRS Standards. Contractor shall provide notice to Engineer and the name and affiliation of the aerial photography subcontractor a minimum of one week before the execution of the aerial photograph.

END OF SECTION

DIVISION 31 – EARTHWORK

DIVISION 31 – EARTHWORK**SECTION 31 05 16 – LIGHTWEIGHT AGGREGATE****PART 1 – GENERAL****1.01 DESCRIPTION OF WORK**

The work includes furnishing materials, labor, and equipment for the construction of lightweight aggregate (LWA) core for the breakwater in accordance with the contract documents.

1.02 RELATED SECTIONS

Section 01 11 00 – Summary of Work
 Section 01 20 00 – Measurement and Basis of Payment
 Section 02 21 13 – Construction Surveying
 Section 31 05 19 – Geotextiles
 Section 31 37 00 – Riprap

1.03 REFERENCES

Publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Testing and Materials (ASTM) International Publications:

- C 29 Standard Test Method for Bulk Density (Unit Weight) and Voids in Aggregate
- C 88 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
- C 117 Standard Test Method for Materials Finer Than 75- μ m (No. 200) sieve in Mineral Aggregates by Washing
- C 131 Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion in the Los Angeles Machine
- C 136 Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
- C 330 Standard Specification for Lightweight Aggregates for Structural Concrete
- C 535 Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
- C 702 Standard Practice for Reducing Samples of Aggregate to Testing Size
- D 75 Standard Practice for Sampling Aggregates
- D 4833 Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
- D 4884 Standard Test Method for Strength of Sewn or Bonded Seams of Geotextiles
- D 6473 Standard Test Method for Specific Gravity and Absorption of Rock for Erosion Control

1.04 SUBMITTALS

Submittals to the Engineer under this section include the following:

1. Name, Location, and Owner of material source (For Information Only)
2. LWA Quality Test Reports (Paragraph 1.05)
3. LWA Gradation Test Reports (Paragraph 1.05)
4. Daily Progress Reports (Section 01 00 00 – Special Conditions)
5. LWAC Construction Plan (Paragraph 3.01 and Drawings)
6. Surveys (Specification Section 02 21 13 – Construction Surveying)

1.05 QUALITY ASSURANCE

- A. Material Testing Before Starting Work: Before starting LWA core production, Contractor shall provide the name, location, and owner of the LWA source for the project. Suitable test reports and service

records are required to determine the acceptability of the LWA from the proposed source. Acceptable LWA shall meet the quality acceptance criteria in paragraph 2.01. Sampling of the LWA shall be performed in accordance with ASTM D75 and ASTM C702.

- B. Material Testing Throughout the Duration of Work: Throughout the duration of the work, Contractor or supplier shall inspect, sample, and test construction materials for compliance with the specified requirements and record the inspection of all operations. All sampling and testing shall be performed by a qualified testing laboratory. A copy of the records of inspection and the records of corrective action taken, shall be provided to Engineer. As a minimum, before construction, Contractor shall perform and submit documentation of quality control inspection and testing to verify compliance with the gradation and quality requirements of paragraph 2.01.

1. Gradation and Quality Tests (Refer to Section 2.01):

- a. Testing Frequency: One gradation and one quality test shall be submitted at each of the following timeframes:
 - i. Before transport or delivery of any LWA
 - ii. After every 2,000 CY of LWA thereafter

PART 2 – PRODUCTS

2.01 LIGHTWEIGHT AGGREGATE

- A. LWA Quality: LWA shall consist of expanded clay, shale, or slate produced using the rotary kiln method or Engineer approved alternate. LWA shall satisfy the chemical composition and physical properties defined in ASTM C330, unless specified otherwise herein. Waste materials and byproduct shall not be included. LWA quality shall conform to the table below:

Quality Characteristic	Unit	Test Method	Requirement
Density, saturated surface dry, (max)	pcf	ASTM C29	65
Soundness Loss, 5-cycle magnesium sulfate, (max)	percent	ASTM C88	12
Los Angeles Abrasion Loss, 500 revolutions, Grading D, (max)	percent	ASTM C131	30

- B. LWA Gradation: LWA shall be reasonably well-graded and fall within the limits of the gradation curve for each size designation. Gradation test results that begin on the coarse side of the curve and end up on the fine side of the curve are considered as "skip-graded" and will not be accepted. When tested in accordance with ASTM C117 and ASTM C136, gradation of the LWA material shall conform to the table below:

Diameter (US Sieve)	Percent finer than the diameter specified
4 inch	100
#4	0-40
#30	0-5

2.02 GEOTEXTILES

Refer to Specification Section 31 05 19 – Geotextiles.

PART 3 – EXECUTION**3.01 LWA CORE CONSTRUCTION PLAN**

Contractor shall submit a Lightweight Aggregate (LWA) Core Construction Plan in the Work Plan. Refer to Lightweight Aggregate Notes on drawing sheet C12 for additional requirements.

3.02 PLACEMENT

Before placement, LWA shall be completely encapsulated within bags or containers fabricated from Type II geotextile fabric (refer to Specification Section 31 05 19 – Geotextiles). Bags/containers shall be limited to a fill volume of 5 cubic yards (max.). Alternative materials or methods for LWA or LWA encapsulation may be used with prior written concurrence by Engineer. Alternative methods or container size may require higher strength geotextile material, subject to Engineer's concurrence. Sketches and a written description of the method of LWA encapsulation and placement and any proposed alternative encapsulation materials shall be provided in the Work Plan. Encapsulated LWA is susceptible to displacement from waves and other forces due to the lightweight nature of the material. Contractor shall cover encapsulated LWA with armor stone as soon as practicable once installed.

3.03 MISPLACED MATERIALS

If any LWA is deposited elsewhere than in places designated or approved, Contractor may be required to remove such misplaced material and redeposit it where directed at Contractor's expense.

3.04 SUBGRADE PREPARATION

The surface to receive the geotextile material shall be prepared by locating and removing obstructions or debris, including natural timber debris (i.e., trees, stumps, logs, etc.). Refer to drawings for additional requirements for debris removal.

3.05 SURVEYING

Refer to Specification Section 02 21 13 – Construction Surveying.

END OF SECTION

DIVISION 31 – EARTHWORK**SECTION 31 05 19 – GEOTEXTILES****PART 1 – GENERAL****1.01 DESCRIPTION OF WORK**

The work includes furnishing materials, labor, and equipment for the installation of geotextile fabric and geogrid beneath the encapsulated lightweight aggregate and GRR armor stone and geotextile fabric for encapsulating the lightweight aggregate core in accordance with the contract documents.

1.02 RELATED SECTIONS

Section 01 11 00 – Summary of Work
 Section 01 20 00 – Measurement and Basis of Payment
 Section 02 21 13 – Construction Surveying
 Section 31 05 16 – Lightweight Aggregate
 Section 31 37 00 – Riprap

1.03 REFERENCES

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Testing and Materials (ASTM) Publications:

- D 1388 Standard Test Method for Stiffness of Fabrics
- D 4354 Standard Practice for Sampling of Geosynthetics and Rolled Erosion Control Products for Testing
- D 4355 Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture, and Heat in a Xenon Arc-Type Apparatus
- D 4533 Standard Test Method for Trapezoidal Tearing Strength of Geotextiles
- D 4595 Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method
- D 4632 Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- D 4751 Standard Test Method for Determining Apparent Opening Size of a Geotextile
- D 4759 Standard Practice for Determining the Specification Conformance of Geosynthetics
- D 4491 Standard Test Methods for Water Permeability of Geotextiles by Permittivity
- D 4884 Standard Test Method for Strength of Sewn or Bonded Seams of Geotextiles
- D 5261 Standard Test Method for Measuring Mass per Unity Area of Geotextile
- D 5818 Standard Practice for Exposure and Retrieval of Samples to Evaluate Installation Damage of Geosynthetics.
- D 6241 Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50 mm Probe
- D 6637 Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method
- D 7737 Standard Test Method for Individual Geogrid Junction Strength

1.04 SUBMITTALS

Submittals to the Engineer under this section include the following:

1. Manufacturer's Product Data and Installation Instructions for Geotextile Fabric and Geogrid (For Information Only)
2. Certified Test Reports for Geotextile Fabric and Geogrid (Paragraph 1.05)
3. Sewn Seam Details and Laboratory Test Reports (Paragraph 2.02)
4. Surveys (Section 02 21 13 – Construction Surveying)

1.05 QUALITY ASSURANCE

- A. Geotextile Fabric Certified Test Reports: Contractor shall submit manufacturer's certified test results to Engineer showing actual test values of the geotextile fabric physical properties. The certificate shall contain signer's title and affiliation, test dates, the name and address of Contractor, the contract number, and the project name and location. The mill certificate or affidavit shall list test results and attest that the materials meet the chemical, physical, and manufacturing requirements in this specification. Provide manufacturer's recommendations for installation and protection instructions for the project considering the foundation soil conditions.
- B. Geogrid Certified Test Reports: Contractor shall submit manufacturer's certified test results to Engineer showing actual test values of the geogrid physical properties. The certificate shall contain the signer's title and affiliation, test dates, the name and address of Contractor, the contract number, and project name and location. The mill certificate or affidavit shall list test results and attest that the materials meet the chemical, physical, and manufacturing requirements in this specification. Provide manufacturer's recommendations for installation and protection instructions for the project considering the foundation soil conditions.

PART 2 – PRODUCTS

2.01 GEOTEXTILE FABRIC

- A. Geotextile fabric shall be pervious sheets consisting of long-chain synthetic polymers composed of at least 85 percent by weight polyolefins, polyesters, polypropylenes, or polyamides. Sheets shall be formed into a stable network such that filaments or yarns retain their relative position to each other. Sheets shall be UV stabilized and be inert to chemicals commonly encountered in natural seawater and the soil conditions encountered at the site. The edges of sheets shall be selvaged or otherwise finished to prevent outer filaments or yarns from pulling away from the sheet.
- 1. Type I Geotextile Fabric: Type I geotextile fabric shall be used in the production of geotextile composite which is intended to be placed beneath graded riprap and encapsulated LWA. Type I geotextile fabric shall be a permeable, nonwoven, needle-punched product. The fabric shall be manufactured from polyester, polypropylene or a combination of polyester and polypropylene. Polymers shall be either virgin compounds or clean reworked material. Clean reworked material shall be previously processed material from the processor's own production that has been reground, pelletized, or solvated. The fabric shall not contain more than 20 percent of clean reworked material by weight. Recycled materials from either post-consumer or post-industrial sources shall not be used. When sampled in accordance with ASTM D4354, Type I geotextile fabric shall conform to the table below.

Type I Geotextile Fabric			
Application: Production of Geotextile Composite for Placement beneath Graded Riprap or Encapsulated LWA			
Quality Characteristic	Unit	Test Method	Requirement
Fabric Type	-	-	Non-Woven
Mass, (min)	oz/yd ²	ASTM D5261	9.5
Grab breaking load. 1-inch grip in each direction, (min)	lb	ASTM D4632	250
Apparent elongation in each direction, (MARV ⁽¹⁾)	%	ASTM D4632	50
Permittivity, (min)	sec ⁻¹	ASTM D4491	0.7
Apparent opening size, (min and max)	US Sieve	ASTM D4751	70-100

Type I Geotextile Fabric			
Application: Production of Geotextile Composite for Placement beneath Graded Riprap or Encapsulated LWA			
Quality Characteristic	Unit	Test Method	Requirement
UV resistance, retained grab breaking load, 500 hours, (min)	%	ASTM D4355	70
CBR Puncture (min)	lb	ASTM D6241	650
Trapezoid Tear Strength (min)	lb	ASTM D4533	100
Notes: 1. MARV is the Minimum Average Roll Value.			

2. Type II Geotextile Fabric: Type II geotextile fabric shall be used to encapsulate the lightweight aggregate material and produce the LWA core. Type II geotextile fabric shall be woven geosynthetic product formed by the uniform and regular interweaving of the threads or yarns in two directions. Fabrics shall be manufactured from monofilament yarn formed into a uniform pattern with distinct and measurable openings, retaining their position relative to each other. The edges of fabric shall be selvaged or otherwise finished to prevent the outer yarn from unraveling. When sampled in accordance with ASTM D4354, Type II geotextile fabric shall conform to the table below.

Type II Geotextile Fabric			
Application: Encapsulation of Lightweight Aggregate			
Quality Characteristic	Unit	Test Method	Requirement
Fabric Type	-	-	Woven
Apparent opening size, (max ⁽¹⁾)	US Sieve	ASTM D4751	30
Wide-Width tensile strength, MD & CD, (min)	lb/ft	ASTM D4595	4,800
Wide-Width tensile elongation, MD & CD, (max)	%	ASTM D4595	15
Seam strength (min)	lb/in	ASTM D4884	250
UV resistance, retained grab breaking load, 500 hours, (min)	%	ASTM D4355	80
Notes: 1. Refers to maximum dimensions of opening			

2.02 SEWN SEAMS

In addition to sewn seams required for LWA containers, Contractor may apply sewn seams or laps for Type I geotextile joints. Thread for seams shall be multi-ply polyester. Nylon thread shall not be used. Written details and drawings shall be submitted for sewn seams. Details shall address, but not be limited to, thread type, thread tension (sewing device), stitch density and type, overlap, and number of rows and type of chainstitch. Also submit laboratory test reports evaluating the load-transfer capability of the proposed seams in accordance with ASTM D 4884.

2.03 GEOGRID

Geogrid for placement beneath the encapsulated lightweight aggregate and GRR armor stone shall be an integrally formed grid structure manufactured of a stress-resistant polypropylene material, or Engineer approved alternate, and have complete continuity of all properties throughout its structure. Geogrid shall accept applied force in use by positive mechanical interlock (i.e., by direct mechanical keying) with (a) compacted soil or fill materials, (b) contiguous sections of itself when overlapped and embedded in compacted soil or fill materials, and (c) rigid mechanical connectors such as bodkins, pins, or hooks.

Conformance of geogrid shall be in accordance with ASTM D 4759. Geogrid shall be sampled in accordance with ASTM D 4354 and tested to verify the following minimum physical properties and requirements:

Physical Property	Unit	Test Method	Measure
Aperture Nominal Dimensions (MD & CD) (max.)	in	I.D. Callipered ⁽¹⁾	1.2
Junction Strength	lb/ft	ASTM D 7737	1,350
Ultimate Tensile Strength (min.)	lb/ft	ASTM D 6637 Method A	1,500
Resistance to Installation Damage ⁽²⁾ (min.)	%GP	ASTM D 5818	70
Pull-out Resistance (min.)	psf	Check with Supplier	75
Notes:			
1. Maximum inside dimension in each principle direction measured by calipers.			
2. Resistance to loss of load capacity of structural integrity when subjected to mechanical stress in installation measured via ASTM D 5818 in crushed stone classified as poorly graded gravel with a maximum 2-inch particle size (GP).			

PART 3 – EXECUTION

3.01 DELIVERY, STORAGE, AND HANDLING OF MATERIALS

Materials delivered to the site shall be inspected for damage, unloaded, and stored with the minimum of handling. Materials shall not be stored directly on the ground without a fabric or plastic liner beneath and shall be kept free of dirt and debris.

3.02 PROTECTION

Materials shall be protected at all times to ensure the original chemical and physical properties. Work shall be sequenced so that geotextile materials are not exposed more than 7 days from the time materials are removed from their protective covering and sheets are fully covered by GRR or opaque temporary coverings. During periods of shipment and storage, geotextile materials shall be protected from direct sunlight, ultra-violet rays, and high temperatures and in accordance with any other instructions of the manufacturer. Unpackaged rolls and sheets shall be protected with temporary opaque coverings. Damaged materials shall be either removed and replaced or covered with a second layer of geotextiles extending 3 feet in each direction from the damaged area. Any material that is rejected or damaged due to the fault or negligence of Contractor shall be repaired or replaced at no additional cost to Owner.

3.03 SUBGRADE PREPARATION

The surface to receive the geotextile material shall be prepared by locating and removing obstructions or debris, including natural timber debris (i.e. trees, stumps, logs, etc.). Refer to drawings for additional requirements for debris removal.

3.04 PLACEMENT BENEATH GRR

Geotextile fabric and geogrid (geotextile composite) shall be placed in accordance with the manufacturer's instructions, but placement method shall meet the following criteria as a minimum.

1. Geotextile fabric may be placed simultaneously with the geogrid by pre-attaching or bonding the fabric to the bottom of each sheet of geogrid with provision for sufficient overlaps to form the geogrid composite. Pre-attaching or bonding geogrid to underlying geotextile fabric is at Contractor's option. Composite shall be placed with geotextile fabric beneath geogrid. Method of pre-attachment shall be submitted for concurrence by Engineer. Care shall be taken to ensure that geogrid composite sections do not separate during construction.
2. Geogrid composite shall be placed to completely cover subgrade at locations shown on construction drawings and shall be relatively free of wrinkles, creases, and sags before overlying rock is placed.
3. Adjacent sheets of geogrid composite shall overlap a minimum of 3 feet unless shown otherwise on the construction drawings.
4. Sheets shall not be staked down to the extent that they are taut and subject to significant puncture or tearing during subsequent GRR placement.
5. Method of GRR placement shall be such that sheets are not pulled apart at connections/ laps or significantly punctured or torn.
6. Geogrid composite placed on a slope shall be oriented so that the strongest material axis bears the majority of the anticipated load.
7. The geogrid composite shall be protected from damage during placement of stone. This shall be accomplished by limiting the height of GRR drop to less than 1 foot.
8. Construction equipment or vehicles shall not operate directly on sheets unless otherwise permitted by Engineer.
9. The work shall be scheduled so that all installed geogrid composite is completely covered with a layer of rock by the end of each workday.

3.05 ENCAPSULATION OF LWA

Refer to Specification Section 31 05 16 – Lightweight Aggregate.

3.06 SURVEYING

Refer to Specification Section 02 21 13 – Construction Surveying.

END OF SECTION

DIVISION 31 – EARTHWORK**SECTION 31 37 00 – RIPRAP****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

The work includes furnishing materials, labor, and equipment for construction of graded riprap (GRR) structures in accordance with the contract documents.

1.02 RELATED SECTIONS

Section 01 00 00 – Special Conditions
 Section 01 11 00 – Summary of Work
 Section 01 20 00 – Measurement and Basis of Payment
 Section 02 21 13 – Construction Surveying
 Section 31 05 16 – Lightweight Aggregate
 Section 31 05 19 – Geotextiles

1.03 REFERENCES

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Testing and Materials (ASTM) Publications:

C 295	Standard Guide for Petrographic Examination of Aggregates for Concrete
C 535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
D 75	Standard Practice for Sampling Aggregates
D 1429	Standard Test Methods for Specific Gravity of Water and Brine
D 3370	Standard Practices for Sampling Water from Flowing Process Streams
D 3740	Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
D 4992	Standard Practice for Evaluation of Rock to be Used for Erosion Control
D 5240	Standard Test Method for Evaluation of Durability of Rock for Erosion Control Using Sodium Sulfate or Magnesium Sulfate.
D 5519	Standard Test Method for Particle Size Analysis of Natural and Man-Made Riprap Materials
D 6473	Standard Test Method for Specific Gravity and Absorption of Rock For Erosion Control
E 329	Standard Specification for Agencies Engaged in Construction Inspection, Testing, Special Inspection

Louisiana Department of Transportation and Development (DOTD) Publications:

DOTD Louisiana Standard Specifications for Roads and Bridges (2016)

1.04 SUBMITTALS

Submittals to the Engineer under this section include the following:

1. Name and Location of Quarry (Paragraph 1.05, For Information Only)
2. Daily Progress Reports (Section 01 00 00 – Special Conditions)
3. Barge Displacement Tables and Hydrometer (Water Density) Test Reports (Paragraph 3.03)
4. GRR Quality Test Reports (Paragraph 1.05)
5. GRR Gradation Test Reports (Paragraph 1.05)
6. Surveys (Section 02 21 13 – Construction Surveying)

GRR Submittal Number	Submittal Description	Required Submission Timeframe
GRR-1	Name, Location, and Historical Quality Reports from Quarry	At Pre-Construction Meeting
GRR-2	Testing Laboratory Qualifications	At Pre-Construction Meeting
GRR-3	GRR Delivery, Staging, and Testing Schedule	Before transport or delivery of any GRR from quarry
GRR-4	GRR Gradation and Quality Test Report 1	With or after GRR Submittal No. 3 "GRR Delivery, Staging, and Testing Schedule" but before transport or delivery of any GRR from quarry
GRR-5 and up	GRR Gradation and Quality Test Reports	Every 10,000 tons and before shipment of GRR from quarry for gradation tests At each change in lithology or at 20,000 tons intervals, whichever is more stringent, for quality tests

- A. GRR Submittal 1: Contractor shall provide the name and location of the quarry that will be the source of the GRR for the project at the Pre-Construction Meeting. Contractor shall also provide historical quality reports from the selected quarry to determine the acceptability of the GRR from the proposed source. Historical quality reports are not considered suitable alternatives to the quality and gradation reports required during construction. Quality and gradation reports during construction shall be from new tests performed on actual GRR to be used on the project. See Paragraph 1.05 for more information.
- B. GRR Submittal 2: Testing laboratory qualifications shall be submitted at the Pre-Construction Meeting.
- C. GRR Submittal 3: Before GRR is shipped from the quarry, Contractor shall submit a GRR delivery, staging, and testing schedule, and a description of the planned gradation test procedure. The schedule shall describe when GRR quality and gradation testing will be performed to ensure that test results are available for Engineer's review before GRR being shipped from the quarry. Quality and gradation tests shall be provided at specified intervals to ensure compliance with quality and gradation requirements. The first quality and gradation test reports shall be performed, submitted, and reviewed by Engineer before delivery of any GRR. The remaining gradation tests shall be performed, submitted, and reviewed by Engineer at approximately 10,000 ton intervals and before shipment of GRR. The remaining quality tests shall be performed, submitted, and reviewed by Engineer at each change in lithology or at 20,000 tons intervals, whichever is more stringent, and before shipment of associated GRR.
- D. GRR Submittals 4, 5, and Up: Contractor shall obtain Engineer's review and confirmation of compliance of gradation and quality tests before shipment of GRR in the increments stated in Table 1. If a single shipment of GRR is planned to encompass multiple increments, Contractor shall submit the required number of test submittals and receive review and confirmation of compliance before shipment of GRR from quarry. Contractor may request variations to timeframes in the table in GRR delivery, staging, and testing schedule.

1.05 QUALITY ASSURANCE

- A. Material Testing Before Starting Work: Before starting GRR production, Contractor shall provide the name and location of the quarry that will provide the GRR for the project. Contractor shall notify Engineer at least 14 days before conducting GRR testing, so Engineer or Engineer's designee can witness the testing. GRR shipments shall not leave the quarry before Engineer reviews test results for conformance to the contract documents. Suitable test reports and service records are required to determine the acceptability of the GRR from the proposed source. Reports shall be from new tests performed on actual GRR to be used on project. Acceptable GRR shall meet the quality acceptance criteria in Paragraph 2.01 when tested in accordance with the procedures listed below:
1. Sampling of the GRR shall be performed in accordance with ASTM D 75.
 2. The absorption of GRR shall be determined in accordance with ASTM D 6473.
 3. The unit weight of GRR shall be provided based on the apparent specific gravity determined in accordance with ASTM D 6473.
 4. The loss by abrasion of GRR shall be determined in accordance with ASTM C 535, processed and tested for No. 1 grading.
 5. The gradation of the GRR shall be determined in accordance with ASTM D 5519, Test Method C.
- B. Material Testing Throughout the Duration of Work: Throughout the duration of the work, Contractor or quarry shall inspect, sample, and test construction materials for compliance with the specified requirements and record the inspection of all operations. All sampling and testing shall be performed by a qualified testing laboratory meeting the requirements of ASTM D 3740 and ASTM E 329. A copy of the records of inspection and any corrective action taken shall be provided to Engineer. Owner reserves the right to test additional samples to verify the submitted test records at Owner's expense. If the first test results indicate that the materials do not meet the specified requirements, the additional test will be at Contractor's expense. As a minimum, Contractor or quarry shall perform quality control inspection and testing in accordance with the following:
1. Gradation and Quality Tests (Refer to Section 1.05 A):
 - a. Gradation Testing Frequency: One gradation test shall be submitted at each of the following timeframes:
 - i. Before transport or delivery of any GRR from the quarry
 - ii. After every 10,000 tons of GRR thereafter
 - b. Quality Testing Frequency: One quality test shall be submitted at each of the following timeframes:
 - i. Before transport or delivery of any GRR from the quarry
 - ii. At each change in lithology or after every 20,000 tons of GRR thereafter, whichever is more stringent
 - c. Sample Size: At least 50 stones and 10 tons per test
 2. Placement Inspection: Continuous inspection of placement to ensure proper thickness and that material is not segregated. Refer to Paragraph 3.01.
- C. Coordination with Quarry: Contractor shall be knowledgeable of the methods used at the quarry to produce the GRR gradations specified, especially the effects of repeated handling. Contractor shall coordinate with the quarry and use loading and unloading methods that ensure required gradations are provided for placement.

PART 2 – PRODUCTS

2.01 GRADED RIPRAP

- A. GRR Quality: All stone for GRR shall be durable natural stone. It shall be free from visible cracks, clay pockets, cavities (vugs), laminations, and other defects that would tend to unduly increase its deterioration from natural causes. Stone shall not include objectionable quantities of dirt, sand, clay, or rock fines. Stone quality shall conform to the requirements below.

Quality Characteristic	Unit	Test Method	Requirement
Apparent Specific Gravity	-	ASTM D6473	2.48-2.65 ⁽¹⁾
Absorption	%	ASTM D6473	3 (max)
Soundness Loss (Sodium Sulfate)	%	ASTM D5240	5 (max)
Los Angeles Abrasion Loss, 1,000 revolutions, Grading No. 1	%	ASTM C535	36 (max)
Petrographic Examination	-	ASTM C295	No deleterious material allowed
Field Evaluation	-	ASTM D4992	No deleterious materials allowed
Notes: 1. Stone with an apparent specific gravity greater than 2.65 may be submitted to Engineer for approval but may require GRR layer thickness modification to reduce bearing pressure on soft soil.			

- B. GRR Gradation: The GRR shall be reasonably well graded and shall include all stone sizes between the two extremes specified which will result in a dense, fairly well-graded bulk material not having noticeable voids or a lack of the larger sizes. The greatest dimension of each stone shall not be more than three times its least dimension. The faces of individual stones shall be roughly angular, not rounded, in shape. Armor stone size range (gradation) shall conform to the requirements of DOTD 2016 Section 711.02.1, "250 lb Riprap Class," as specified below.

Armor Stone Gradation – LADOTD 250 lb

Stone Size, lb	% of Stone Smaller Than
1,250	100
500	45-100
250	15-50
80	0-15

PART 3 – EXECUTION

3.01 GRR PLACEMENT

GRR shall be placed over the prepared subgrade, geotextiles, and encapsulated LWA within the limits indicated on the construction drawings. The stone layer shall be constructed as indicated on the construction drawings, and include the following characteristics:

- Contractor shall be aware that soft soil conditions exist and employ placement techniques as described on the construction drawings.

2. Contact between individual stones shall be maximized on all sides. Each stone shall have at least three (minimum) points of contact with other stones.
3. GRR shall be placed and spread in such a manner that the various stone sizes produce a relatively uniform surface and a completed layer that is a reasonably well-graded, compact mass of rock with minimal percentage of voids. Smaller stones or chips and fragments shall be placed as required to produce a relatively uniform finished outer surface.
4. GRR shall be placed carefully onto the geogrid composite by limiting the height of drop to less than one foot.

3.02 MISPLACED MATERIAL

If any GRR is deposited elsewhere than in places designated or approved, Contractor may be required to remove such misplaced material and redeposit it where directed at Contactor's expense.

3.03 BARGE DISPLACEMENT MEASUREMENTS

Contractor shall develop a barge displacement table for measurement and payment of graded riprap and include it in the Work Plan (refer to Section 01 00 00 – Special Conditions). The table shall be reviewed for approval by the Engineer. It shall show the barge name or number, dimensions, name of owner, and name of fabricator for each barge. 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 rakes. All new or modified barges shall be field checked for current dimensions by Contractor in the presence of Engineer. Each table shall contain the freeboard of the barge in feet and tenths from zero to the full depth of the barge and the corresponding gross displacement to the nearest ton.

Each barge shall be suitably marked with two 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 4 inches wide and 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 4 feet from the box end. The freeboard will be measured at the 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.

Barge displacement measurements shall be taken on final barge used to transport GRR to the project footprint. For example, if GRR is transported via barge to the project vicinity and then light-loaded onto a different barge before final placement of material in the project footprint, measurements for payment shall be taken on the light-loaded barge. Measurements shall be taken when the barge has a minimum of 1 foot clearance between the underside of the barge and the bay bottom.

A unit weight of 62.45 pounds/cubic foot is standard for fresh water and shall be applied to the displacement table and GRR quantities. The Contractor has the option to obtain water samples and determine alternative densities or unit weights of the water using the procedure explained below. If Contractor does not obtain water samples and densities according to this procedure, then no adjustments will be applied to the displacement table and graded riprap quantities.

Water sampling for density adjustments shall be performed by the Contractor during every barge measurement event, both when barges are fully loaded before material placement and when barges are empty. The water samples shall be taken in accordance with ASTM D 3370 (practice A-Grade Sample) at depths of 4 and 8 feet in the area where measurements are taken using a "Polypro" 2000 ml water sampler or approved equal. If water depth at measurement location is less than 8 feet, Contractor shall notify the Engineer and take water samples at half the water depth and at 6 inches above the existing grade. All water samples shall be tested to determine densities according to ASTM D 1429 (Method D - Hydrometer method) or Engineer-approved alternative method. Test results shall be submitted to the Engineer. After review and approval of the test results by the Engineer, the average of the densities for each barge will be used to adjust the measurements.

3.04 SURVEYING

Contractor shall provide initial, interim, and final surveys of GRR. Refer to Specification Section 02 21 13
– Construction Surveying.

END OF SECTION

DIVISION 35 – WATERWAY AND MARINE
CONSTRUCTION

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION**SECTION 35 01 50 – ACCESS AND FLOTATION CHANNEL****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

The work includes furnishing materials, labor, and equipment necessary to conduct the optional access and flotation channel excavation (mechanical dredging), stockpiling, and backfilling of soil from the lake bottom. Contractor shall be responsible for maintaining channels in a useable configuration throughout the duration of the work, as needed. Boring logs for the project site are provided in Appendix A.

1.02 RELATED SECTIONS

Section 01 20 00 – Measurement and Basis of Payment
Section 01 41 00 – Environmental Protection Measures
Section 01 41 26 – Permits
Section 02 21 13 – Construction Surveying

1.03 QUALITY ASSURANCE

Environmental Protection Requirements: Refer to Section 01 41 00, Environmental Protection Measures.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

3.01 Pre-Construction Hazard Survey: Refer to Section 02 21 13 - Construction Surveying.

3.02 Excavating: All excavation shall be performed mechanically. Hydraulic dredging is not allowed.

3.03 Excavation Limits: The excavation shall not extend beyond the lines, grades, and slopes specified in the contract documents. The Contractor shall be responsible for obtaining a permit modification and prior approval from Engineer to enlarge or relocate the channels. Contractor shall also obtain and submit to Engineer a letter of no objection from any pipeline company for the proposed excavation inside their right-of-way.

3.04 Temporary Stockpiles: The excavated material shall be temporarily deposited seaward of the access and flotation channels and conform to the elevations, grades, and lines specified in the contract documents. After completion of work, dredged material shall be placed back into the channels as indicated in the contract documents. The temporary stockpile areas shall be reworked to within 6" of the original grade. Unauthorized placement areas shall be restored to pre-construction conditions at the Contractor's expense.

3.05 Backfilling: Excavations shall be backfilled with previously excavated/stockpiled soil material as promptly as the work permits, but not until required surveying has been performed and adjacent breakwaters have been accepted. Backfill material shall be placed in uniform lifts to avoid unequal soil pressures. Contractor shall be aware that soft soil conditions exist and employ suitable placement methods. Final top surface of backfilled areas shall be relatively uniformly graded. Compaction of backfill will not be required; however, the top surface shall be manipulated so that it is reasonably smooth and free of voids and abrupt humps or depressions.

3.06 Unsatisfactory Material: Material such as trees, stumps, logs, rocks, cable, tires, concrete, debris, etc. shall become the property of Contractor and be removed from the project site and disposed of in accordance with all applicable laws and ordinances. This requirement includes that all loose natural timber

debris shall be collected by Contractor and disposed of offsite in accordance with all applicable laws and ordinances. Loose natural timber debris shall not be allowed to float away from the project site.

- 3.07 Surveying: Contractor shall provide initial, interim, and final surveys of flotation channels, access channels, and stockpiles. Refer to Section 02 21 13 – Construction Surveying.
- 3.08 Acceptance: This work is considered complete when the access and flotation channels have been backfilled. Surveys shall be submitted to verify that excavated areas have been backfilled as specified.

END OF SECTION

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION**SECTION 35 12 73 – LIGHTED DAYBEACONS****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

The work includes furnishing materials, labor, and equipment necessary to construct, install, survey, and maintain the lighted daybeacons in accordance with the Contract Documents.

1.02 RELATED SECTIONS

Section 01 11 00 – Summary of Work
Section 01 20 00 – Measurement and Basis of Payment
Section 02 21 13 – Construction Surveying

1.03 REFERENCES

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Testing and Materials (ASTM) Publications:

D 25 Standard Specification for Round Timber Piles

1.04 SUBMITTALS

Submittals to the Engineer under this section include the following:

1. Surveys (Refer to Section 02 21 13 – Construction Surveying)
2. Material Certifications for Treated Timber Post, Aluminum Plate Signage, Hardware, Reflective Tape, and Signal Lights (Paragraph 2.01)
3. Shop Drawings (Paragraph 2.01)

PART 2 – PRODUCTS

2.01 LIGHTED DAYBEACONS

Lighted daybeacons shall be constructed of the materials and to the dimensions required as shown in the construction drawings. Posts shall consist of ASTM D 25-compliant 12-inch diameter by 60 feet long treated timber post with 6-inch minimum tip with a 2.5 chromated copper arsenate (CCA) retention value. Signs shall be 3 feet by 3 feet and consist of 0.125-inch-thick marine grade aluminum with white sheeting on one side. A 3-inch orange reflective border shall be on the sign face. Hardware shall consist of three 0.75-inch diameter A307 Hot Dip Galvanized (HDG) dome head bolts with ogee washer and nut. Nuts shall be tack welded to bolts. Lettering and additional requirements are shown in the construction drawings. A self-contained white solar-powered LED marine Lantern, FL2.5 s (0.3 sec ON/2.2 sec OFF) shall be attached to the top of each permanent warning sign pile. Contractor shall submit certifications showing accordance with the material requirements for the treated timber post, aluminum plate signage, hardware, reflective tape, and signal lights before installing the lighted daybeacons.

PART 3 – EXECUTION

3.01 LIGHTED DAYBEACON INSTALLATION

The lighted daybeacons shall be installed at locations approved by the Engineer. Locations shown in construction drawing will be updated based on updates to the breakwater alignment (refer to Section 01 11 00 – Summary of Work for additional details). Lighted daybeacons shall not be installed until updated alignment points and updated lighted daybeacon locations have been approved by Engineer. Contractor

shall exercise care when performing work near the lighted daybeacons. Contractor shall submit shop drawings detailing the method to be used to attach the marine warning light to the timber post for review at least 7 days before installation of the lighted daybeacons. The Contractor shall maintain the warning light until final acceptance.

3.02 SURVEYING

Contractor shall survey the adjacent grade, sign location, and sign elevation of each lighted daybeacon. Refer to Specification Section 02 21 13 – Construction Surveying.

3.03 MAINTENANCE

Contractor shall maintain lighted daybeacons until work is completed. Damaged lighted daybeacon shall be repaired or replaced by Contractor at no expense to the Owner.

END OF SECTION

DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION**SECTION 35 59 53 – SETTLEMENT PLATES****PART 1 – GENERAL**

1.01 DESCRIPTION OF WORK

The work includes furnishing all the materials, labor, and equipment necessary to construct, install, survey, and maintain the settlement plates in accordance with the Contract Documents.

1.02 RELATED SECTIONS

Section 01 11 00 – Summary of Work
Section 01 20 00 – Measurement and Basis of Payment
Section 02 21 13 – Construction Surveying
Section 31 37 00 – Riprap

1.03 REFERENCES

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

American Society for Testing and Materials (ASTM) Publications:

A 123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

Louisiana Department of Transportation and Development (DOTD) Publications:

DOTD Louisiana Standard Specifications for Roads and Bridges (2016)

1.04 SUBMITTALS

Submittals to the Engineer under this section include the following:

1. Surveys (Refer to Section 02 21 13 – Construction Surveying)

PART 2 – PRODUCTS

2.01 PLATES

Plates shall be fabricated with a 4 ft by 4 ft by one-fourth inch (1/4") steel plate and a 3-inch diameter galvanized steel Schedule 40 or heavier riser pipe welded to the center of the plate using a 3/16" continuous fillet. The pipe shall have the top closed with a galvanized cap tack welded to the pipe in at least 3 locations equally spaced around the pipe perimeter. After fabrication, the plates shall be hot-dip galvanized.

2.02 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 coat of a vinyl wash primer 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.

PART 3 – EXECUTION**3.01 SETTLEMENT PLATE INSTALLATION**

Plates shall be installed at locations approved by the Engineer. Locations shown on the construction drawings will be updated based on updates to the breakwater alignment (refer to Section 01 11 00 – Summary of Work for additional details). Settlement plates shall not be installed until updated breakwater alignments and updated settlement plate locations have been approved by Engineer. Contractor shall exercise care when performing work near the settlement plates to not damage the settlement plate. Leveling of the plate bed shall be accomplished by removing the minimum amount of earth or rock necessary to produce a level foundation.

3.02 SURVEYING

Contractor shall survey the settlement plates as described in Section 02 21 13 – Construction Surveying.

3.03 MAINTENANCE

Contractor shall maintain all settlement plates until work is completed. Any damaged settlement plates shall be repaired or replaced by Contractor at no expense to Owner.

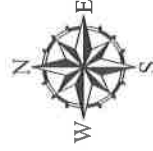
END OF SECTION

APPENDIX A – GEOTECHNICAL BORING LOGS

DISCLAIMER: This data represents geotechnical boring logs provided by GeoEngineers, Inc. based on data collected in 2010 and 2019. These data represent the most recent information available. However, variations may exist in the surface and subsurface conditions between sample locations. Contractor shall draw their own conclusions as to the character of the in-situ soil material. This data is provided for information only.



State Outline



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Topographic map was taken from USGS, Quad: Ponchatoula, Dated: 1983.

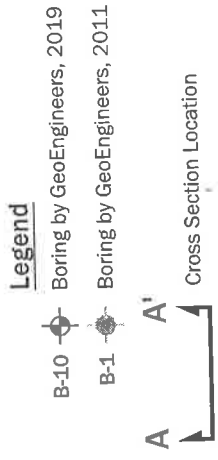
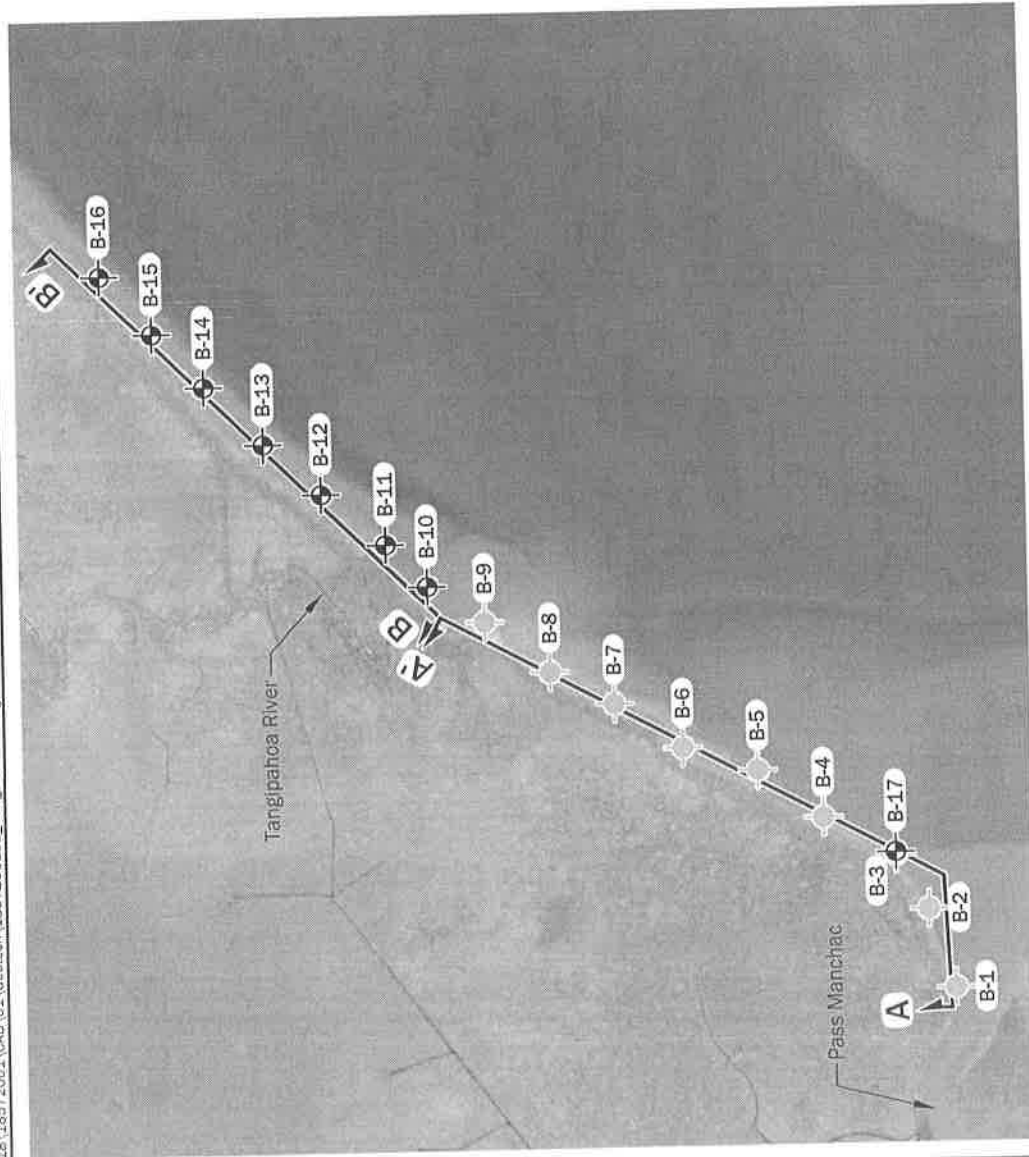
Projection: NAD83 Louisiana State Planes, Southern Zone, US Foot

Vicinity Map

Lake Pontchartrain Shoreline Protection
Continuation Project
Tangipahoa Parish, Louisiana



Figure 1

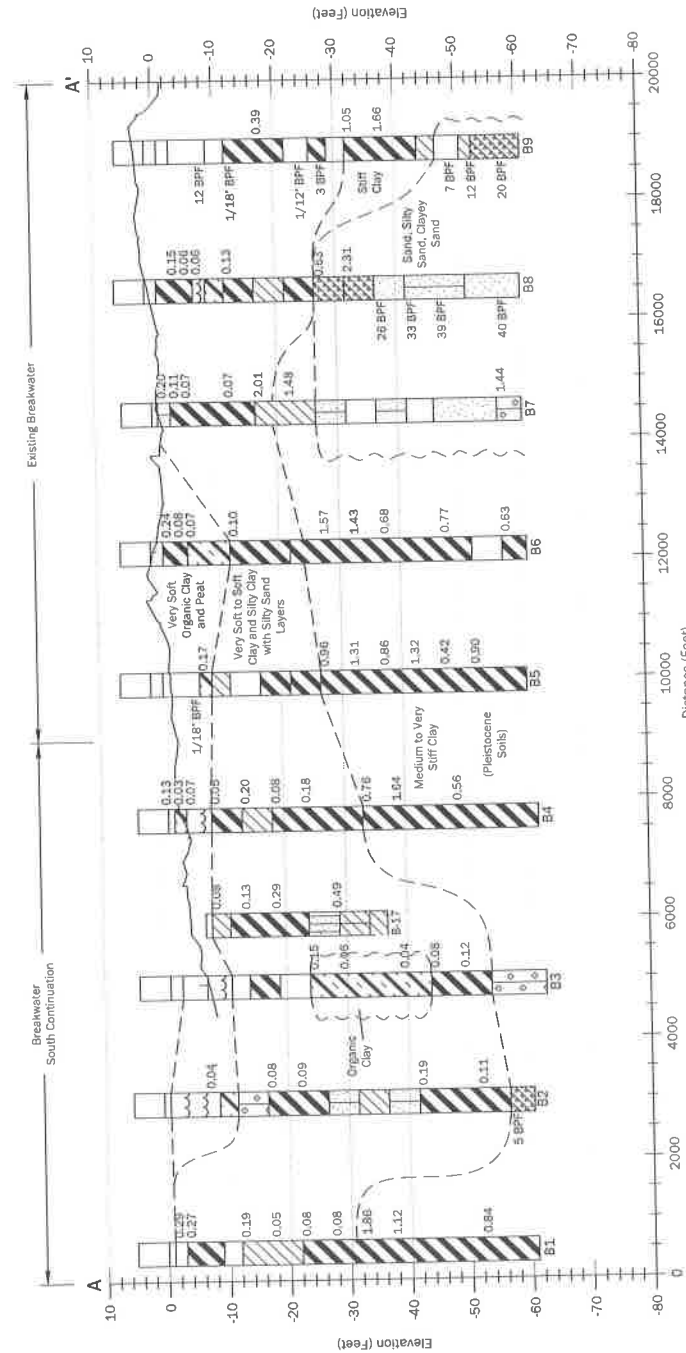


Site Plan	
Lake Pontchartrain Shoreline Protection Continuation Project Tangipahoa Parish, Louisiana	
	Figure 2

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

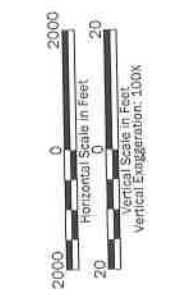
Data Source: Aerial was taken from Google Earth Pro., Imagery Dated: 01/24/2018
 Projection: NAD83 Louisiana State Planes, Southern Zone, US Foot



Cross Section A-A'
 Lake Pontchartrain Shoreline Protection
 Continuation Project
 Tangipahoa Parish, Louisiana



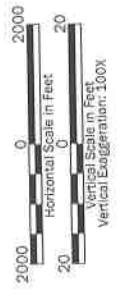
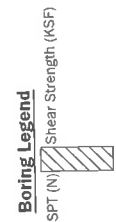
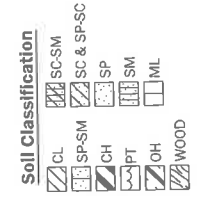
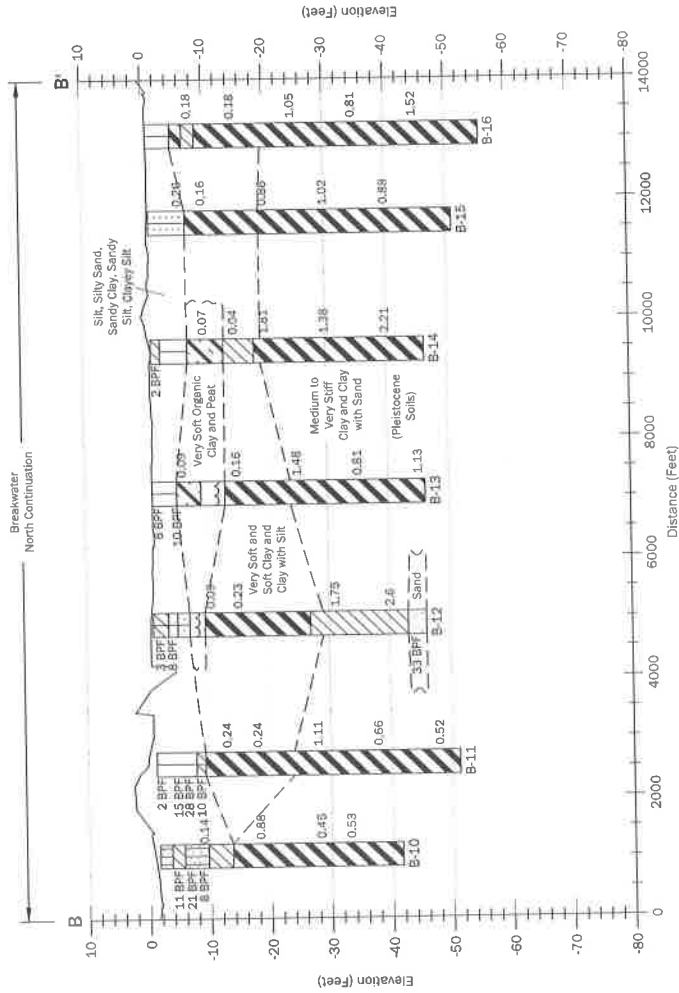
Figure 3a



Soil Classification
 CL, SC-SM, SC & SP-SC, SP, SM, ML, WOOD

Boring Legend
 SPT (N), Shear Strength (KSF), BPF = Blows Per Foot

NOTES:
 1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot stand behind the accuracy and content of electronic files. The client is advised to verify all data with the original report of the communication.
 Data Source: Ground surface dated 2019.
 Projection: NAD83 Louisiana State Planes, Southern Zone, US Foot.



Notes:
 1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is not to be used to make or follow any decisions or actions. The user assumes all responsibility for the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 Data Source: Ground surface dated 2019.
 Projection: NAD83 Louisiana State Plane, Southern Zone, US Foot.

Cross Section B-B'

Lake Pontchartrain Shoreline Protection
Continuation Project
Tangipahoa Parish, Louisiana

GEOENGINEERS **Figure 3b**

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA										
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level		Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Min/Vane (KSF)	Passing No. 200 Sieve, %
35																		
35	35	18			10					29	98	1.86		14				
40	40																	
45	45	14			11					40	84.8	1.12		2	82	53		
50	50	10			12					47								
55	55	12			13					46								
60	60	9			14					44	81.2	0.84		5				
65	65	12			15					25								

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-1 (continued)



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00

B:\data\Projects\Louisiana\18572\18572001\GINT\18572001\LOGS\PS1_DBT\sampledata\18572001\GINT\GEOENGINEERS\DOT\GEOENGINEERS\LAB

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	LABORATORY DATA											
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	MiniVane (KSF)	Passing No. 200 Sieve, %
35																		
								CL										
	35	22.5			10				41					30	13	0.29		
	40							SP-SM										
	45	23			11													
	45							CH										
	50	22			12				75	54.3	0.19	2.88	11					
	55	24			13				34									
	60	9.5			14				33	87.5	0.11		15					
	65				15			SC										
																		8
																		36

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-2 (continued)



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00

Borehole Number: 18572001-001; Date: 11/11/11; File Path: P:\18572001\GINT\18572001-001\LOGS\LP2\01Template\GEOENGINEERS\DOT\GEN_GECOTECH_LAB

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA									
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level		Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (1'SF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	MiniVane (KSF)
35																	
35								CH									
38		12			10					38	84.2	0.76	2.02	15			
40																	
45		10			11					41	81	1.64		7			
45																	
50		19			12												
50																	
55		17			13					50	75.3	0.56		15			
55																	
60		14			14					46							
60																	
65		13			15					44							
65																	

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-4 (continued)



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00


Baton Rouge, Louisiana Date: 1/17/11 File: P:\1857200\GINT\1857200-00_LOGS.GPJ DBITemplate.LBT.mdb:GEOENGINEERS.DDT:GELS_GEO TECH_LAB

Start Drilled	6/25/2010	End	6/25/2010	Total Depth (ft)	67	Logged By	DAS	Driller	Specialized Environmental Resources, LLC	Drilling Method	Rotary Wash
Surface Elevation (ft)	6.5			Hammer Data	Safety Hammer/Cathead 140 (lbs) / 30 (in) Drop			Drilling Equipment	Marsh Buggy-Mounted Drill Rig		
Latitude	N30° 18' 42.8"			System Datum	Geographic NAVD88			Groundwater	Depth to Water (ft)	Elevation (ft)	
Longitude	W90° 17' 26.0"						Date Measured				
Notes: See Figure A-1 for explanation of symbols. Cement-bentonite grout backfill top 25 feet.											

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA											
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level		Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Min/Vane (KSF)	Passing No. 200 Sieve, %	
0																			
0								Zero (0) feet at top of barge deck											
5								Water surface											
6								Mudline @ -0.54 feet											
8								No soil recovered (wood/peat)											
10								No soil recovered (wood/peat)											
12								No sample recovered											
15			1/18"					OH Very soft brown organic clay (19.4% organics) (Specific Gravity - 2.42)	195	26				154	91	0.08			
18								CL Very soft gray silty clay with organic matter traces	64	70.6	0.17	0.92	15	36	16				
20								No soil recovered (wood)											
25								CH Brown clay with wood (5.8% organics)	61					57	33				
30								CH Dark gray clay with wood											
35																			

¹An Asterisk indicates a remold was used for strength testing.

Boring Rough Location: Date: 1/17/11 File Path: I:\18572001\GINTT\18572001-00_L005.DPJ DBTerra\18572001-00_Terra\18572001-00\GEOENGINEERS\007\0811_GEO TECH.LAB

Log of Boring B-5		
	Project:	Lake Pontchartrain Shoreline Protection
	Project Location:	Tangipahoa Parish, Louisiana
	Project Number:	18572-001-00
		Figure A-6 Sheet 1 of 2

Drilled	Start 6/26/2010	End 6/26/2010	Total Depth (ft)	66	Logged By Checked By	DAS JP	Driller	Specialized Environmental Resources, LLC	Drilling Method	Rotary Wash
Surface Elevation (ft) Vertical Datum	5.1			Hammer Data	Safety Hammer/Cathead 140 (lbs) / 30 (in) Drop			Drilling Equipment	Marsh Buggy-Mounted Drill Rig	
Latitude Longitude	N30° 19' 22.7" W90° 17' 2.8"			System Datum	Geographic NAVD88			Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
Notes: See Figure A-1 for explanation of symbols. Cement-bentonite grout backfill top 25 feet.										

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA										
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level		Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	MiniVane (KSF)	Passing No. 200 Sieve, %
0																		
								Zero (0) feet at top of barge deck										
								Water surface										
5								Mudline @ -0.88 feet										
		14						ML Light gray very sandy silt with clay traces										54
		10						CH Very soft brown clay with organics and 3" sandy silt layer (12.8% organics)	94	49.6	0.20	0.52	15				0.56	86
10		10						Very soft brown clay with organics and wood (18.9% organics)	63	53.8	0.11	0.63	15	99	55		0.17	
		12						Very soft brown clay with organic matter and 5" gray slightly organic clay layer at bottom	65	51	0.07	0.75	15				0.12	
		7						Very soft brown clay with organics and wood	71								0.05	
15																		
		18						Very soft gray clay with organics and wood	79	53.3	0.07	1.15	14				0.1	
20																		
		12						CL Very stiff gray sandy clay with sand pockets	19	106.3	2.01		13					
25																		
		10						Stiff gray sandy clay with organic matter	22	104	1.48		14					
30																		
		17						SP-SM Tan fine sand with silt and clay traces										16
35																		

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-7



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00

Baton Rouge, Louisiana: Date: 07/11/11 Path: P:\18572001\GINT\18572001\LOGS\DPJ\DBTemp\mlh\LOT\mss\DEC\DEC\HNE\ER\SLD\DT\GBH_GEO\TECH_L14B

Start Drilled	6/26/2010	End	6/26/2010	Total Depth (ft)	67	Logged By	DAS	Checked By	JP	Driller	Specialized Environmental Resources, LLC	Drilling Method	Rotary Wash
Surface Elevation (ft) Vertical Datum	6.5			Hammer Data	Safety Hammer/Cathead		140 (lbs) / 30 (in) Drop		Drilling Equipment	Marsh Buggy-Mounted Drill Rig			
Latitude	N30° 19' 41.0"			System Datum	Geographic		NAVD88		Groundwater	Date Measured		Depth to Water (ft)	Elevation (ft)
Longitude	W90° 16' 52.0"			Notes: See Figure A-1 for explanation of symbols. Cement-bentonite grout backfill top 25 feet.									

Elevation (feet)	Depth (feet)	FIELD DATA					MATERIAL DESCRIPTION	LABORATORY DATA											
		Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	MiniVane (KSF)	Passing No. 200 Sieve, %
0																			
							Zero (0) feet at top of barge deck												
							Water surface												
							Mudline @ -1.0 feet												
	9					1	Brown clay with organics and 2" sandy silt layer (12.4% organics)	76											
	16					2	Brown clay with organics and wood	89							83	56			
	24					3	Very soft brown clay with organic matter	106	45.2	0.15	0.81	15	87	60	0.28				
	17					4	Very soft brown peat with wood (23.9% organics)	276	18.6	0.06	0.84	15			0.09				
	15					5	Very soft brown organic clay with wood	111	38	0.06	0.92	15			0.07				
	20					6	Very soft brown clay	62	62.1	0.13	1.21	15	59	36	0.22				
	25					7	Very soft dark gray silty clay with organic matter	56	68.4				40	19	0.07				
	30					8	Very soft gray clay with organic matter and 2" silt layer	52					58	31					
	35																		

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-8



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00

Figure A-9
 Sheet 1 of 2

Boring Boring Location: Date: 11/7/11 File: P:\11847201\G01\11857200_00_LOSS.gpj Job Temporal: 6/26/2010 6:56:15 AM Temporal: 6/26/2010 6:56:15 AM User: JESHER

Elevation (feet)	FIELD DATA					Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA								
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name			Water Level	Graphic Log	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %
35	10						Light gray and dark gray clayey sand with sand pockets and streaks	31	98.2	0.63		15				
40	18			10		SC	Light gray and tan clayey sand with sand streaks	21	106.2	2.31		15	35	19		46
45			26	11		SP	Finn tan fine sand									2
50			33	12		SP-SM	Dense tan sand with silt traces									13
55			39	13			Dense tan and light gray sand with silt traces									
60				14		SP	Tan and light gray sand									2
65	15		40	15			Dense tan and light gray sand									

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-8 (continued)



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00

Figure A-9
 Sheet 2 of 2

B:\2018\Projects\18572\18572001\GMM\18572001_001_001.dwg (P1) - 08/14/2018 10:10:10 AM

Drilled	Start 6/26/2010	End 6/26/2010	Total Depth (ft)	67	Logged By Checked By	DAS JP	Driller	Specialized Environmental Resources, LLC	Drilling Method	Rotary Wash
Surface Elevation (ft) Vertical Datum	6.3			Hammer Data	Safety Hammer/Cathead 140 (lbs) / 30 (in) Drop			Drilling Equipment	Marsh Buggy-Mounted Drill Rig	
Latitude Longitude	N30° 19' 59.4" W90° 16' 35.4"			System Datum	Geographic NAVD88			<u>Groundwater</u> <u>Date Measured</u>	Depth to Water (ft)	<u>Elevation (ft)</u>
Notes: See Figure A-1 for explanation of symbols. Cement-bentonite grout backfill top 25 feet.										

Elevation (feet)	FIELD DATA							MATERIAL DESCRIPTION	LABORATORY DATA								
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected sample	Sample Name	Water Level	Graphic Log		Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	MiniVane (KSF)
0								Zero (0) feet at top of barge deck									
5								Water surface									
15		15			1			Mudline @ -0.75 feet No sample recovered									
10		13			2			Shells									
					3			Shells									
					4			Shells									
15			12		5			Firm light gray shell fragments with sand traces									
20			1/18"		6		CH	Very soft gray clay	35				6	58	37		
25					7			Soft gray clay with sand streaks	39	80.5	0.39	1.50		50	30		
30					8			No sample recovered									
35			1/12"		9		CH	Very soft gray clay with shell fragments	34								

¹An Asterisk indicates a remold was used for strength testing.

Log of Boring B-9



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00

Baton Rouge, Louisiana, Date: 11/11/11, Pgm: P-118, 18572001-00, LOGS (P), DBT template: G:\ENGINEERS\DOT\FIELD_GEO TECH_LAB

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	LABORATORY DATA											
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Compressive Strength (TSF) ¹	Confining Pressure (KSF)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Min/Vane (KSF)	Passing No. 200 Sieve, %
35																		
35																		
40								CH	29	97.1	1.05		14					
45									29	98.7	1.66		10	60	38			
50								CL										
55																		
55																		
60								CL										82
60								SC										32
65																		23

¹An Asterisk indicates a remold was used for strength testing.
















Log of Boring B-9 (continued)



Project: Lake Pontchartrain Shoreline Protection
 Project Location: Tangipahoa Parish, Louisiana
 Project Number: 18572-001-00








Baton Rouge, Louisiana: Date: 11/17/11 File: P1811857200.rpt Path: \\1857200-00_LDCS.GPJ DIST template.Lot Template: Lot

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% RETAINED ON NO. 200 SIEVE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	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
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		CLEAN SANDS (LITTLE OR NO FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	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 MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
		CLAYEY SANDS, SAND - CLAY MIXTURES		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
		INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
HIGHLY ORGANIC SOILS	INORGANIC CLAYS OF HIGH PLASTICITY		CH	INORGANIC CLAYS OF HIGH PLASTICITY	
	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY		OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY	
				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
	Continuous Coring






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.

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

"WOH" indicates sampler pushed using the weight of the hammer.

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.

ADDITIONAL MATERIAL SYMBOLS

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

Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Water level observed at time of exploration

Graphic Log Contact

 Distinct contact between soil strata

 Approximate contact between soil strata

Material Description Contact

 Contact between geologic units

 Contact between soil of the same geologic unit

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity Index
PL	Point lead test
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

Key to Exploration Logs

Start Drilled	7/23/2019	End	7/23/2019	Total Depth (ft)	40	Logged By	HJF	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) Vertical Datum	-1.64 NAVD88			Hammer Data	Automatic Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Air Boat-Mounted Drill Rig		
Latitude	30.33746			System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	2.5		
Longitude	-90.27301										
Notes: Cement-bentonite grout full depth.											

Elevation (feet)	FIELD DATA					Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA							
	Depth (feet)	Interval Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name					Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %
0	12				1		SM	Gray silty sand with shells	28								
5	7	11			2		CL	Dark gray sandy clay with silt	32								57
5	7	21			3		SM	Gray silty sand with trace organic matter and shells (firm) (organic content = 1.8%)									
7	0	8			4			No sample recovered									
10	9	0.0			5		CL	Gray clay with silt and shell fragments (very soft)	48	74.7	0.14	5	15				
15	11	2.0			6		CH	Gray and tan clay with ferrous nodules and shells (specific gravity from consol = 2.679)	32	104.4				52	36		
20	12	2.25			7			Light gray and tan clay with calcareous nodules, ferrous nodules, and shells (medium)	27	96.5	0.88	7.6	15	60	41		
25	7	3.5			8			Light gray and tan clay with shells									
30	10	3.0			9			Tan and light gray clay with ferrous nodules and shells (soft)	43	77.9	0.45	11.6	7				
35	15	3.0			10			Light gray clay with calcareous nodules, ferrous nodules, and shells (medium)	35	87.8	0.53	15.6	15				

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on DEM.
*Indicates a remold was used for strength testing.


Log of Boring B-10



Project: Lake Pontchartrain Shoreline Protection Continuation
Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
Project Number: 18572-001-01

Date: 1/22/20 Print: 1/23/2011 10:01 AM Path: \\G:\Projects\18572-001-01\GINT\18572001-01\DELIVERY\Library\GEOENGINEERS_DESKTOP\2017\GIB\GIBS_GEO TECH_LAB_MUDLINE

D:\proj\122\210\Part9-18\118572001\GINT\18572001\GIP\DelLibrary\Library\5E01\GHEERS_DP STD.dwg JUN 12 2017 10:46:08 AM GEOTECH_CAD_MJ.DWG

Elevation (feet)	FIELD DATA						LABORATORY DATA												
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
35			3	2.75		11				Gray clay with shells									
40																			

Log of Boring B-10 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Figure A-2
 Sheet 2 of 2

Start Drilled	7/24/2019	End	7/24/2019	Total Depth (ft)	50	Logged By	HJF	Checked By	JEA	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) Vertical Datum	-1.29 NAVD88		Hammer Data	Automatic Hammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Air Boat-Mounted Drill Rig						
Latitude	30.34061		System Datum	Geographic NAD83 (feet)		Depth of water to mudline at time of exploration (ft)	2.8						

Notes: Cement-bentonite grout full depth.

FIELD DATA							LABORATORY DATA														
Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)		
0		6	2	1					ML	Brown silt with clay and shells (very loose)											
5		14	15	2						Dark gray and brown silt (firm)	25					NP	NP				
		10	28	3						Gray silt (firm)											
		14	10	4					CL-ML	Gray clayey silt (firm)											
10		24	0.75	5					CH	Dark gray clay with silt pockets, shell fragments, and trace sand (specific gravity from consol = 2.634)	82	51				80	54				
15		24	0.75	6						Dark gray clay with sand pockets and shells (very soft)	72	57.5	0.24	5.6	10						
20		16	0.25	7						Gray clay with sand pockets (very soft)	43	80.5	0.24	7.6	15						
25		24	2.25	8						Tan and gray clay with silt lenses											
30		20	3.5	9						Gray and tan clay with silt seams, calcareous nodules, and ferrous nodules (stiff)	41	82.3	1.11	11.6	4						
35		6	3.75	10						Tan and light gray clay											

Note: See Figure A-1 for explanation of symbols. Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on DEM. *Indicates a remold was used for strength testing.

Log of Boring B-11



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Figure A-3
 Sheet 1 of 2

Date: 1/22/20 File: P:\18\18572\001\GINT\18572000\18572000\18572000\GEOENGINEERS_DEF_STD_US_JUNE_2017\GIB\GIBS_GEO TECH_LAB_MUDLINE

Date: 11/22/20 PM: 1:51:18 | 18572001 | GINT | 18572001 | GP | DBLibrary/Library/GEENGINEERS_DF_STD_US_JUNE_2017.dbl | GBR_GEDTECH_LAB_MUDLINE

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA										
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %
35																		
38	38	15	2.0		11				Tan and light gray clay with ferrous nodules (medium)	50	70	0.66	15.6	2				
42	42	24	2.25		12				Tan and light gray clay with shells									
48	48	7	1.0		13				Gray clay with ferrous nodules and organic matter layer (medium)	51	68.8	0.52	19.6	2				
50																		

Log of Boring B-11 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Figure A-3
 Sheet 2 of 2

Start Drilled	7/24/2019	End	7/24/2019	Total Depth (ft)	45	Logged By	HJF	Checked By	JEA	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft)	-1.01	Vertical Datum	NAVD88	Hammer Data	Automatic Hammer	140 (lbs) / 30 (in) Drop		Drilling Equipment	Air Boat-Mounted Drill Rig				
Latitude	30.34553			System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	2.5				
Longitude	-90.26433												

Notes: Cement-bentonite grout full depth.

Elevation (feet)	FIELD DATA						Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA								
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name					Water Content, %	Dry Density, (pcf)	Shear Strength, (ksf)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minimum Shear Strength (ksf)
0	10		3		1		CL-ML	Gray and brown clayey silt with organic matter (very loose)											
5	7		8		2		ML	Gray silt with 2-inch peat layer (loose)											
5	10		0.0		3		OL	Dark gray and brown organic silt with clay and fine sand pockets (very soft) (specific gravity from consol = 2.555)	54	66.3			44	17		0.07			
	12		0.0		4		PT	Black peat (very soft) (organic content = 35.5%)	238							0.10			
10	12		0.0		5		CH	Brown clay with organic matter (very soft)	120	39.5	0.09	5	12			0.13			
15	18		0.25		6			Brown and gray clay with silty sand lenses and organic matter (very soft)	84	52.4	0.23	5.6	5			0.14			
20		0						No sample recovered											
25		0						No sample recovered											
30	15		1.5		7		CL	Gray and tan clay with sand pockets and organic matter	32										
30	24		2.25		8			Gray and tan clay with sand (stiff)	21	108.2	1.75	12	15						
35	24		3.0		9			Gray and tan clay with sand											

Note: See Figure A-1 for explanation of symbols.
 Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on DEM.
 *Indicates a remold was used for strength testing.

Log of Boring B-12



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Figure A-4
 Sheet 1 of 2

Date: 11/22/2019 9:46:16 AM 1155730011\GINT\18572001\DP_1\BLL\pww\Library\GEOENGINEERS_DP_11D_US_JUNE_2017\GLB\GEIS_GEO TECH_LAB - MUDLINE

Date: 1/22/20 Path: P:\Users\GEO\18572001\GWT\18572001\GWT\US_JUNE_2017\G1B\G1B_GEDTECH_LAB_MUCLINE

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	LABORATORY DATA											
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample		Sample Name	Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %
35																		
38		9	3.5							19	110.6	2.6	15.6	15				
40					10													
43		10	33		11			SP										
45																		

Log of Boring B-12 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Start Drilled	7/25/2019	End	7/25/2019	Total Depth (ft)	45	Logged By	HJF	Checked By	JEA	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) Vertical Datum	-1.11 NAVD88			Hammer Data	Automatic Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Air Boat-Mounted Drill Rig				
Latitude	30.34999			System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	2.4				
Longitude	-90.25964												

Notes: Cement-bentonite grout full depth.

Elevation (feet)	FIELD DATA						Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA								
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name					Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
0	0	6	8		1			ML	Brown and gray silt with sand lenses and shell fragments (loose)	31									
5	5	5	10		2				Brown and gray silt with organic layer at bottom										
5	5	20	0.0		3			OH	Dark brown organic clay with silt and shell fragments (very soft)	72	58.3	0.09	5	15	63	24		0.01	
10	10	4	0.0		4				Dark brown organic clay with silt and shell fragments (organic content = 5.9%)	104									
10	10	10	0.0		5			PT	Brown peat (soft)	256									0.47
15	15	24	2.0		6			CH	Gray clay with silty clay layer, ferrous nodules, and shells (very soft)	54	69.4	0.16	5.6	10					
20	20	20	0.25		7				Gray clay with silt pockets and shell fragments (specific gravity from consol = 2.726)	99	44.1				109	80			
25	25	20	3.0		8				Light gray and tan clay with silt pockets, calcareous nodules, and ferrous nodules (stiff)	25	101.4	1.48	9.6	15					
30	30	17	3.5		9				Light gray and tan clay										
35	35	20	2.5		10				Tan and light gray clay with ferrous nodules (medium)	45	77	0.81	13.6	8					

Note: See Figure A-1 for explanation of symbols.
 Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on DEM.
 *Indicates a remold was used for strength testing.

Log of Boring B-13



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Borehole Log 200-Path 18572001-01.GPJ, C:\Library\Library\GEOENGINEERS\DF STD US JUNE 2017\GLB\GEIS\GEOTECH\LAB\MUDLINE

Date: 1/22/20 Path: S:\Projects\18572001\GRN\18572001\LOG\Library\GEOENGINEERS_DF_STD_US_JUNE_2017\GLE\08B_GEOTECH_LAB_MUDLINE

Elevation (feet)	FIELD DATA						LABORATORY DATA												
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minimum Shear Strength (KSF)
35																			
40	38.5 - 40.0	24	2.75			11			Tan and light gray clay										
45	43.5 - 45.0	22	3.0			12			Gray clay with trace organic matter (stiff)	38	83.6	1.13	17.6	11					

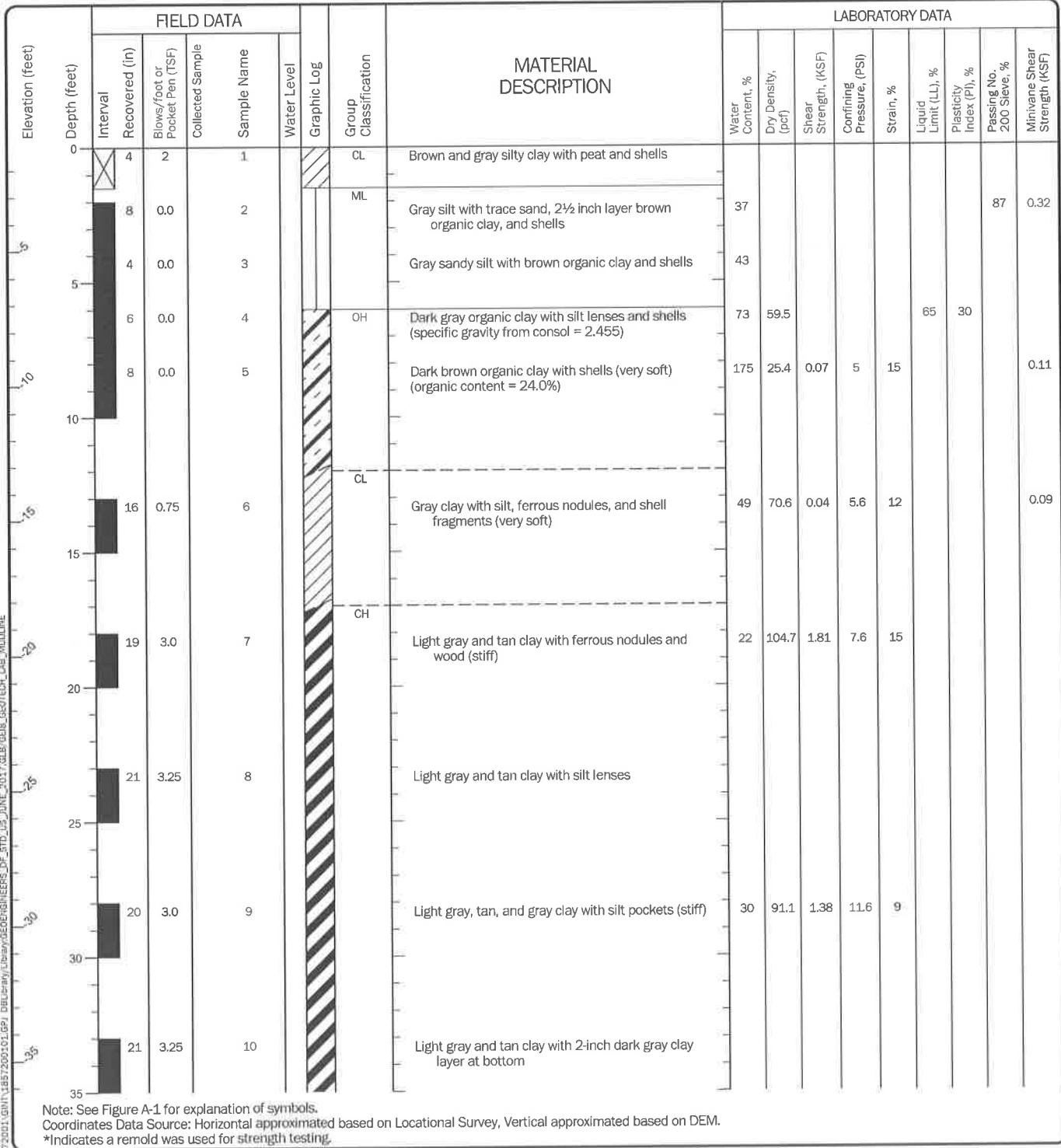
Log of Boring B-13 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Start Drilled	7/25/2019	End	7/25/2019	Total Depth (ft)	45	Logged By	HJF	Checked By	JEA	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) Vertical Datum	-1.17 NAVD88			Hammer Data	Automatic Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment Air Boat-Mounted Drill Rig					
Latitude	30.35456			System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)			2.5		

Notes: Cement-bentonite grout full depth.




Log of Boring B-14



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Figure A-6
Sheet 1 of 2

Date: 1/22/20 Plot: P:\18572001\GINT\18572001\01.DP1.DBL\m\GEOENGINEERS_DP_STD_US_JUNE_2017.GLB\QDB8_GEO TECH_LAB_INDU LINE

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA											
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
35																			
40	38.5 - 40.0	24	3.0		11					26	99.7	2.21	15.6	15					
45	43.5 - 45.0	20	1.5		12														

Log of Boring B-14 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Figure A-6
 Sheet 2 of 2

Start Drilled	7/26/2019	End	7/26/2019	Total Depth (ft)	50	Logged By	HJF	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft)	-1.06			Hammer Data	Automatic Hammer			Drilling Equipment			
Vertical Datum	NAVD88				140 (lbs) / 30 (in) Drop			Air Boat-Mounted Drill Rig			
Latitude	30.35856			System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)		2.5	
Longitude	-90.24927										
Notes: Cement-bentonite grout full depth.											

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA										
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %
0	10	0.0	1					OL	Gray organic silt with peat	33								0.02
	15	0.0	2						Gray organic silt with sand and wood	29								0.11
	18	0.0	3						Brown organic silt with peat layer	41	81.1	0.26	5	15	49	18		0.29
5	19	0.25	4					CH	Black clay with peat pockets (soft) (organic content = 19.8%)	64								0.37
	19	0.5	5						Dark gray clay with peat pockets (very soft)	95	47.2	0.16	5	10				0.21
10																		
	24	0.75	6						Light gray clay with sand pockets (specific gravity from consol = 2.680)	28	94.3				51	35		
15																		
	21	3.0	7						Light gray and tan clay with trace silt, calcareous nodules, and wood (medium)	29	94.1	0.86	7.6	15				
20																		
	20	3.25	8						Light gray and tan clay with wood (very stiff)									
25																		
	24	3.0	9						Light gray and tan clay with sand pockets and trace silt (stiff)	34	86.9	1.02	11.6	6				
30																		
	19	3.5	10						Light gray and tan clay (very stiff)									
35																		

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on DEM.
*Indicates a remold was used for strength testing.

Log of Boring B-15



Project: Lake Pontchartrain Shoreline Protection Continuation
Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
Project Number: 18572-001-01

Figure A-7
Sheet 1 of 2

Date: 1/22/20 Plot: 18572001-01-01 (P) DRILLING/ENGINEERS DE STD US JUNE 2017.GLB/GEOTECH LAB_MUDLINE

C:\Users\j22\20\p\proj\187\18572001-01\GNT\18572001-01\GEOENGINEERS_OF_STD_JUS_JUNE_2017\GLB\GEB_GEO TECH_LAB_MUDLINE

Elevation (feet)	FIELD DATA						MATERIAL DESCRIPTION	LABORATORY DATA										
	Depth (feet)	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %
45	42	24	2.75		11				Gray clay with trace organic matter (medium)	42	80.8	0.88	15.6	15				
45	45	23	3.0		12				Gray clay									
50	50	15	3.75		13				Light gray clay									

Log of Boring B-15 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Start Drilled	7/24/2019	End	7/24/2019	Total Depth (ft)	55	Logged By	HJF	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary
Surface Elevation (ft) Vertical Datum	-1.5 NAVD88			Hammer Data	Automatic Hammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Air Boat-Mounted Drill Rig		
Latitude	30.36254			System Datum	Geographic NAD83 (feet)			Depth of water to mudline at time of exploration (ft)	2.7		
Longitude	-90.24387										
Notes: Cement-bentonite grout full depth.											

Elevation (feet)	FIELD DATA						Group Classification	MATERIAL DESCRIPTION	LABORATORY DATA									
	Depth (feet)	Interval Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name	Water Level			Graphic Log	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %	Minivane Shear Strength (KSF)
0	18				1		ML	Gray sandy silt with shells and organic matter	27									
5	17	1.0			2			Gray sandy silt	28	101.5				NP	NP			
10	19	0.25			3		CH	Gray clay with trace organic matter, sand, and shells (very soft) (organic content = 2.5%)	52								0.17	
15	20	0.25			4		CL	Gray clay with silt, trace organic matter and shell fragments (very soft)	31	89.2	0.18	5	15					
20	10	0.5			5		CH	Dark gray clay with organic matter and shells (specific gravity from consol = 2.676)	67	57.2				89	59			
25	17	0.25			6			Dark gray clay with organic matter (very soft)	77	54.7	0.18	5.6	8					
30	24	3.0			7			Gray and tan clay										
35	12	3.0			8			Tan and light gray clay with silt pockets and ferrous nodules (stiff)	29	93.1	1.05	9.6	15					
40	10	3.25			9			Tan and light gray clay										
45	24	3.5			10			Tan and light gray clay with ferrous nodules (medium)	46	75.9	0.81	13.6	4					

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Local Survey, Vertical approximated based on DEM.
*Indicates a remold was used for strength testing.

Log of Boring B-16



Project: Lake Pontchartrain Shoreline Protection Continuation
Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
Project Number: 18572-001-01

Date: 1/22/20 Plot: B-16 18572001-01.GPJ (DBL/erby/Laura)GEOENGINEERS DE STD_US_JUNE_2017.GLB (GEB_GEDTECH_LAB_MUDLINE)

I:\area4\22\20 P\hob\18\18572001\GINT\145\700101.GPJ DELEBARY\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_GEDTECH_UAB_MUDLINE

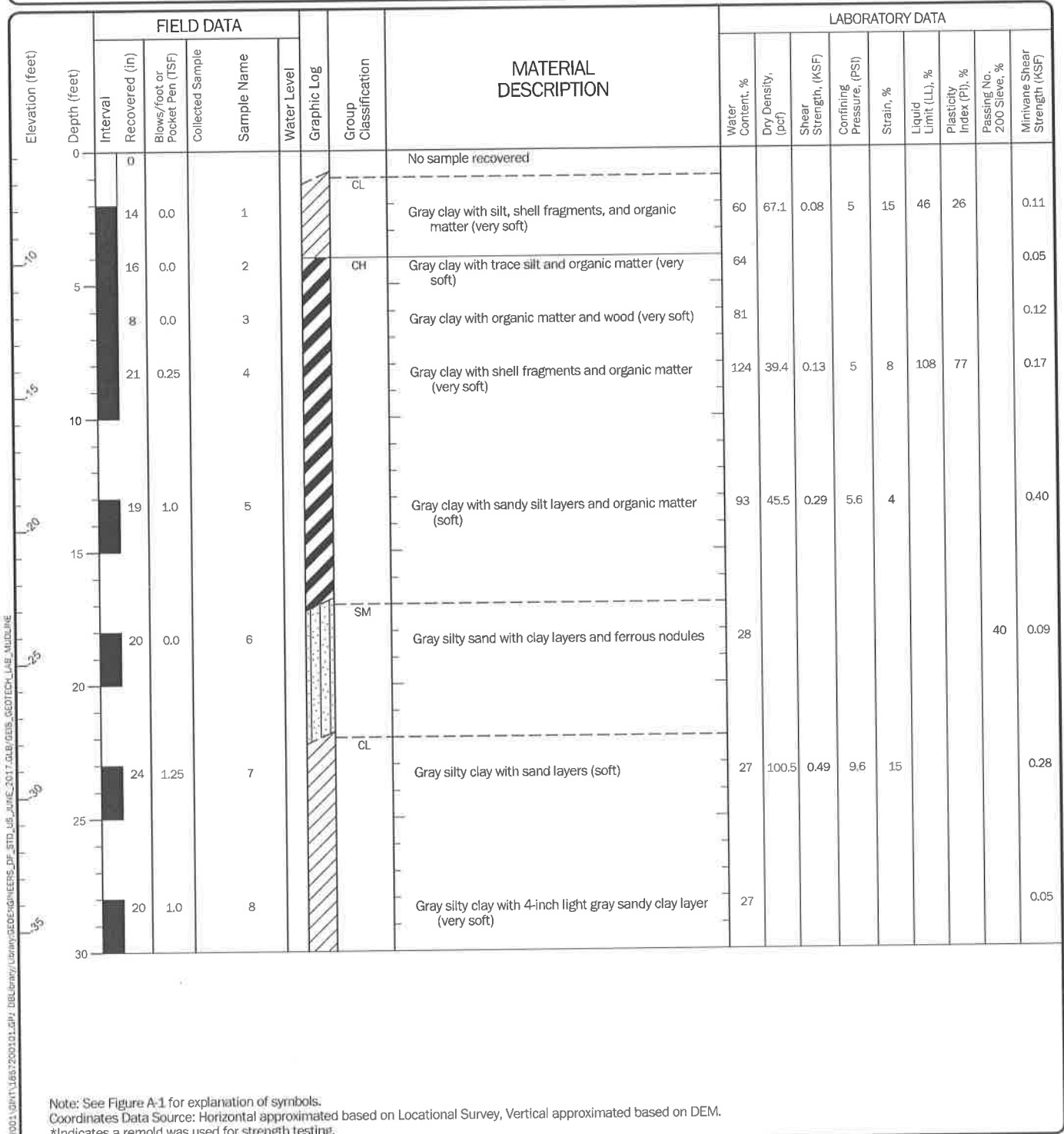
Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	LABORATORY DATA										
	Interval	Recovered (in)	Blows/foot or Pocket Pen (TSF)	Collected Sample	Sample Name		Water Level	Graphic Log	Group Classification	Water Content, %	Dry Density, (pcf)	Shear Strength, (KSF)	Confining Pressure, (PSI)	Strain, %	Liquid Limit (LL), %	Plasticity Index (PI), %	Passing No. 200 Sieve, %
35																	
38	20	3.25			11												
40																	
42	24	3.0			12				34	87.8	1.52	17.6	6				
45																	
48	24	2.75			13												
50																	
52	21	2.75			14												
55																	

Log of Boring B-16 (continued)



Project: Lake Pontchartrain Shoreline Protection Continuation
 Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
 Project Number: 18572-001-01

Start Drilled	7/22/2019	End	7/22/2019	Total Depth (ft)	30	Logged By	HJF	Driller	Specialized Environmental Resources, LLC	Drilling Method	Wet Rotary	
Surface Elevation (ft)	-5.81			Hammer Data	Automatic Hammer			Drilling Equipment				Air Boat-Mounted Drill Rig
Vertical Datum	NAVD88			Data			140 (lbs) / 30 (in) Drop			Depth of water to mudline at time of exploration (ft)		11.5
Latitude	30.30139			System Datum			Geographic NAD83 (feet)					
Longitude	-90.29836											
Notes: Cement-bentonite grout full depth.												



Log of Boring B-17



Project: Lake Pontchartrain Shoreline Protection Continuation
Project Location: Lake Pontchartrain, Tangipahoa Parish, Louisiana
Project Number: 18572-001-01

Figure A-9
Sheet 1 of 1

Date: 1/22/20 Path: \\L18118572001\GINT\UGB3200101.dwg DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.dwg/DEES_GDOT_ECHLAE_MUDLINE

APPENDIX B – USACE PERMIT



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS LOUISIANA 70118-3651

December 12, 2022

Regulatory Division
Eastern Evaluation Branch

SUBJECT: MVN 2011-00805 EMM

Tangipahoa Parish Government
206 E. Mulberry Street
Amite City, Louisiana 70422

Gentlemen:

Additional plans attached in 16 drawings furnished with your application dated April 25, 2022, covering the proposed modification to excavate and fill to install and maintain two offshore breakwaters in Lake Pontchartrain, in Tangipahoa Parish, Louisiana, are approved and will be included in your plans for the work authorized by the Secretary of the Army in a permit dated August 18, 2011 from the District Engineer at New Orleans, Louisiana. This new drawing set supersedes all previous authorized drawings. The permit is specifically extended to November 30, 2025.

The special conditions to which the work is made subject, excepting the time limit for completion, remain in full force and effect. This new drawing set supersedes all previous authorized drawings.

You must keep a copy of this approval letter and a copy of the original permit, including permit conditions and plans, at the project site until the work is completed.

Should you have any further questions concerning this matter, please call Scott Kennedy at (504) 862-2259.

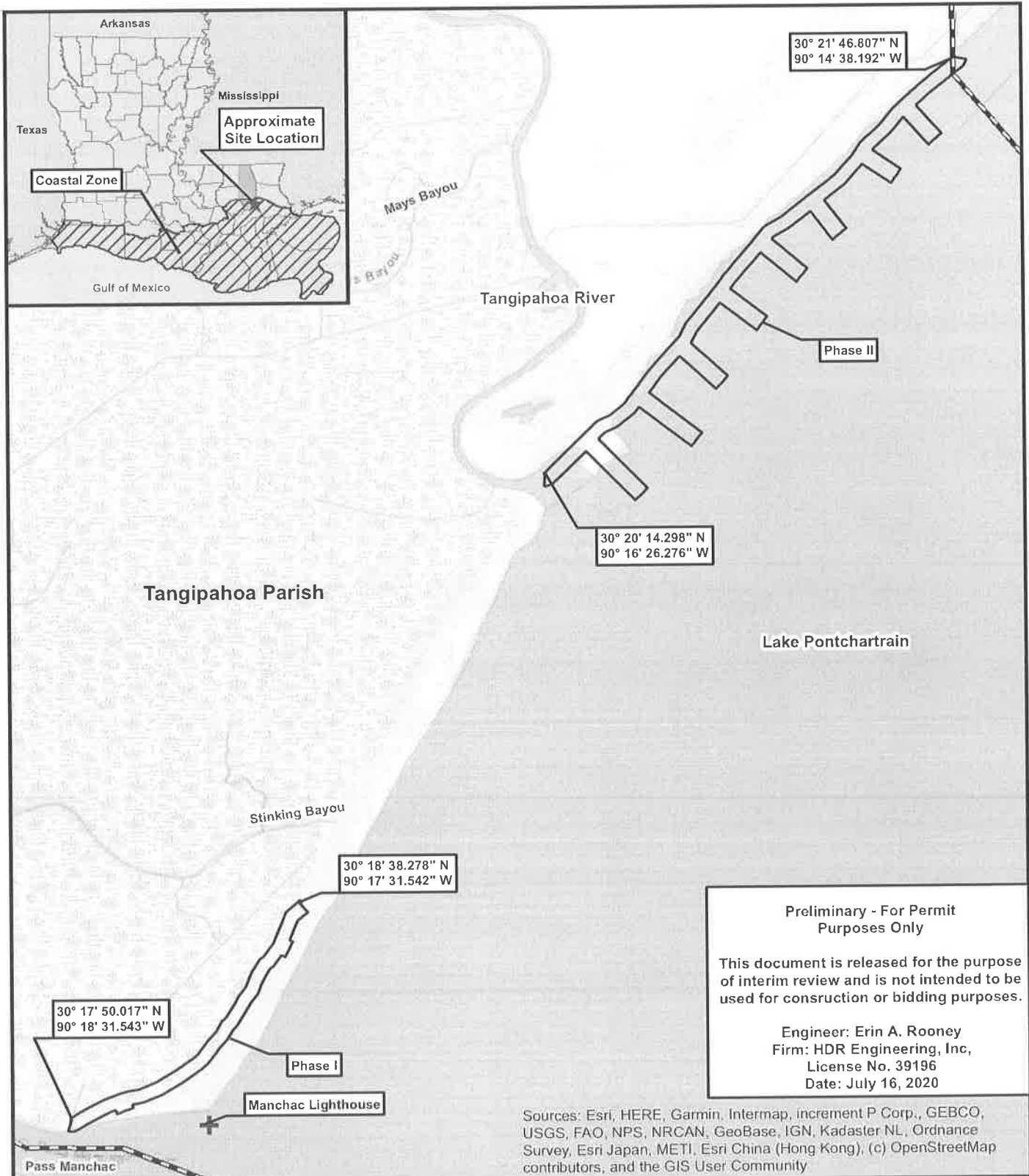
BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Martin
S. Mayer

Digitally signed by
Martin S. Mayer
Date: 2022.12.13
07:03:28 -06'00'

Martin S. Mayer
Chief, Regulatory Division
for
Cullen A. Jones
Colonel, U.S. Army
District Commander

Enclosure



0 2,200 4,400 Feet

Figure 1: TopoVicinity Map

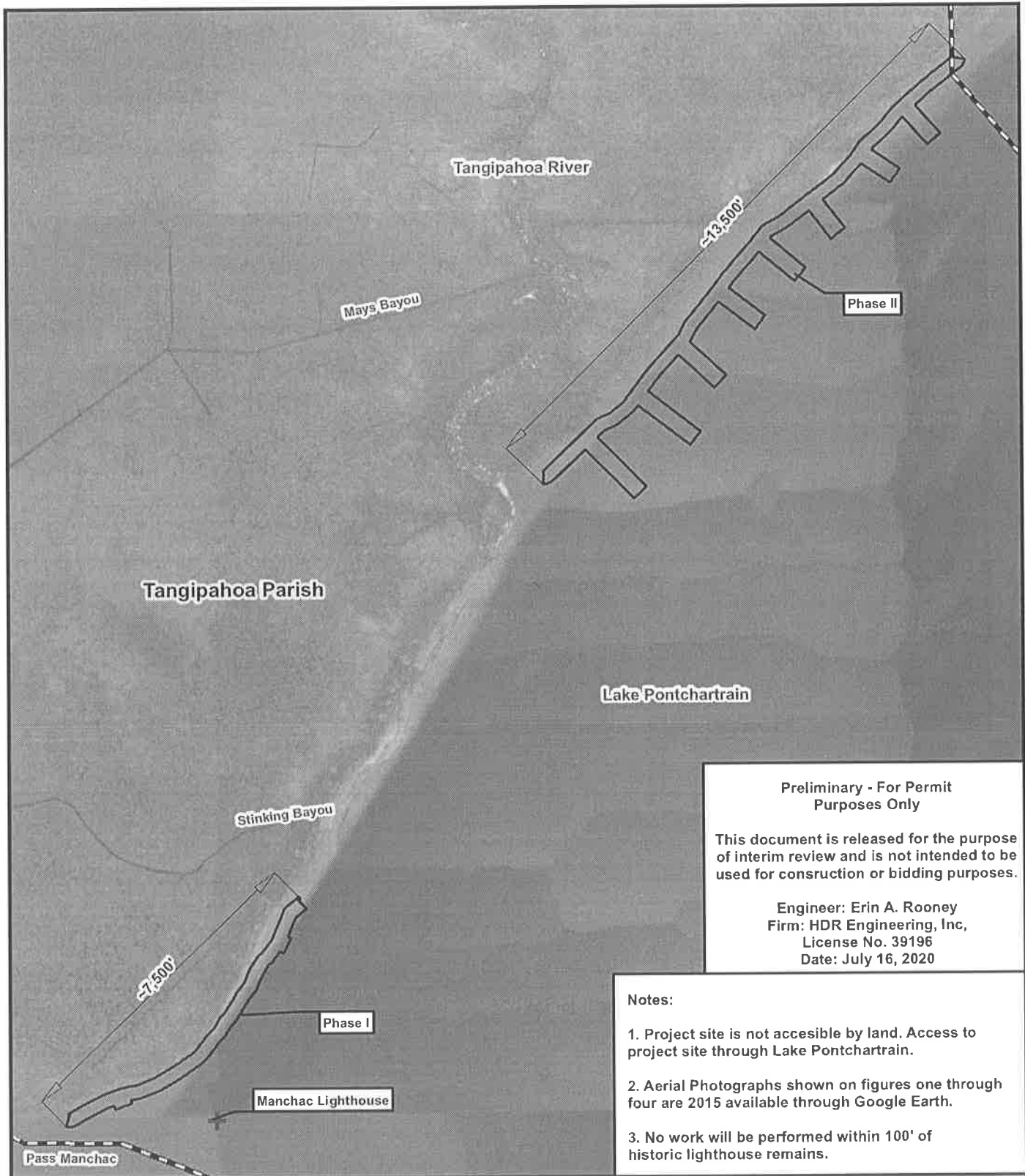
Lake Pontchartrain Shoreline Protection Project

Legend:

- Proposed Project Area
- Parish Boundary
- Stream/River
- Waterbody

Sections: 4, 33, 34, 37, 38
Township: 08 South, 09 South
Range: 09 East

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

- Notes:**
1. Project site is not accessible by land. Access to project site through Lake Pontchartrain.
 2. Aerial Photographs shown on figures one through four are 2015 available through Google Earth.
 3. No work will be performed within 100' of historic lighthouse remains.

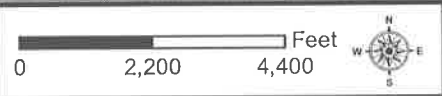


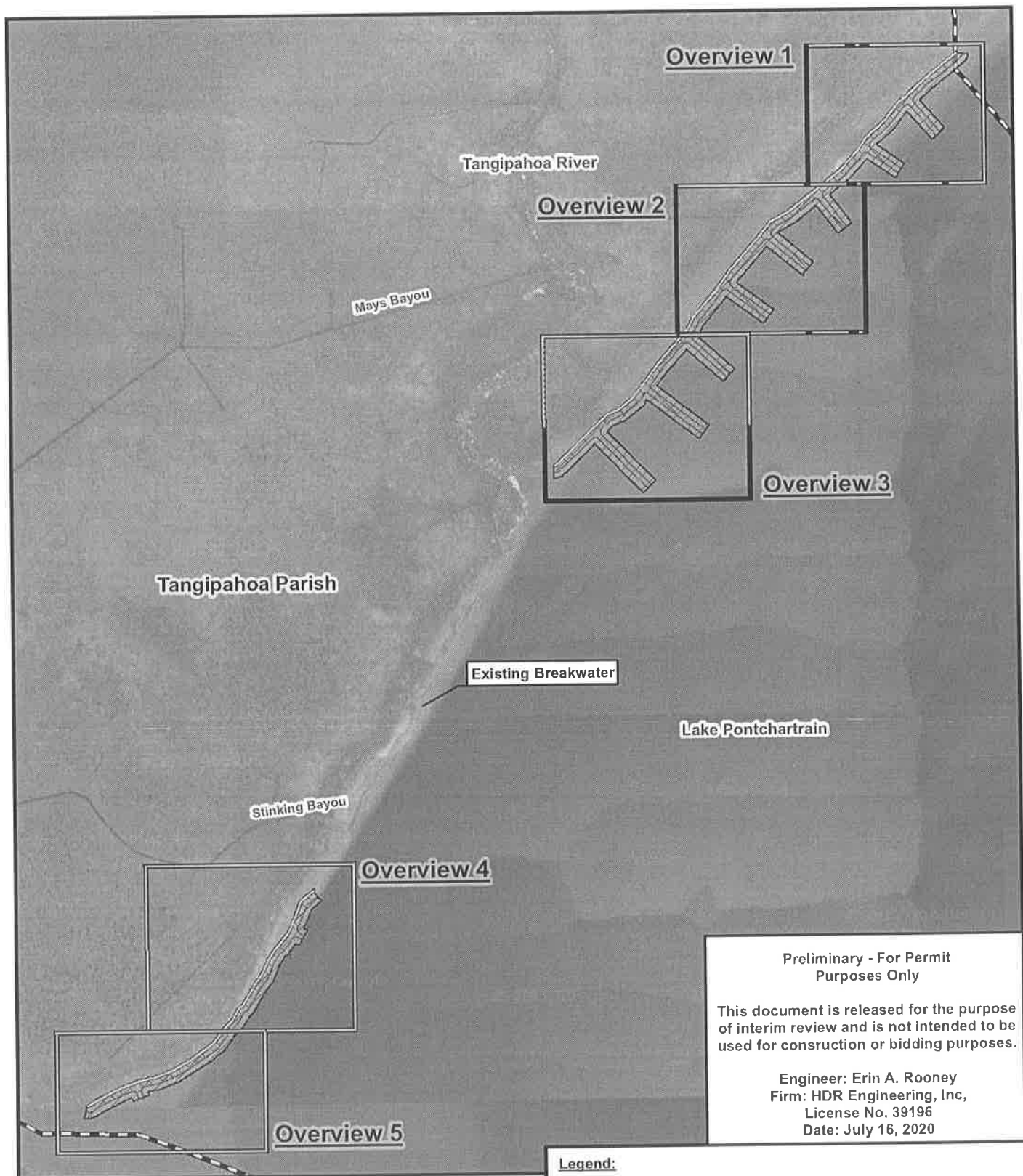
Figure 2: Existing Conditions

Lake Pontchartrain Shoreline Protection Project

Legend:

□ Proposed Project Area □ Parish Boundary

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

Legend:			
	Proposed Project Area		Matchline
	Breakwater		Temporary Flotation and Access Channels
	Centerline ~20,592'		Temp Stock Pile
	Parish Boundary		Breakwater Gap

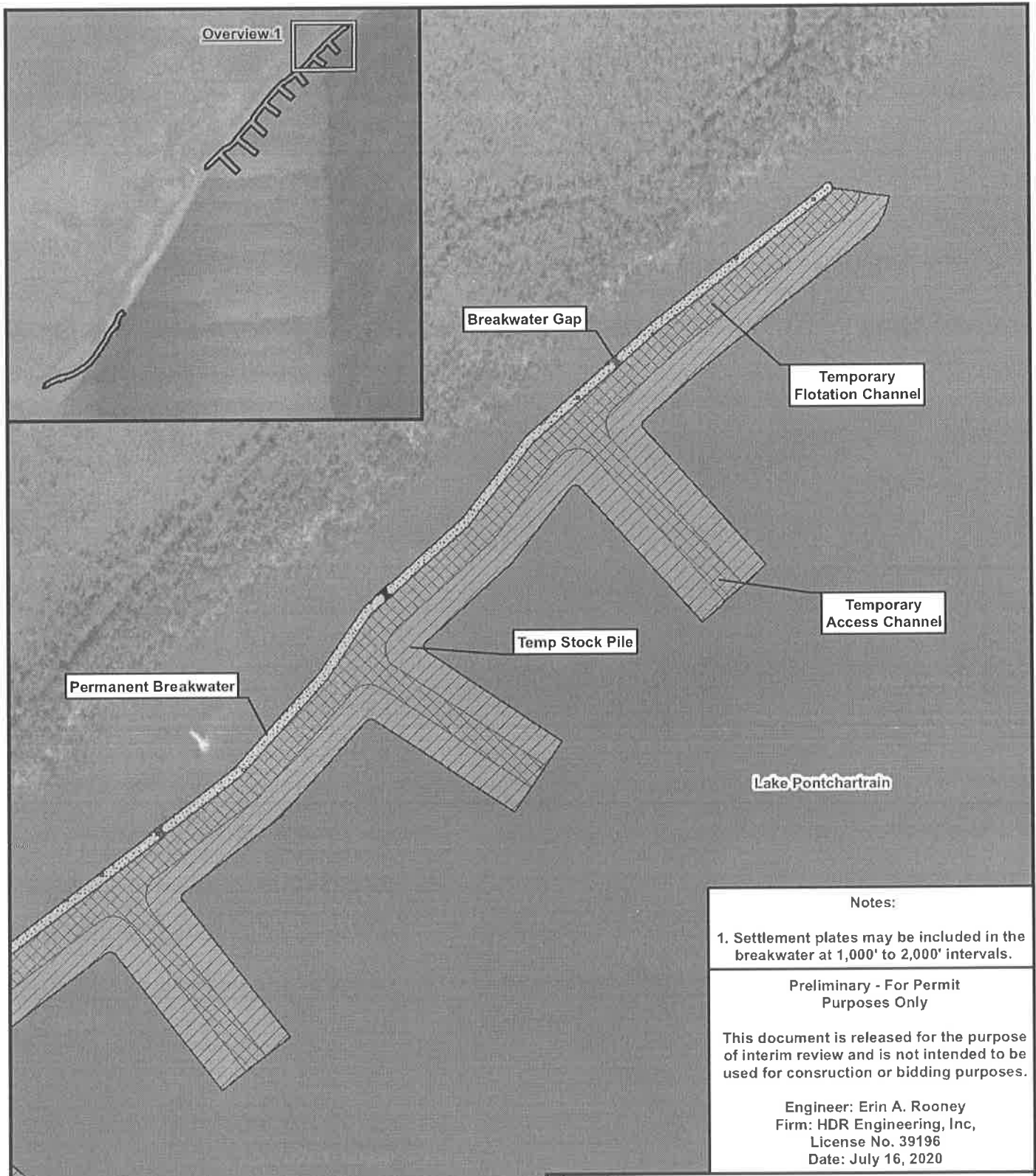


0 2,200 4,400 Feet

Figure 3: Plan View

Lake Pontchartrain Shoreline Protection Project

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Notes:

1. Settlement plates may be included in the breakwater at 1,000' to 2,000' intervals.

Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

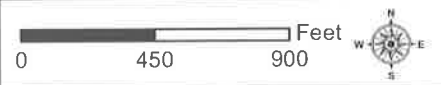


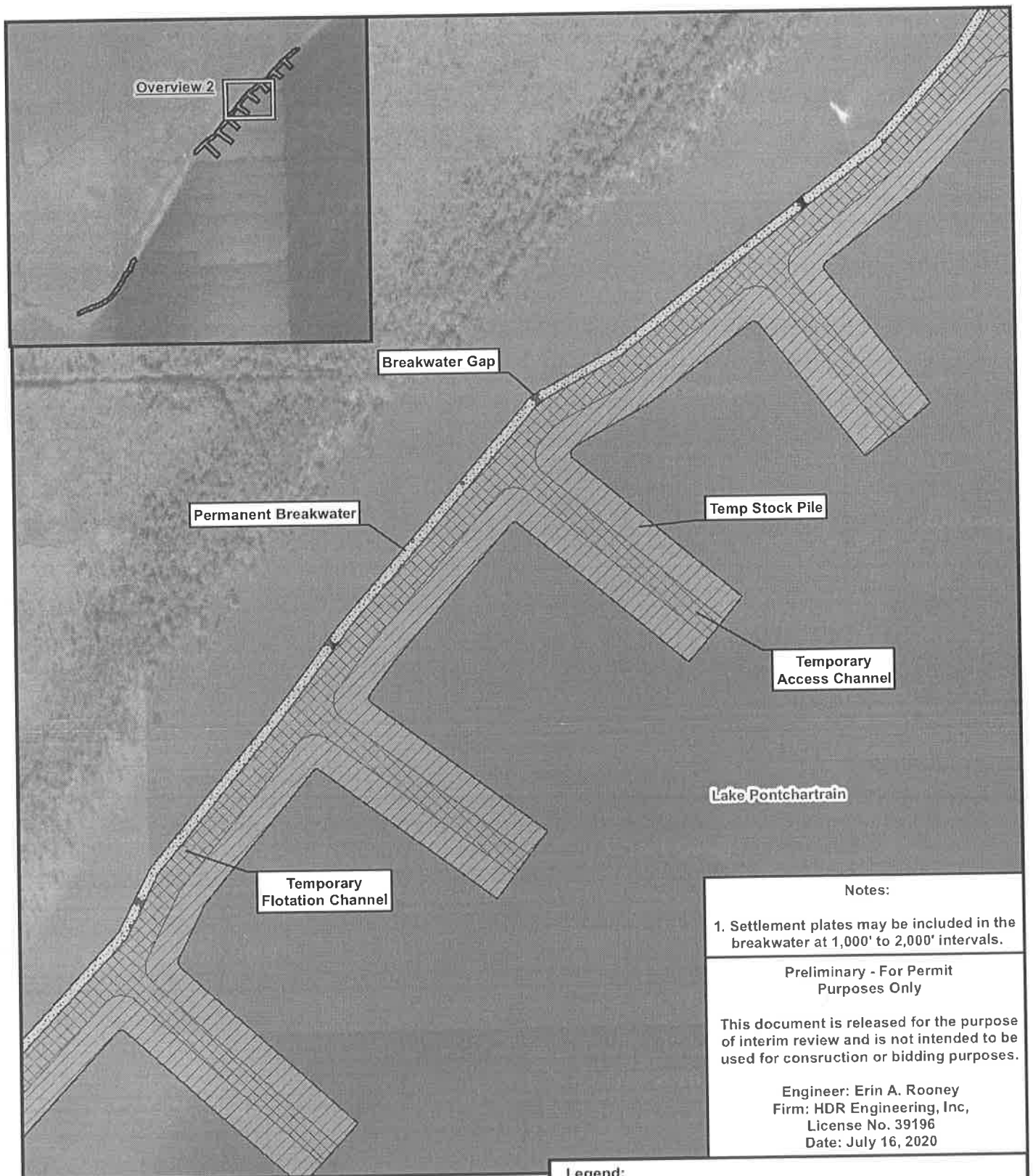
Figure 3.1: Plan View

Lake Pontchartrain Shoreline Protection Project

Legend:

Proposed Project Area	Temporary Flotation and Access Channel
Breakwater Gap	Temp Stock Pile
Permanent Breakwater	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Notes:

1. Settlement plates may be included in the breakwater at 1,000' to 2,000' intervals.

Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

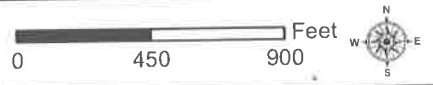


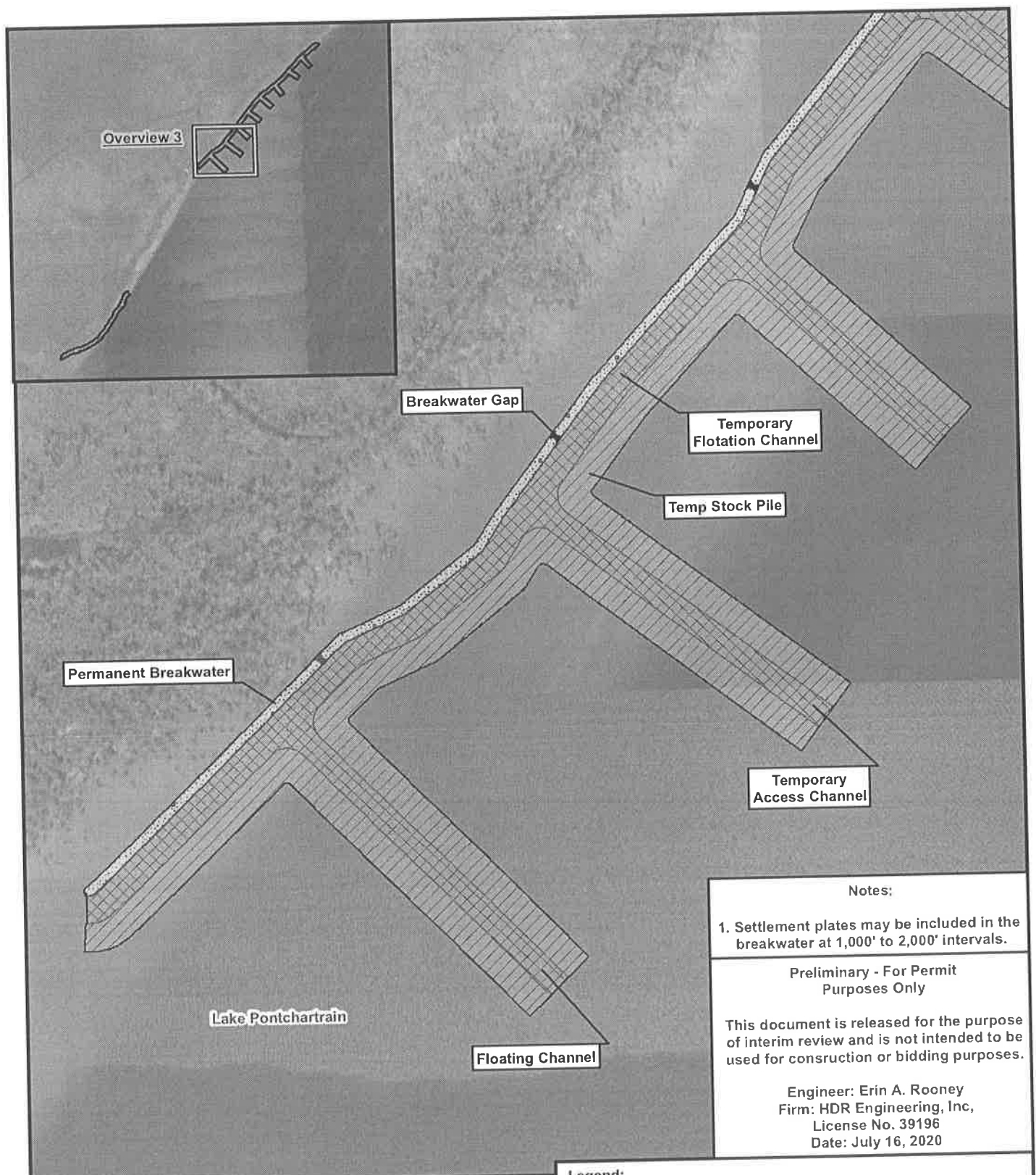
Figure 3.2: Plan View

Lake Pontchartrain Shoreline Protection Project

Legend:

Proposed Project Area	Temporary Flotation and Access Channel
Breakwater Gap	Temp Stock Pile
Permanent Breakwater	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Notes:

1. Settlement plates may be included in the breakwater at 1,000' to 2,000' intervals.

Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

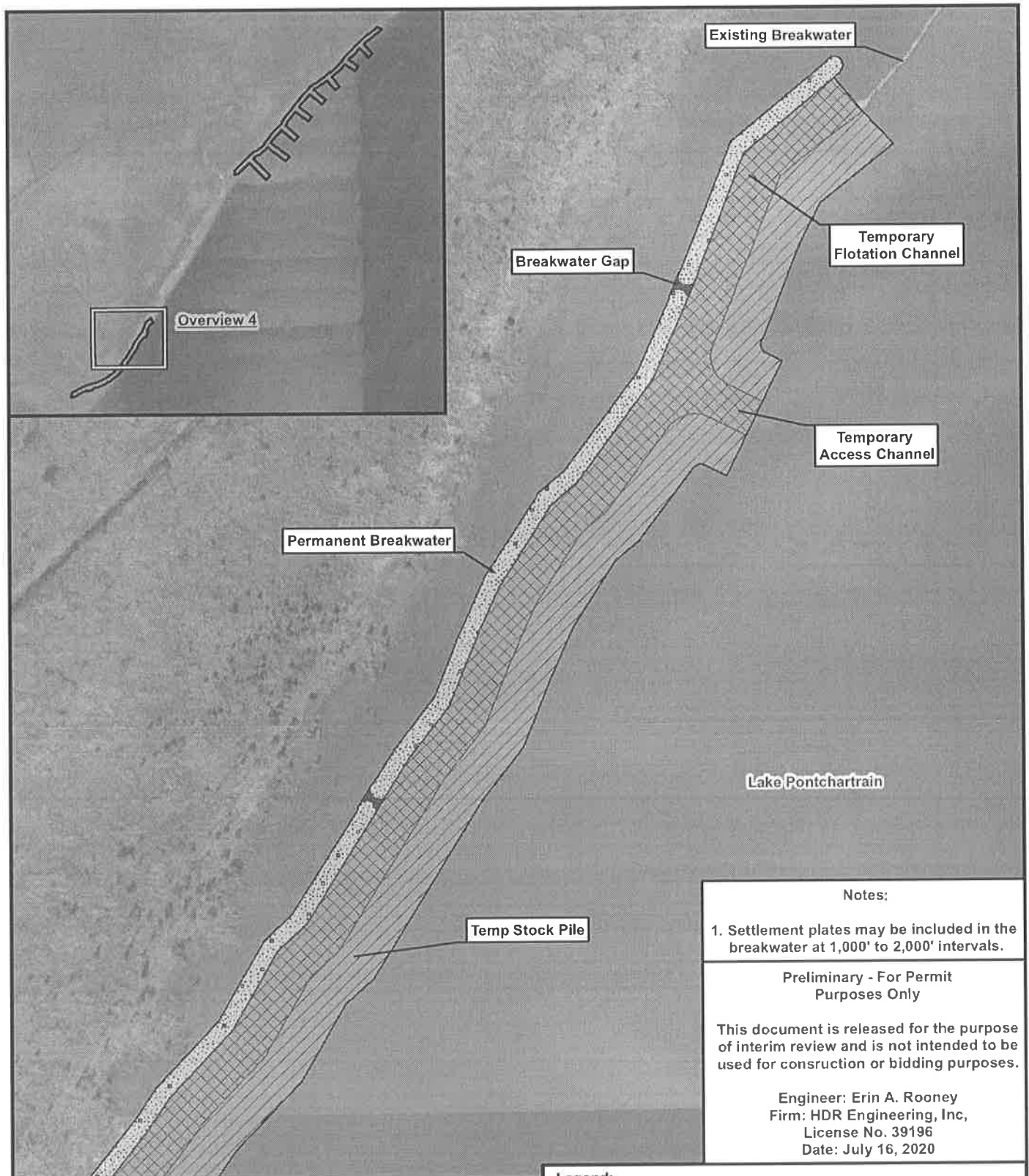


Figure 3.3: Plan View
Lake Pontchartrain Shoreline Protection Project

Legend:

Proposed Project Area	Temporary Flotation and Access Channel
Breakwater Gap	Temp Stock Pile
Permanent Breakwater	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Notes:

1. Settlement plates may be included in the breakwater at 1,000' to 2,000' intervals.

Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc.
 License No. 39196
 Date: July 16, 2020

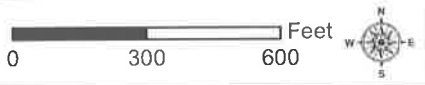


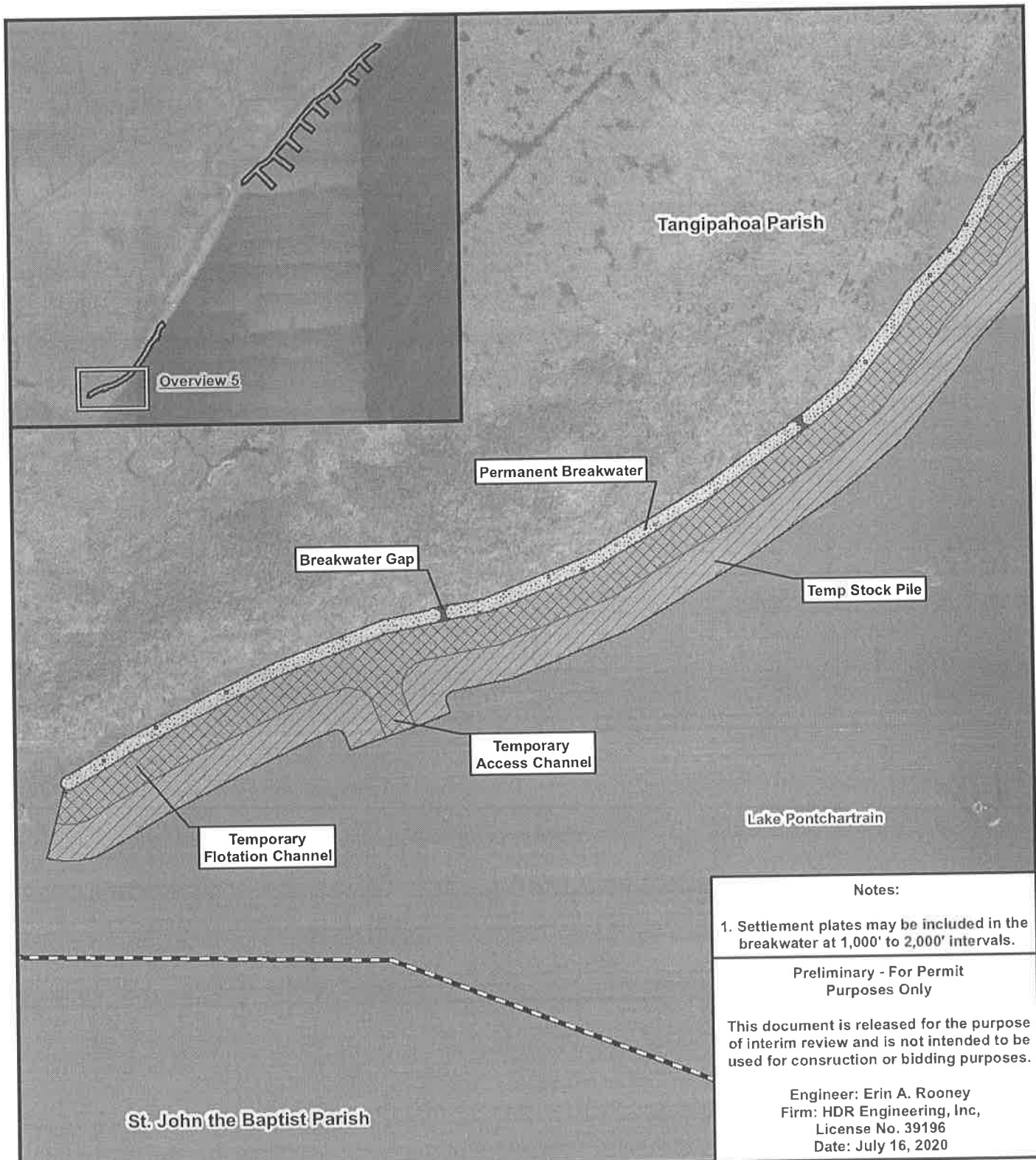
Figure 3.4: Plan View

Lake Pontchartrain Shoreline Protection Project

Legend:

Proposed Project Area	Temporary Flotation and Access Channel
Breakwater Gap	Temp Stock Pile
Permanent Breakwater	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Notes:

1. Settlement plates may be included in the breakwater at 1,000' to 2,000' intervals.

Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc.,
 License No. 39196
 Date: July 16, 2020

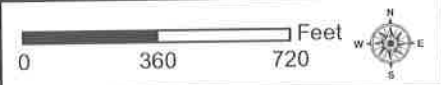


Figure 3.5: Plan View

Lake Pontchartrain Shoreline Protection Project

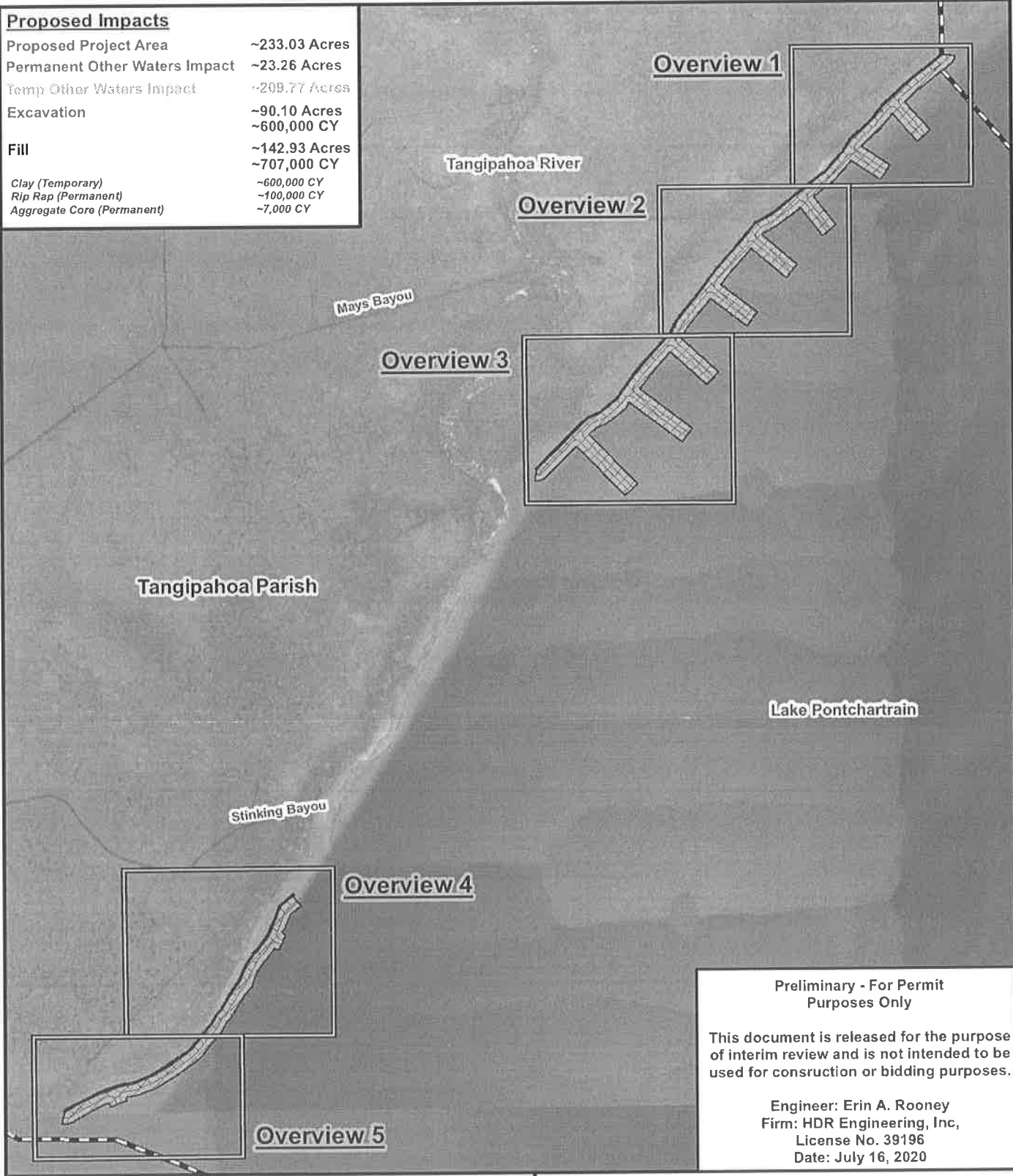
Legend:

Proposed Project Area	Temporary Flotation and Access Channel
Parish Boundary	Temp Stock Pile
Permanent Breakwater	Breakwater Gap

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

Proposed Impacts

Proposed Project Area	~233.03 Acres
Permanent Other Waters Impact	~23.26 Acres
Temp Other Waters Impact	~209.77 Acres
Excavation	~90.10 Acres ~600,000 CY
Fill	~142.93 Acres ~707,000 CY
Clay (Temporary)	~600,000 CY
Rip Rap (Permanent)	~100,000 CY
Aggregate Core (Permanent)	~7,000 CY



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

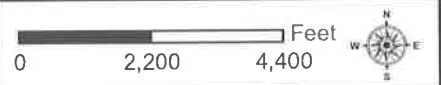


Figure 4: Proposed Impacts

Lake Pontchartrain Shoreline Protection Project

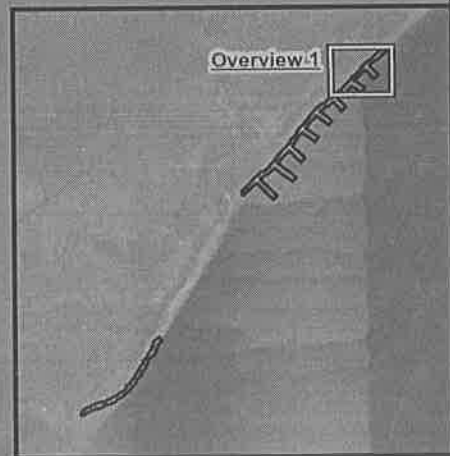
Legend:

Proposed Project Area	Fill Area
Parish Boundary	Excavation/Fill Area
Other Water Impacts	
Temp Other Water Impacts	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

Proposed Impacts

Proposed Project Area	~233.03 Acres
Permanent Other Waters Impact	~23.26 Acres
Temp Other Waters Impact	~209.77 Acres
Excavation	~90.10 Acres ~600,000 CY
Fill	~142.93 Acres ~707,000 CY
Clay (Temporary)	~600,000 CY
Rip Rap (Permanent)	~100,000 CY
Aggregate Core (Permanent)	~7,000 CY



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc.
 License No. 39196
 Date: July 16, 2020

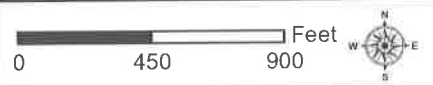


Figure 4.1: Proposed Impacts

Lake Pontchartrain Shoreline Protection Project

Legend:

Proposed Project Area	Fill Area
Other Water Impacts	Excavation/Fill Area
Temp Other Water Impacts	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

Proposed Impacts

Proposed Project Area	~233.03 Acres
Permanent Other Waters Impact	~23.26 Acres
Temp Other Waters Impact	~205.77 Acres
Excavation	~90.10 Acres ~600,000 CY
Fill	~142.93 Acres ~707,000 CY
Clay (Temporary)	~600,000 CY
Rip Rap (Permanent)	~100,000 CY
Aggregate Core (Permanent)	~7,000 CY



Lake Pontchartrain



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
Firm: HDR Engineering, Inc.,
License No. 39196
Date: July 16, 2020

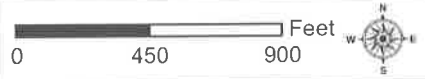


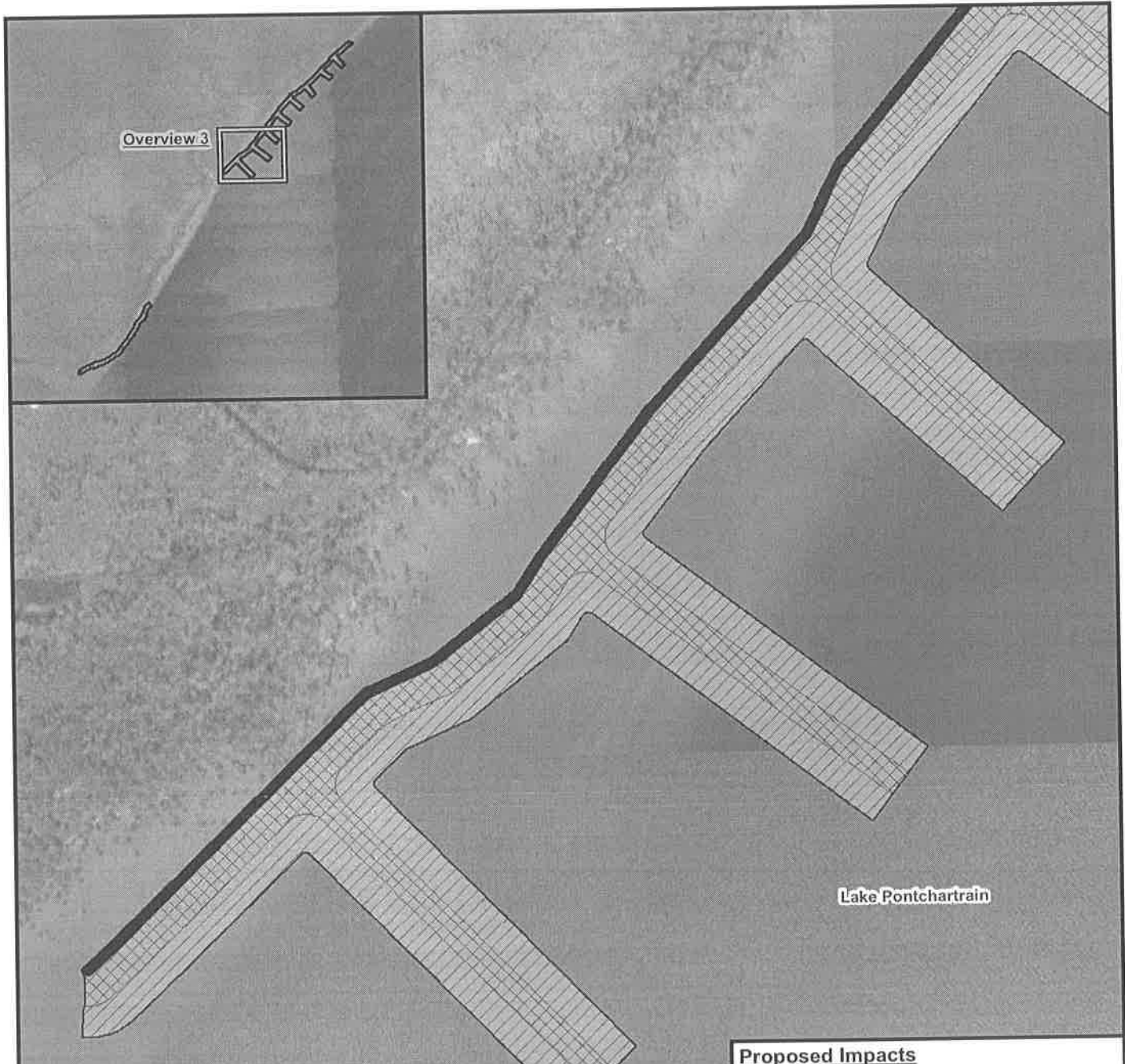
Figure 4.2: Proposed Impacts

Lake Pontchartrain Shoreline Protection Project

Legend:

- Proposed Project Area
- Other Water Impacts
- Temp Other Water Impacts
- Fill Area
- Excavation/Fill Area

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.



Lake Pontchartrain

Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc,
 License No. 39196
 Date: July 16, 2020

Proposed Impacts

Proposed Project Area	~233.03 Acres
Permanent Other Waters Impact	~23.26 Acres
Temp Other Waters Impact	~209.77 Acres
Excavation	~90.10 Acres ~600,000 CY
Fill	~142.93 Acres ~707,000 CY
Clay (Temporary)	~600,000 CY
Rip Rap (Permanent)	~100,000 CY
Aggregate Core (Permanent)	~7,000 CY



Legend:

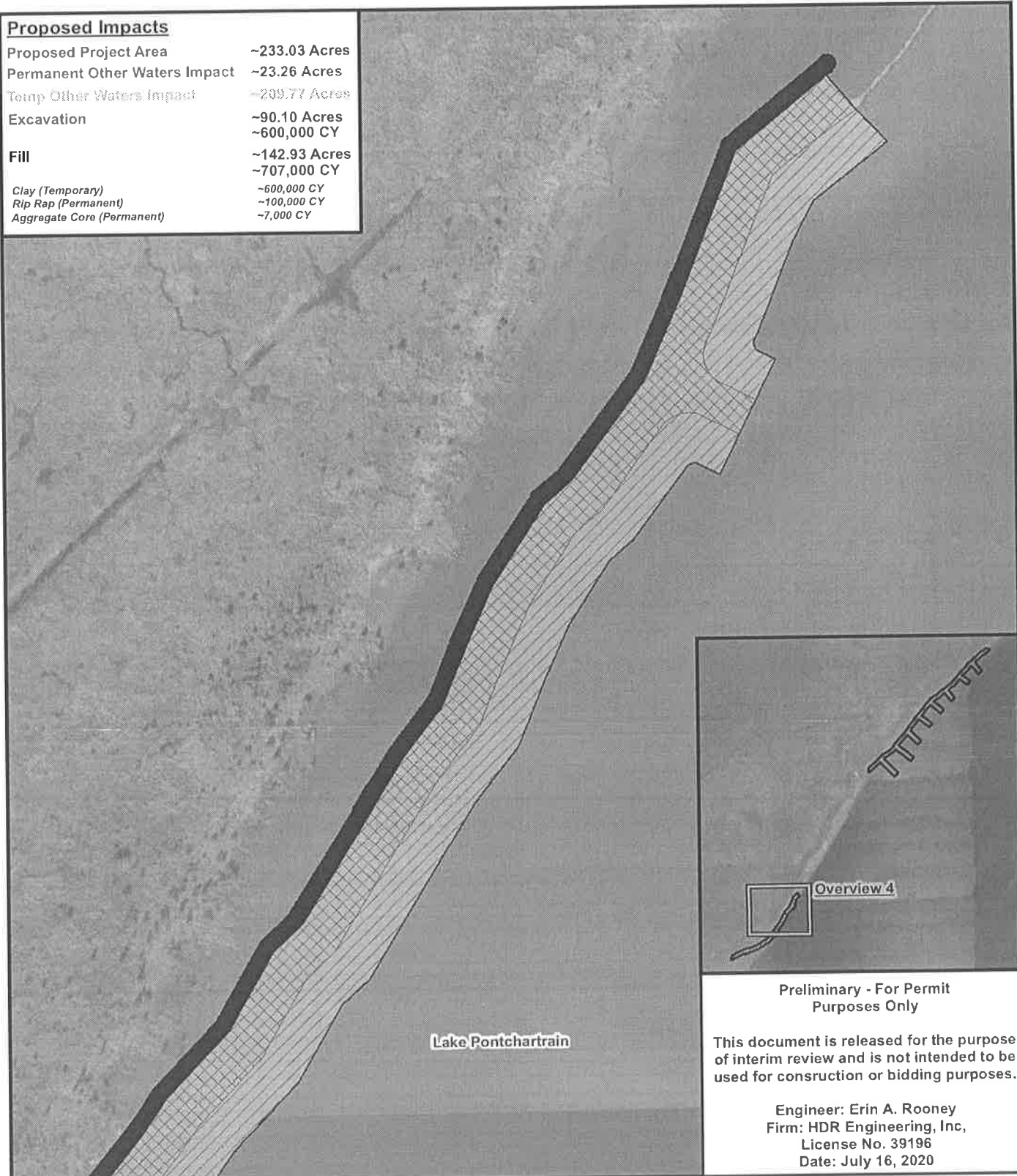
Proposed Project Area	Fill Area
Other Water Impacts	Excavation/Fill Area
Temp Other Water Impacts	

Figure 4.3: Proposed Impacts
 Lake Pontchartrain Shoreline Protection Project

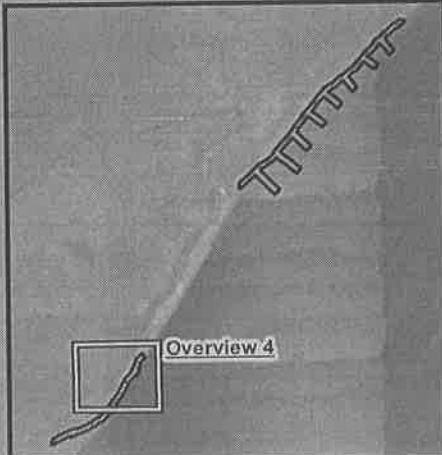
This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

Proposed Impacts

Proposed Project Area	~233.03 Acres
Permanent Other Waters Impact	~23.26 Acres
Temp Other Waters Impact	~239.77 Acres
Excavation	~90.10 Acres ~600,000 CY
Fill	~142.93 Acres ~707,000 CY
Clay (Temporary)	~600,000 CY
Rip Rap (Permanent)	~100,000 CY
Aggregate Core (Permanent)	~7,000 CY



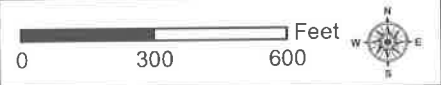
Lake Pontchartrain



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
Firm: HDR Engineering, Inc.,
License No. 39196
Date: July 16, 2020



Legend:

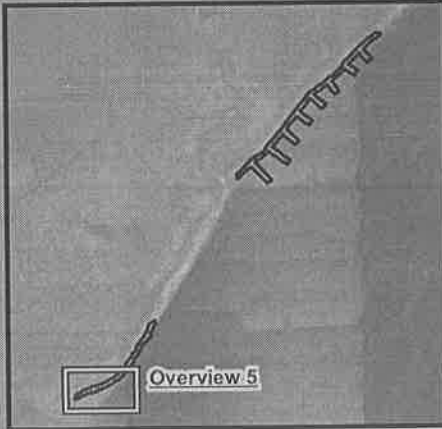
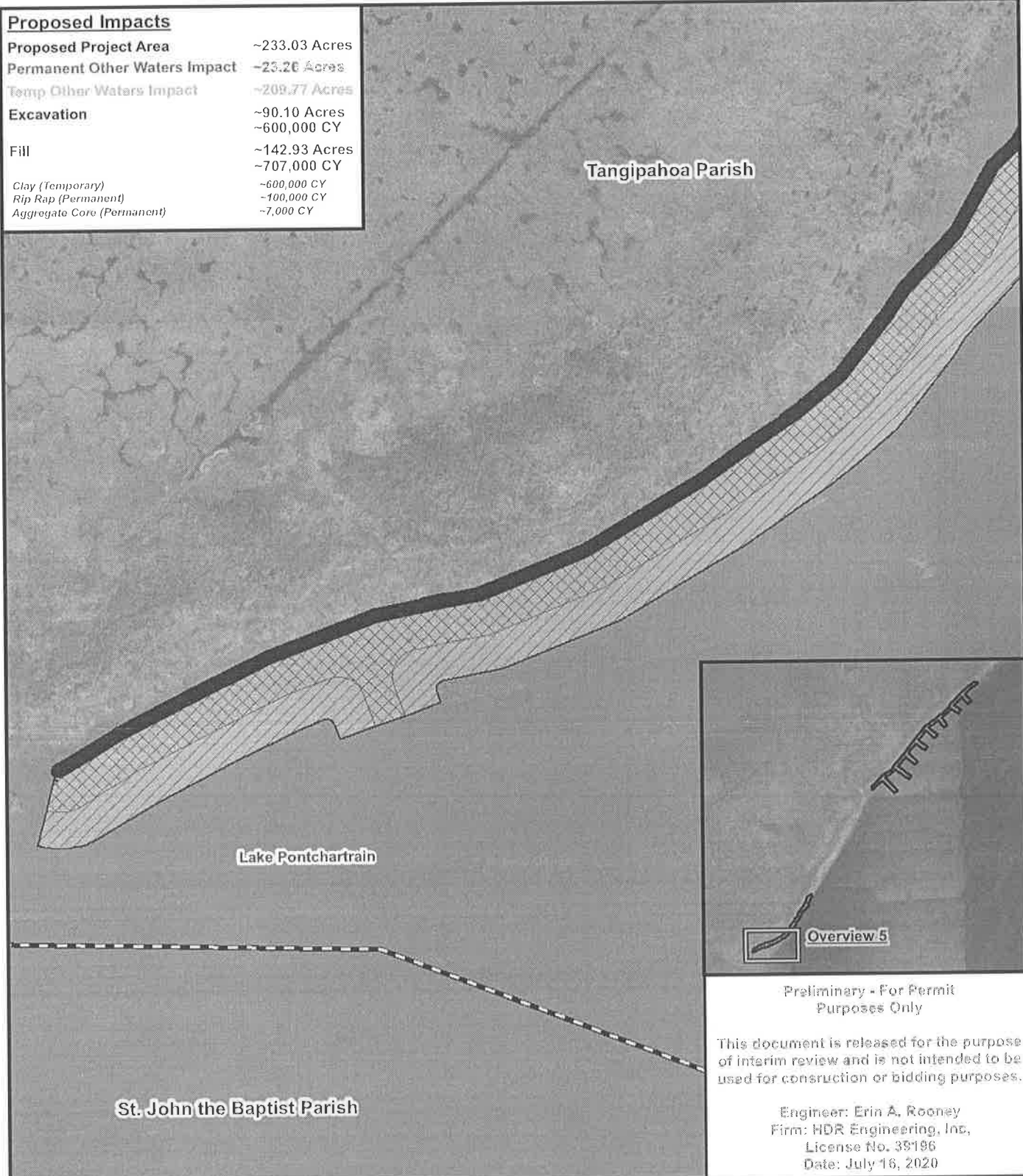
Proposed Project Area	Fill Area
Other Water Impacts	Excavation/Fill Area
Temp Other Water Impacts	

Figure 4.4: Proposed Impacts
Lake Pontchartrain Shoreline Protection Project

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

Proposed Impacts

Proposed Project Area	~233.03 Acres
Permanent Other Waters Impact	~23.26 Acres
Temp Other Waters Impact	~209.77 Acres
Excavation	~90.10 Acres ~600,000 CY
Fill	~142.93 Acres ~707,000 CY
<i>Clay (Temporary)</i>	~600,000 CY
<i>Rip Rap (Permanent)</i>	~100,000 CY
<i>Aggregate Core (Permanent)</i>	~7,000 CY



Preliminary - For Permit Purposes Only

This document is released for the purpose of interim review and is not intended to be used for construction or bidding purposes.

Engineer: Erin A. Rooney
 Firm: HDR Engineering, Inc.
 License No. 38196
 Date: July 16, 2020



Figure 4.5: Proposed Impacts

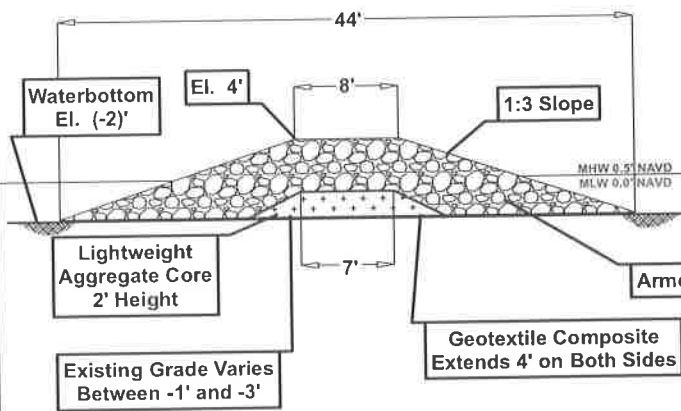
Lake Pontchartrain Shoreline Protection Project

Legend:

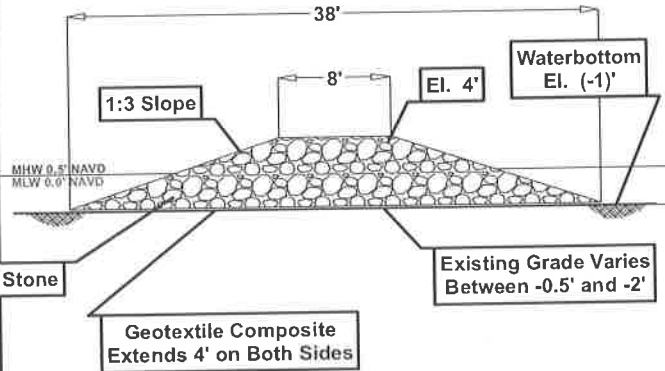
Proposed Project Area	Fill Area
Parish Boundary	Excavation/Fill Area
Other Water Impacts	
Temp Other Water Impacts	

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

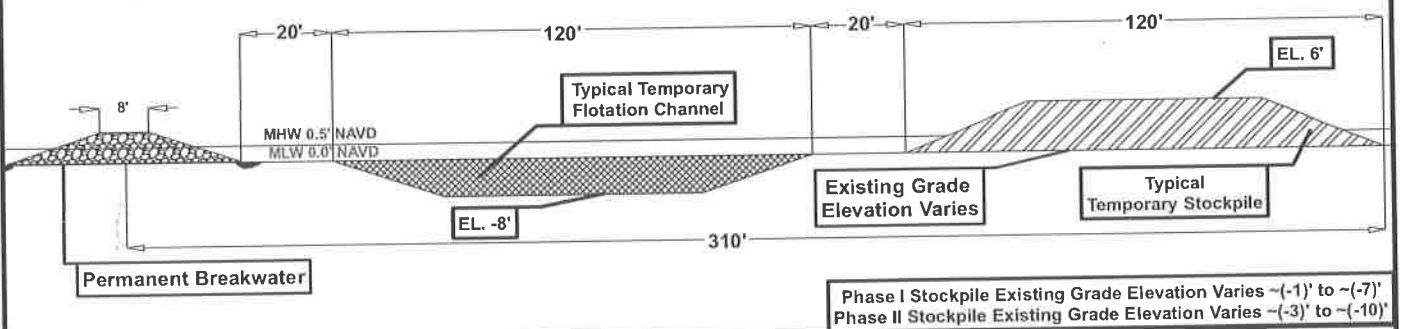
Phase I Breakwater Typical Section



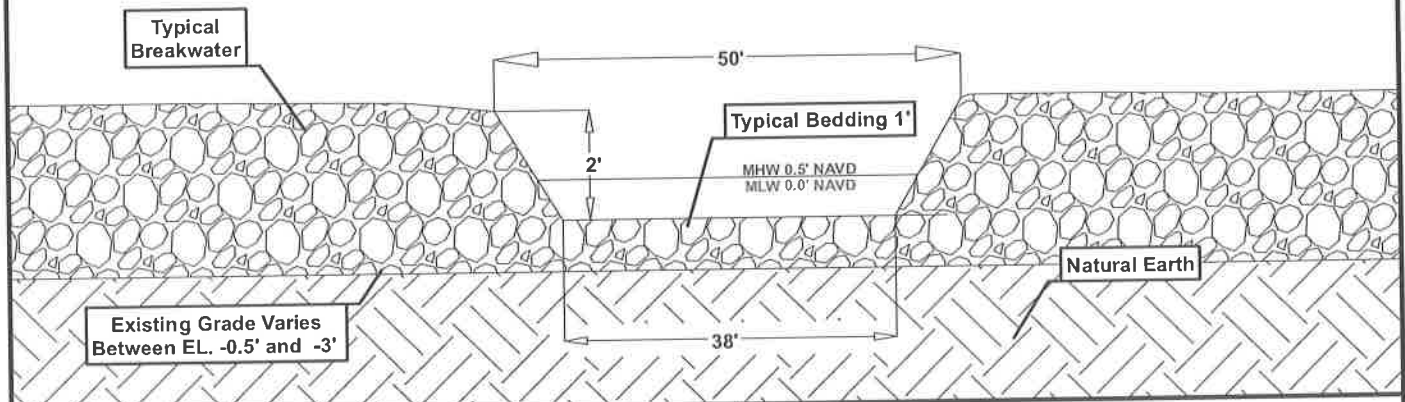
Phase II Breakwater Typical Section



Typical Temporary Flotation Channel and Stockpile Section



Typical Breakwater Gap Section



Scale = Not to Scale

Figure 5: Typical Section

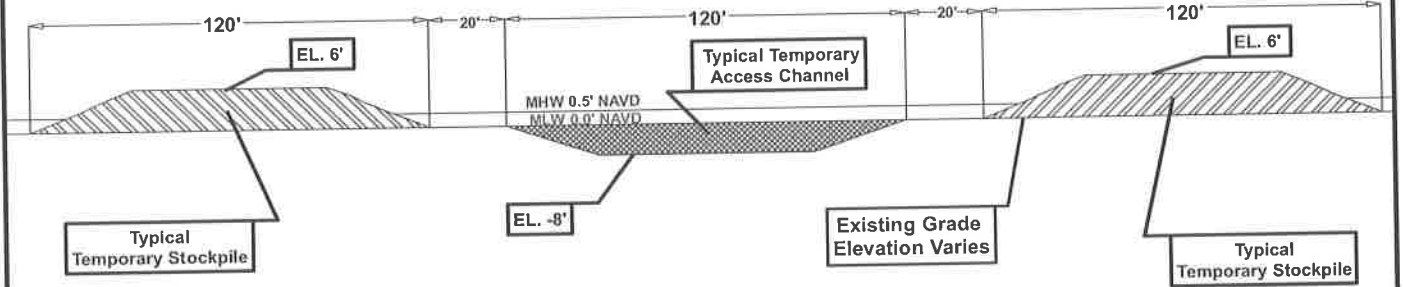
Lake Pontchartrain Shoreline Protection Project

Notes:

1. Temporary and Permanent warning signs and lighted daybeacons will be included as required by the U.S. Coast Guard.
2. Elevations represented in NAVD88

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

Typical Access Chanel and Stockpile Section



Phase I Stockpile Existing Grade Elevation Varies $\sim(-1)$ ' to $\sim(-7)$ '
 Phase II Stockpile Existing Grade Elevation Varies $\sim(-3)$ ' to $\sim(-10)$ '



Scale = Not to Scale

Figure 6: Typical Access Chanel and Stockpile Section

Lake Pontchartrain Shoreline Protection Project

Notes:

1. Temporary and Permanent warning signs and lighted daybeacons will be included as required by the U.S. Coast Guard.

2. Elevations represented in NAVD88

This figure was prepared utilizing public and proprietary data. It should not be used to establish any legal boundaries or specific locations. ELOS Environmental, L.L.C., is not responsible for any usage of this figure contrary to its original, intended purpose.

P20110325

DEPARTMENT OF THE ARMY PERMIT

OFFICE OF COASTAL MANAGEMENT

2011 SEP -6 PM 4:41

RECEIVED

Permittee: Tangipahoa Parish Government

Permit No. MVN-2011-0805-CY

Issuing Office: New Orleans District

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

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

Project Description: Dredge for access, deposit fill and rip-rap material to construct and maintain an approximately 3.25 mile offshore breakwater to include, fish dips, bedding stones, geotextile fabric and warning signs to prevent shoreline erosion, in accordance with drawings attached in nine sheets dated March 2011.

Project Location: In Lake Pontchartrain, northwestern shoreline between Pass Manchac and Tangipahoa River, in Tangipahoa Parish, Louisiana.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **August 31, 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: Pages 4-5.

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 Garban A. Buryea X 8/12/11
 (PERMITTEE) (DATE)

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

Martin S. Mayer 18 August 2011
 Martin S. Mayer (DATE)
 Chief, Central 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.

 (TRANSFeree) (DATE)

SPECIAL CONDITIONS: MVN-2011-0805-CY

7. The permittee is aware that all necessary local, state and parish approvals must be obtained prior to the commencement of work at the project site.
8. The permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
9. The permittee must install and maintain, at the permittee's expense, any safety lights, signs, and signals prescribed by the US Coast Guard, through regulations or otherwise, on the permittee's authorized facilities.
10. 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.
11. 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 so that a Notice to Mariners, if required, may be prepared. Notification, with a copy of your permit approval and drawings, should be mailed to the US Coast Guard, Sector New Orleans Command Center, 201 Hammond Highway, Metairie, Louisiana 70005, about 1 month before you plan to start work. Telephone inquiries can be directed to (504) 846-5923.
12. The Chitimacha Tribe of Louisiana has stated that the project area is part of the aboriginal Chitimacha homelands. If during the course of work at the site, prehistoric and/or historic aboriginal cultural materials are discovered, the permittee will contact the Chitimacha Tribe of Louisiana at P.O. Box 661, Charenton, LA 70523, and the US Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch. CEMVN Regulatory Branch will initiate the required federal, state, and Tribal coordination to determine the significance of the cultural materials and the need, if applicable, for additional cultural resource investigations.
13. Structures and fill will not be placed on state-owned water bottoms without the approval of the Louisiana Division of Administration, State Land Office. The permittee will be responsible for contacting the State Land Office to ascertain if any structures or fill will be placed on state-owned water bottoms.

SPECIAL CONDITIONS CON'T MVN-2011-0805-CY

14. The permittee shall limit dredge and fill activities to areas essential to the project. If the proposed project requires any additional work not expressly permitted herein, the permittee must apply for an amendment to this authorization prior to commencement of work.

15. The usage of rip-rap or any other type of concrete material shall be free of protruding, reinforcement steel (i.e., rebar).

16. The permittee shall comply with United States Fish and Wildlife Service letter dated April 29, 2011 (attached), regarding necessary procedures to follow if there is an encounter with the endangered West Indian manatee (*Trichechus manatus*). Specifically, conditions 1 through 6 shall be strictly be adhered to.

TANGIPAHOA
PARISH GOVERNMENT

LAKE PONTCHARTRAIN
SHORELINE PROTECTION

TANGIPAHOA PARISH, LOUISIANA

INDEX TO SHEETS

SHEET NO. DESCRIPTION

- 1 TITLE SHEET
- 2 SITE PLAN
- 3-6 ENLARGED SITE PLANS
- 7 & 8 TYPICAL SECTIONS
- 9 WARNING SIGN DETAILS



PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF
INFORMATION AND IS NOT INTENDED TO BE USED FOR
CONSTRUCTION OR BIDDING PURPOSES

ENGINEER: BRETT L. GEESEY, HDR
 LICENSE NO. 35172
 DATE: MARCH 2011



HDR
Hydrologic Design Resources, Inc.

APPLICATION BY:
 TANGIPAHOA PARISH
 GOVERNMENT

LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

TITLE SHEET

DRAWN BY: C. TAYLOR

DESIGNED BY: A. WILSON

APPROVED BY: B. GEESEY, P.E.

DATE: MARCH 2011

SHEET 1 OF 9

NOTES:

1. PROJECT SITE IS NOT ACCESSIBLE BY LAND. ACCESS TO PROJECT SITE WILL BE THROUGH LAKE PONTCHARTRAIN.
2. AERIAL PHOTOGRAPHS SHOWN ON SHEETS 1 AND 2 ARE 2009 AERIALS AVAILABLE THRU USDA FARM SERVICE AGENCY/ NAD. AERIAL PHOTOGRAPHS SHOWN ON SHEETS 3 THRU 6 WERE PERFORMED BY GULF COAST AERIAL MAPPING DURING AUGUST 2010.
3. THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF PERMITTING AND IS NOT INTENDED TO BE USED FOR BIDDING OR CONSTRUCTION. LIGHTHOUSE REMAINS.
4. NO WORK WILL BE PERFORMED WITHIN 100' OF HISTORIC LIGHTHOUSE REMAINS.

TYPE	APPROX. AREA (AC.)	APPROX. VOLUME (CY.)	APPROX. LENGTH (FT.)
BREAKWATER (FILL)	15	90,100	17,100
TEMPORARY ACCESS/FLOTATION CHANNEL (EXCAVATION/FILL)	47	280,000	19,500



PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF AERIAL REVIEW AND IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.
 ENGINEER: BRETT L. GEESEY, HDR
 LICENSE NO. 35172
 DATE: MARCH 2011



HDR
 HDR Engineering, Inc.

APPLICATION BY:
TANGIPAHOA PARISH GOVERNMENT

LAKE PONTCHARTRAIN SHORELINE PROTECTION

SITE PLAN

DRAWN BY: C. TAYLOR

DESIGNED BY: A. WILSON

APPROVED BY: B. GEESEY, P.E.

DATE: MARCH 2011

SHEET 2 OF 8

TEMPORARY ACCESS CHANNEL APPROX. COORDINATES
 N30°17'48"
 W90°18'31"

PASS MANCHAC



LEGEND:

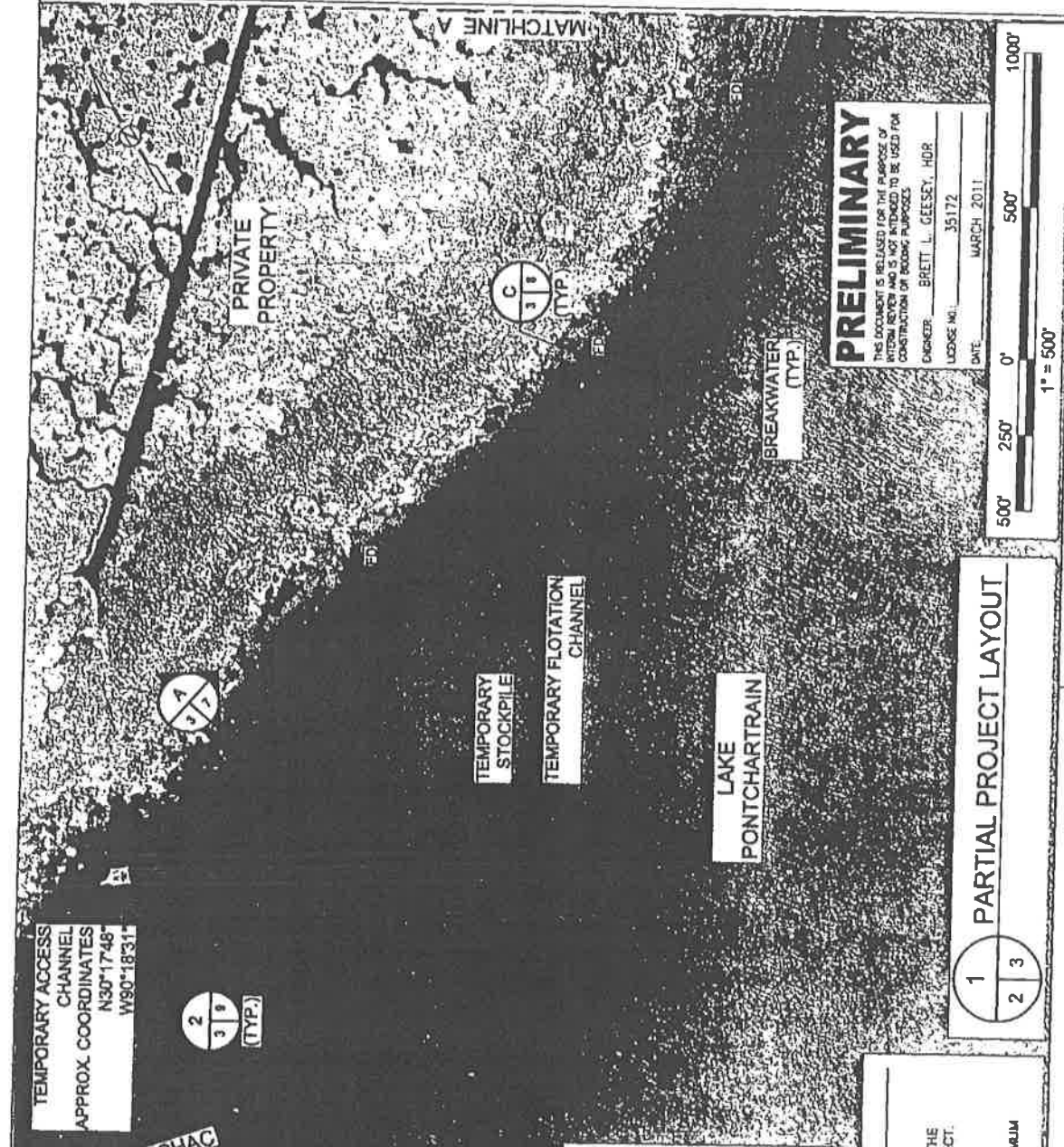
	BREAKWATER FOOTPRINT
	ACCESS/FLOTATION CHANNEL
	TEMPORARY STOCKPILE
	PERMANENT WARNING SIGN
	TEMPORARY WARNING SIGN
	SETTLEMENT PLATE
	FISH DIP

- NOTES:**
- SEE NOTES ON SHEET 2.
 - THE TEMPORARY STOCKPILE IS TO BE BACKFILLED INTO THE FLOTATION CHANNEL AT THE COMPLETION OF THE PROJECT.
 - SEE SHEET 8 FOR FISH DIP DETAILS.
 - WARNING SIGNS AND FISH DIPS WILL BE SPACED AT MAXIMUM 1,000' INTERVALS.

1 PARTIAL PROJECT LAYOUT
 2 3



PRELIMINARY
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW AND IS NOT INTENDED TO BE USED FOR CONSTRUCTION OF RECORD PURPOSES.
 ENGINEER: BRETT L. GEESEY, HDR
 LICENSE NO.: 35172
 DATE: MARCH 2011



HDR
 OF HOUSTON, TX

APPLICATION BY:
TANGIPAHOA PARISH GOVERNMENT

LAKE PONTCHARTRAIN SHORELINE PROTECTION

ENLARGED SITE PLAN

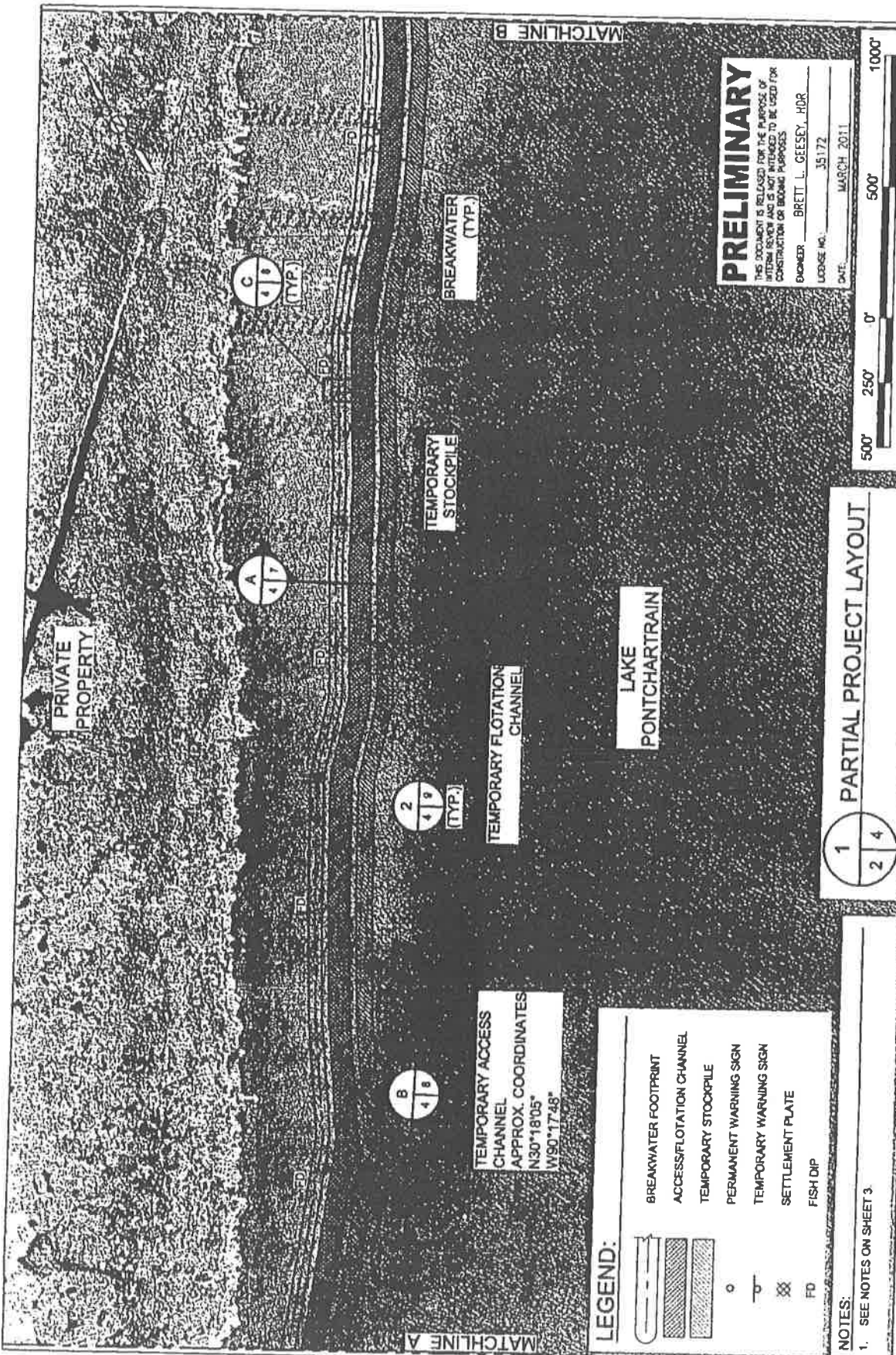
DRAWN BY: C. TAYLOR

DESIGNED BY: A. WILSON

APPROVED BY: B. GEESEY, P.E.

DATE: MARCH 2011

SHEET 3 OF 9



TEMPORARY ACCESS CHANNEL
 APPROX. COORDINATES
 N30°18'05"
 W90°17'48"

LEGEND:

- BREAKWATER FOOTPRINT
- ACCESS/FLOTATION CHANNEL
- TEMPORARY STOCKPILE
- PERMANENT WARNING SIGN
- TEMPORARY WARNING SIGN
- SETTLEMENT PLATE
- FISH DIP

NOTES:

1. SEE NOTES ON SHEET 3

PRELIMINARY
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF
 INITIAL REVIEW AND IS NOT INTENDED TO BE USED FOR
 CONSTRUCTION OR BIDDING PURPOSES
 ENGINEER: BRETT L. GEESEY, HDR
 LICENSE NO.: 35172
 DATE: MARCH 2011



1 PARTIAL PROJECT LAYOUT



APPLICATION BY:

TANGIPAHOA PARISH
 GOVERNMENT

LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

ENLARGED
 SITE PLAN

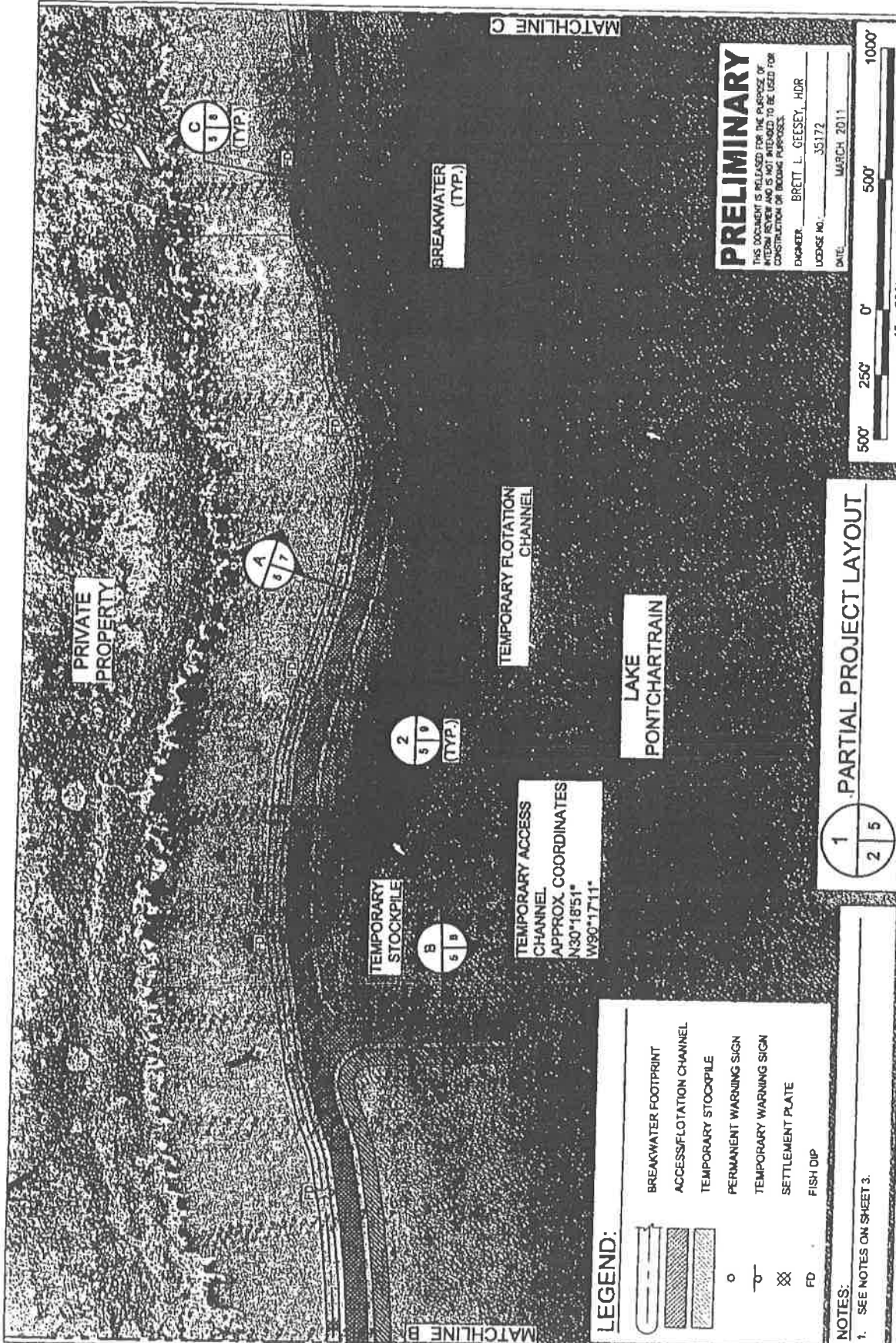
DESIGNED BY: C. TAYLOR

APPROVED BY: A. WILSON

APPROVED BY: B. GEESEY, P.E.

DATE: MARCH 2011

SHEET 4 OF 9



PRELIMINARY
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF
 INTERNAL REVIEW AND IS NOT INTENDED TO BE USED FOR
 CONSTRUCTION OR BIDDING PURPOSES.
 DESIGNER: BRETT L. GEESEY, HDR
 LICENSE NO.: 35172
 DATE: MARCH 2011



1 PARTIAL PROJECT LAYOUT

- LEGEND:**
- BREAKWATER FOOTPRINT
 - ACCESS/FLOTATION CHANNEL
 - TEMPORARY STOCKPILE
 - PERMANENT WARNING SIGN
 - TEMPORARY WARNING SIGN
 - SETTLEMENT PLATE
 - FISH DIP

NOTES:
 1. SEE NOTES ON SHEET 3.



APPLICATION BY:

**TANGIPAHOA PARISH
 GOVERNMENT**

DRAWN BY: C. TAYLOR

DESIGNED BY: A. WILSON

APPROVED BY: B. GEESEY, P.E.

DATE: MARCH 2011

**LAKE PONTCHARTRAIN
 SHORELINE PROTECTION**

**ENLARGED
 SITE PLAN**

SHEET 5 OF 9

TANGIPAHOA RIVER

PRIVATE PROPERTY

MATCHLINE C

TEMPORARY STOCKPILE

BREAKWATER (TYP.)

TEMPORARY FLOTATION CHANNEL

LAKE PONTCHARTRAIN

TEMPORARY ACCESS CHANNEL
APPROX. COORDINATES
N30°19'30"
W90°16'37"



PARTIAL PROJECT LAYOUT



PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF WITHSTANDING REVIEW AND IS NOT INTENDED TO BE USED FOR CONSTRUCTION OR RECORDING PURPOSES.
DRAWN BY: BRETT L. GEESEY, HDR
LICENSE NO. 351172
DATE: MARCH 2011

LEGEND:

- BREAKWATER FOOTPRINT
- ACCESS/FLOTATION CHANNEL
- TEMPORARY STOCKPILE
- PERMANENT WARNING SIGN
- TEMPORARY WARNING SIGN
- SETTLEMENT PLATE
- FISH DWP



HDR
INCORPORATED



TANGIPAHOA PARISH
GOVERNMENT

APPLICATION BY:

LAKE PONTCHARTRAIN
SHORELINE PROTECTION

ENLARGED
SITE PLAN

NOTES:
1. SEE NOTES ON SHEET 3.

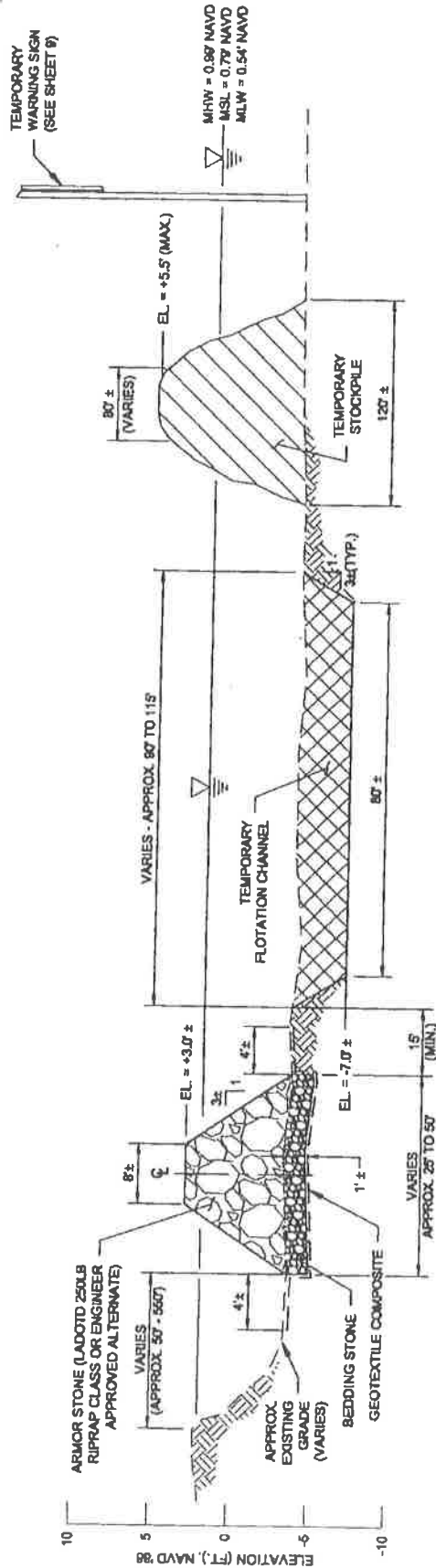
DRAWN BY: C. TAYLOR

DESIGNED BY: A. WILSON

APPROVED BY: B. GEESEY, P.E.

DATE: MARCH 2011

SHEET 6 OF 8



A TYPICAL SECTION - ROCK BREAKWATER
 3 | 7 NOT TO SCALE
 4. THRU 8


PRELIMINARY
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF
 PRELIMINARY REVIEW AND IS NOT INTENDED TO BE USED FOR
 CONSTRUCTION OR BIDDING PURPOSES.
 DESIGNER: BRETT L. GEESEY, HDR
 LICENSE NO. 35172
 DATE: MARCH 2011

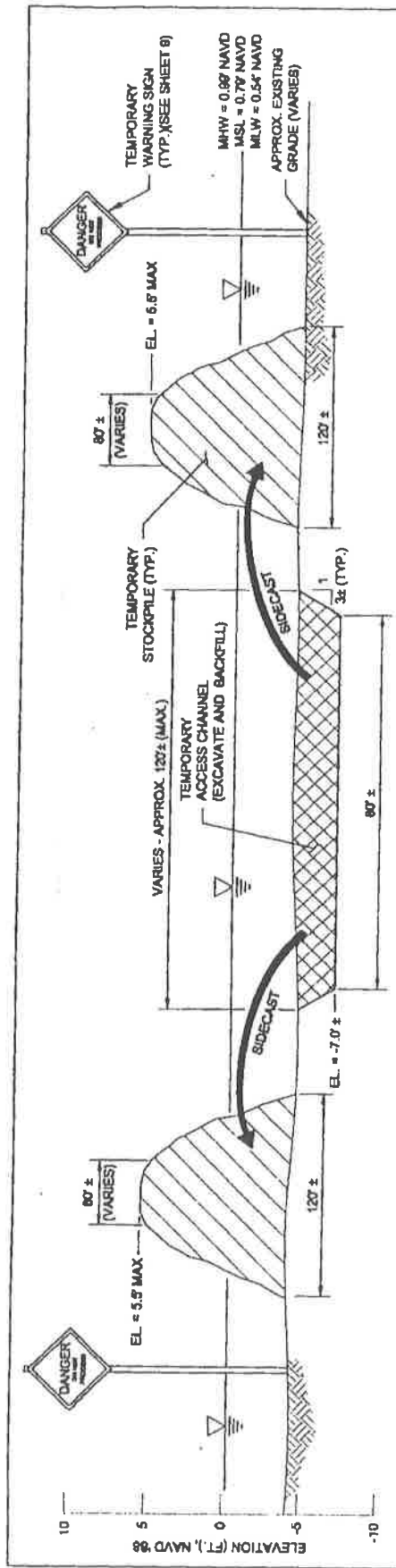
NOTES:

1. GEOTEXTILE COMPOSITE WILL CONSIST OF GEOTEXTILE FABRIC AND/OR GEOGRID.
2. MHW, MSL, AND MLW ELEVATIONS ARE BASED ON RECORDS FROM NOAA STATION 876237Z.

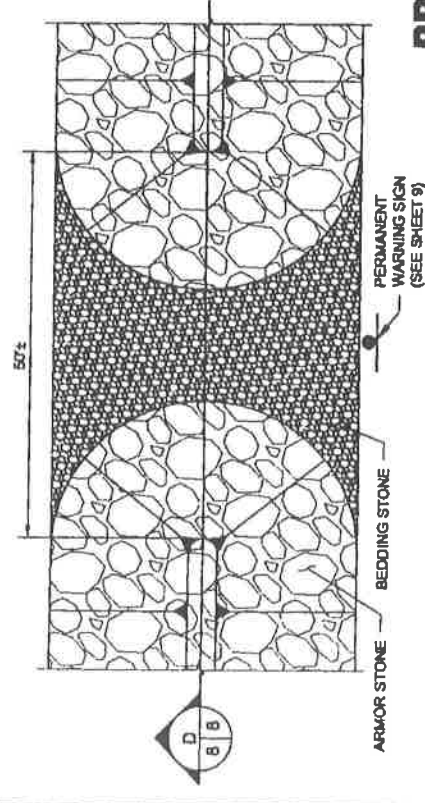


 APPLICATION BY:
**TANGIPAHOA PARISH
 GOVERNMENT**
 DESIGNED BY: A. WILSON
 APPROVED BY: B. GEESEY, P.E.
 DATE: MARCH 2011

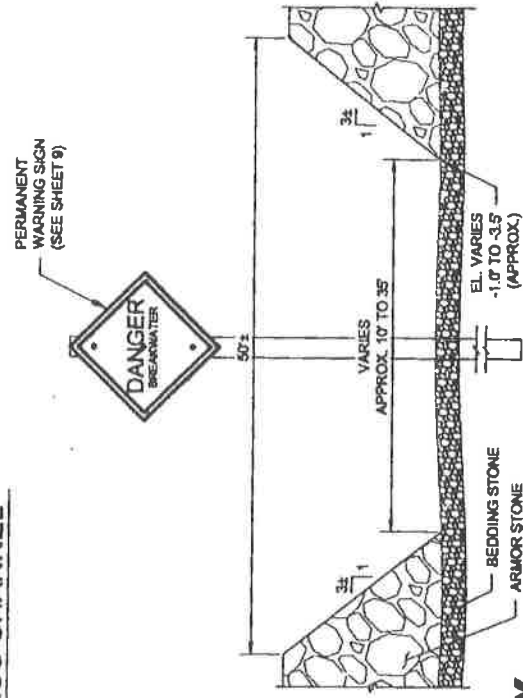

 DRAWN BY: C. TAYLOR
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION
 TYPICAL SECTIONS
 SHEET 7 OF 9



B TYPICAL SECTION - ACCESS CHANNEL
 3 | 8 NOT TO SCALE
 4 THRU 6



C TYPICAL PLAN - FISH DIP
 3 | 8 NOT TO SCALE
 4 THRU 6



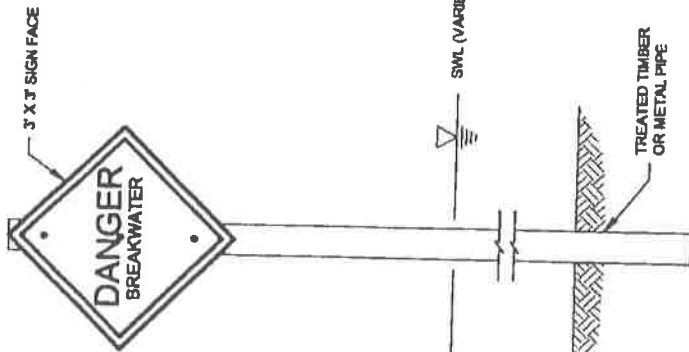
D TYPICAL SECTION - FISH DIP
 8 | 8 NOT TO SCALE

PRELIMINARY
 THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF
 INTERIM REVIEW AND IS NOT INTENDED TO BE USED FOR
 CONSTRUCTION OR BIDDING PURPOSES.
 ENGINEER: BRETT L. GEESEY, HDR
 LICENSE NO.: 35172
 DATE: MARCH 2011

NOTES:
 1. SEE NOTES ON SHEET 7.

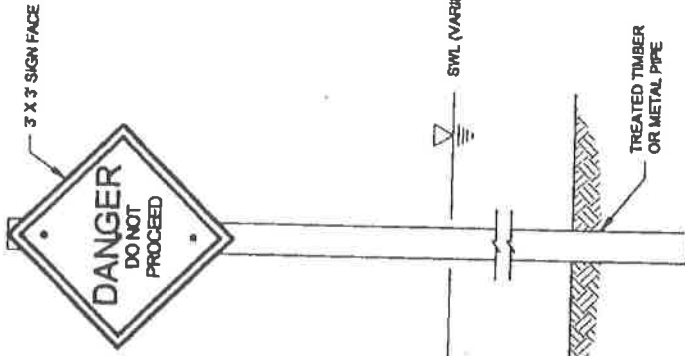
 HDR <small>Hydrologic Design Resources, Inc.</small>	APPLICATION BY: TANGIPAHOA PARISH GOVERNMENT	LAKE PONTCHARTRAIN SHORELINE PROTECTION	TYPICAL SECTIONS
	DESIGNED BY: A. WILSON	APPROVED BY: B. GEESEY, P.E.	DATE: MARCH 2011

DRAWN BY: C. TAYLOR



1
8 9
DETAIL - PERMANENT WARNING SIGN
NOT TO SCALE

NOTE: PERMANENT WARNING SIGN MAY INCLUDE LIGHTED BEACON.



2
3 9
DETAIL - TEMPORARY WARNING SIGN
NOT TO SCALE

4 THRU 6


PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF
 RECORD REVIEW AND IS NOT INTENDED TO BE USED FOR
 CONSTRUCTION OR BIDDING PURPOSES.

ENGINEER: BRETT L. GEESEY, HDR

LICENSE NO: 35172

DATE: MARCH, 2011

 HDR <small>Hydrologic Design Resources, Inc.</small>	APPLICATION BY: TANGIPAHOA PARISH GOVERNMENT		LAKE PONTCHARTRAIN SHORELINE PROTECTION	TYPICAL WARNING SIGN DETAILS
	DESIGNED BY: A. WILSON	APPROVED BY: B. GEESEY, P.E.	DATE: MARCH 2011	SHEET 9 OF 9

DRAWN BY: C. TAYLOR



United States Department of the Interior

FISH AND WILDLIFE SERVICE
646 Cajundome Blvd.
Suite 400
Lafayette, Louisiana 70506



April 29, 2011

Mr. Martin S. Mayer
Chief, Central Evaluation Section
Regulatory Branch
New Orleans District
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Mayer:

The U.S. Fish and Wildlife Service (Service) has reviewed *Joint Public Notice MVN 2011-0805-CY*, dated April 11, 2011. The Tangipahoa Parish Government has requested authorization to dredge for access; deposit fill and rip-rap material (including fish dips, bedding stones, and geotextile fabric) and to post warning signs, in order to construct and maintain a 3.25-mile-long offshore breakwater that would protect the rapidly eroding shoreline of Lake Pontchartrain, Tangipahoa Parish, LA. Approximately 280,000 cubic yards of native material affecting 47 acres of open water bottom would be temporarily side-casted to allow for access and would be backfilled upon completion. Approximately 90,100 cubic yards of rip-rap affecting 15 acres of open water bottom would be deposited to construct the breakwater. No net loss of wetland acreage is anticipated. This report is submitted in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The endangered West Indian manatee (*Trichechus manatus*) could be found within the vicinity of the proposed project area. The Service has record of a historic manatee sighting in Pass Manchac, approximately three miles from the proposed location. The West Indian manatee utilizes coastal waters and streams of Louisiana, most often during the warmer months (i.e., June through September). The Service has records that indicate manatee may also be present outside of that time frame, when the average water temperature is warm enough (i.e., April through November). Cold weather and outbreaks of red tide may adversely affect these animals. However, human activity is the primary cause for declines in species number due to collisions with boats and barges, entrapment in flood control structures, poaching, habitat loss, and pollution.

TAKE PRIDE
IN AMERICA 

All personnel associated with the project should be instructed about the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee should advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.

All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following permit conditions: (1) all work, equipment, and vessel operation must cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the 50 foot buffer zone on its own accord (manatees must not be herded or harassed into leaving) and after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s) and under idle/no wake speeds for vessel operations; (2) all vessels shall operate at idle/no wake speeds whenever a manatee is spotted outside of the 50 foot buffer zone, but within 100 yards of the active work zone; (3) all vessels must follow routes of deep water whenever possible and operate at idle/no wake speeds while in water where the draft of the vessel provides less than a four-foot clearance from the bottom; (4) siltation or turbidity barriers should be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement; (5) temporary signs concerning manatees should be posted prior to and during all in-water project activities and removed upon project completion. One temporary sign should be posted in a location easily visible to vehicle operator and should read *Caution: Boaters* in conspicuous letters. Another sign, measuring at least 8½ " by 11", should be posted in a location prominently visible to all personnel engaged in water-related activities and explain the special requirements of vessel operation at idle/no wake speeds if manatee(s) are spotted; vessel operation at idle/no wake speeds when there is less than four foot bottom clearance; and the necessary shut-down of all in-water operations when manatee(s) are within 50 feet of the work area; and (6) collisions with, injury to, or sightings of manatees should be immediately reported to the Service's Louisiana Ecological Services Office (337/291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225/765-2821). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

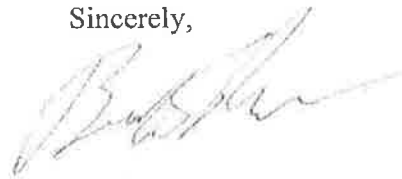
Submerged aquatic vegetation (SAV) occurs in the shallow shoreline waters of Lake Pontchartrain. SAV provides habitat for many aquatic invertebrate and vertebrate species, including feeding and sheltering habitat for the manatee. SAV has significantly diminished in the lake since 1954 due to shoreline modification, increased water turbidity, and increases in algal blooms (Cho and Porrier 2001). Current SAV conservation areas in Lake Pontchartrain occur mostly east of the causeway along the north shore and scattered along the east shore, with two isolated SAV areas along the north shore on the west side of the causeway (McInnis and Rogers 2006). Our office has mapped the latitude/longitude coordinates provided for the proposed project and determined that the location does not fall within the designated SAV conservation areas (McInnis and Rogers 2006, Carol Franze, LSU Ag Center, Pers. Comm.,

April 26, 2011). Thus, construction at this location would have minimal impact on SAV conservation in Lake Pontchartrain.

Please be advised that the U.S. Army Corps of Engineers (Corps) has the affirmative responsibility to determine whether permit issuance is “likely to adversely affect” or “not likely to adversely affect” the manatee. If the project would be conducted during months when manatees are unlikely to be present (i.e., December through March), please submit a request for our concurrence with the Corps’ determination that permit issuance and implementation of the proposed project is not likely to adversely affect manatees. If construction would be conducted from April through November, the Corps could request the Service to concur with a “not likely to adversely affect” determination based upon incorporation of our recommendations into any Corps’ permit issued for the proposed project.

The above findings and recommendations constitute the report of the Department of the Interior. Please contact Monica Sikes (337/291-3118) if additional information is needed.

Sincerely,



Brad S. Rieck
Deputy Supervisor
Louisiana Ecological Services Office

cc: COE, New Orleans, LA (attn.: John M. Herman, Project Manager)
LDEQ, Baton Rouge, LA (attn: Jamie Phillippe, Project Manager)
LDWF, NHP, Baton Rouge, LA (attn: Beau Gregory)



**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.: P20200732

C.O.E. No.:

NAME: **TANGIPAHOA PARISH GOVERNMENT**
c/o ELOS ENVIRONMENTAL, LLC
607 WEST MORRIS AVENUE
HAMMOND, LA 70403
Attn: Claire Labarbera

LOCATION: **Saint Tammany, Tangipahoa Parishes, LA**
Phase I: POB @ Lat. 30-17-50.01, Long. -90-18-31.54 and POE @ Lat. 30-18-38.27, Long. -90-17-31.54
(see plats for additional project coordinates) Lake Ponchartrain, LA.

DESCRIPTION: Proposed construction of two offshore breakwaters; Phase I (approx. 7,500') and Phase II (approx. 13,500'). Approx. 600,000 cy of native material will be temporarily displaced and approx. 7,000 cy of enclosed lightweight aggregate fill and 100,000 cy of rock will be required for project activities.

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 entering a commencement date through the online system, or by mailing said information to OCM.
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 June 21, 2022. 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. That a Class B permit is received from the Division of Administration, State Land Office prior to the initiation of construction.
- b. This permit does not convey any property rights, mineral rights, or exclusive privileges; nor does it authorize injury to property.
- c. This project is located in the vicinity of a Louisiana designated Natural and Scenic River. The applicant must obtain

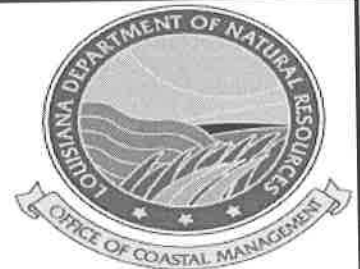


authorization from the Louisiana Department of Wildlife and Fisheries, Scenic Rivers Program for this permit to be valid. Please contact Chris Davis at (225) 765-2642.

- d. Manatee (*Trichechus manatus*) may occur in the surrounding water bodies of your site location. Manatees are large mammals inhabiting both fresh and salt water. Although most manatees are year round residents of Florida or Central America, they have been known to migrate to areas along the Atlantic and Gulf coast during the summer months. Manatee is a threatened species protected under the Endangered Species Act of 1973 and the Federal Marine Mammal Protection Act of 1972. In Louisiana, taking or harassment of a manatee is in violation of state and federal law. Critical habitat for manatee includes marine submergent vascular vegetation (sea-grass beds). Areas with sea-grass beds should be avoided during project activities if possible. Report all manatee sightings to the Louisiana Department of Wildlife and Fisheries at 337-735-8676 or 1-800-442-2511.

The Paddlefish (*Polyodon spathula*) occurs in water bodies near the project area and is considered rare in Louisiana. The paddlefish is threatened by siltation of spawning habitat, pollution, back-to-back impoundments, and in some areas, exploitation by the caviar industry. Habitat destruction and river modification are the most obvious changes affecting abundance and distribution. We advise you to take the necessary measures in order to avoid any degradation of water quality of streams/canals. If you have any questions, please contact Keri Lejeune at 337-735-8676. No other impacts to rare, threatened or endangered species or critical habitats are anticipated from the proposed project. WDP reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. If at any time WDP tracked species are encountered within the project area, please contact our biologist at 225-763-3554.

- e. Permittee shall obtain a Water Quality Certification, should one be required, from the LA Department of Environmental Quality prior to initiation of any construction activities.
- f. Upon completion of construction of the breakwaters, the channels dredged for access and flotation shall immediately be backfilled using stockpiled native material.
- g. All logs, stumps and other debris encountered during dredging activities shall be removed from the site during or immediately after the activity and disposed of in accordance with all applicable laws and regulations.
- h. Dredged material shall be marked in accordance with USCG regulations for marking temporary dredged material mounds.
- i. Structures must be marked/lighted in accordance with U. S. Coast Guard regulations.
- j. All fill material shall be clean and free of contaminants and shall not contain hazardous materials such as asbestos or asbestos residue, shingles, tires, oil/grease residue, exposed rebar, protruding objects, etc.
- k. The 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 not be discharged into any of the streams or adjacent waters of the area without authorization from DH and/or DEQ 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 and DEQ regulations. 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 DH for purpose of review and approval prior to any utilization of such provisions.
- l. 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.

- m. Permittee is subject to all applicable state laws related to damages which are demonstrated to have been caused by this action.
- n. 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.
- o. 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.
- p. 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 June 21, 2022. 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:I.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 June 21, 2022. If the Coastal Use is not completed within this five (5) year period, an extension may be granted pursuant to the requirements contained in the Rules and Procedures for Coastal Use Permits (LAC 43:I.723(D)).

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.
- q. This determination does not eliminate the need to obtain a permit from the United States Army, Corps of Engineers or any other Federal, state or local approval that may be required by law. The drawings submitted with your referenced application are attached hereto and made a part of the record.

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

Page: 4 of 5
C.U.P. No.: P20200732
C.O.E. No.:



By accepting this permit the applicant agrees to its terms and conditions.
I affix my signature and issue this permit this 21st day of June, 2022.

THE DEPARTMENT OF NATURAL RESOURCES

Karl L. Morgan, 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: 5 of 5
C.U.P. No.: P20200732
C.O.E. No.:



Final Plats:

1) P20200732 Final Plats 12/14/2020

cc: Martin Mayer, COE w/attachments
Dave Butler, LDWF w/attachments
Elizabeth Hill, DEQ w/attachments
Les Rosso, State Land w/attachments
Johan Forsman, DHH w/attachments
Jordan Cobbs, OCM w/attachments
Craig Leblanc, OCM/FI w/attachments
Saint Tammany Parish w/attachments
Tangipahoa Parish w/attachments

TANGIPAHOA PARISH GOVERNMENT w/attachments

APPENDIX C – MAP OF VISIBLE NATURAL TIMBER DEBRIS

DISCLAIMER: This data represents natural timber debris and stumps in the water that were visible via aerial drone imagery on the day of data collection. It does not represent all natural timber debris and stumps, including but not limited to underwater material. If other debris is found or identified during construction, it shall not be construed to represent a change in conditions.

APPENDIX D – DAVIS BACON WAGE
DETERMINATIONS

"General Decision Number: LA20230004 03/31/2023

Superseded General Decision Number: LA20220004

State: Louisiana

Construction Type: Heavy

Counties: Allen, Assumption, Avoyelles, Beauregard, Bienville, Caldwell, Cameron, Catahoula, Claiborne, Concordia, De Soto, East Carroll, East Feliciana, Evangeline, Franklin, Grant, Iberia, Iberville, Jackson, Jefferson Davis, La Salle, Lincoln, Madison, Morehouse, Natchitoches, Pointe Coupee, Red River, Richland, Sabine, St Helena, St Mary, Tangipahoa, Tensas, Union, Vermilion, Vernon, Washington, West Carroll, West Feliciana and Winn Counties in Louisiana.

HEAVY CONSTRUCTION PROJECTS (includes water wells, water & sewer lines, and flood control; excludes elevated storage tanks)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	01/13/2023
2	03/31/2023

ELEC0130-007 12/05/2022

ASSUMPTION AND ST. MARY (Northeast of Atchafalaya River) PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 32.75	14.51

ELEC0194-006 09/05/2022

BIENVILLE, CLAIBORNE, DE SOTO, NATCHITOCHEs (Northeast of the Red River), and RED RIVER PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 31.25	14.34

* ELEC0446-004 03/01/2023

CALDWELL, EAST CARROLL, FRANKLIN, JACKSON, LINCOLN, MADISON, MOREHOUSE, RICHLAND, TENSAS, UNION, and WEST CARROLL PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 26.95	2%+13.11

ELEC0576-002 09/01/2022

AVOUELLES, CATAHOULA, CONCORDIA, EVANGELINE, GRANT, LA SALLE, NATCHITOCHEs (Southwest of Red River), SABINE, VERNON, AND WINN PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 26.40	4.25%+9.60

ELEC0861-004 09/01/2022

ALLEN, BEAUREGARD, CAMERON, IBERIA, JEFFERSON DAVIS, ST. MARY (Southwest of Atchafalaya River), AND VERMILION PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 29.53	4.34%+13.05

ELEC0995-002 01/01/2023

EAST FELICIANA, IBERVILLE, POINTE COUPEE, ST. HELENA, AND WEST FELICIANA PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.49	12.66

 ELEC1077-005 12/05/2022

TANGIPAHOA and WASHINGTON PARISHES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.39	3%+9.42

 * SULA2004-008 05/19/2004

	Rates	Fringes
CARPENTER (including formsetting/formbuilding).....	\$ 14.75 **	0.00
Laborers:		
Common.....	\$ 7.60 **	0.00
Pipelayer.....	\$ 8.47 **	0.00
PIPEFITTER (excluding pipelaying).....	\$ 18.75	4.05
Power equipment operators:		
Backhoe/Excavator.....	\$ 11.67 **	0.00
Boring Machine.....	\$ 10.25 **	0.00
Bulldozer.....	\$ 11.82 **	0.00
Crane.....	\$ 13.60 **	0.00
Dragline.....	\$ 13.12 **	0.00
Front End Loader.....	\$ 9.93 **	0.00
Mechanic.....	\$ 12.50 **	0.00
Trackhoe.....	\$ 11.99 **	0.00
Tractor.....	\$ 10.43 **	0.00
Water Well Driller.....	\$ 10.73 **	2.01
Truck drivers:		
Dump.....	\$ 10.00 **	0.00
Water.....	\$ 8.00 **	0.00

 WELDERS - Receive rate prescribed for craft performing
 operation to which welding is incidental.

=====
 ** Workers in this classification may be entitled to a higher
 minimum wage under Executive Order 14026 (\$16.20) or 13658
 (\$12.15). Please see the Note at the top of the wage
 determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
 for Federal Contractors applies to all contracts subject to the
 Davis-Bacon Act for which the contract is awarded (and any
 solicitation was issued) on or after January 1, 2017. If this
 contract is covered by the EO, the contractor must provide
 employees with 1 hour of paid sick leave for every 30 hours
 they work, up to 56 hours of paid sick leave each year.
 Employees must be permitted to use paid sick leave for their
 own illness, injury or other health-related needs, including
 preventive care; to assist a family member (or person who is

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a

new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

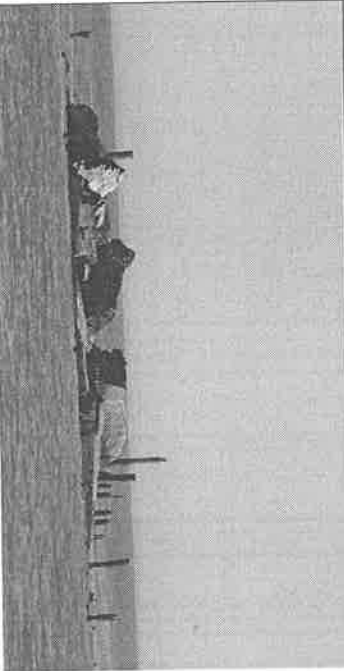
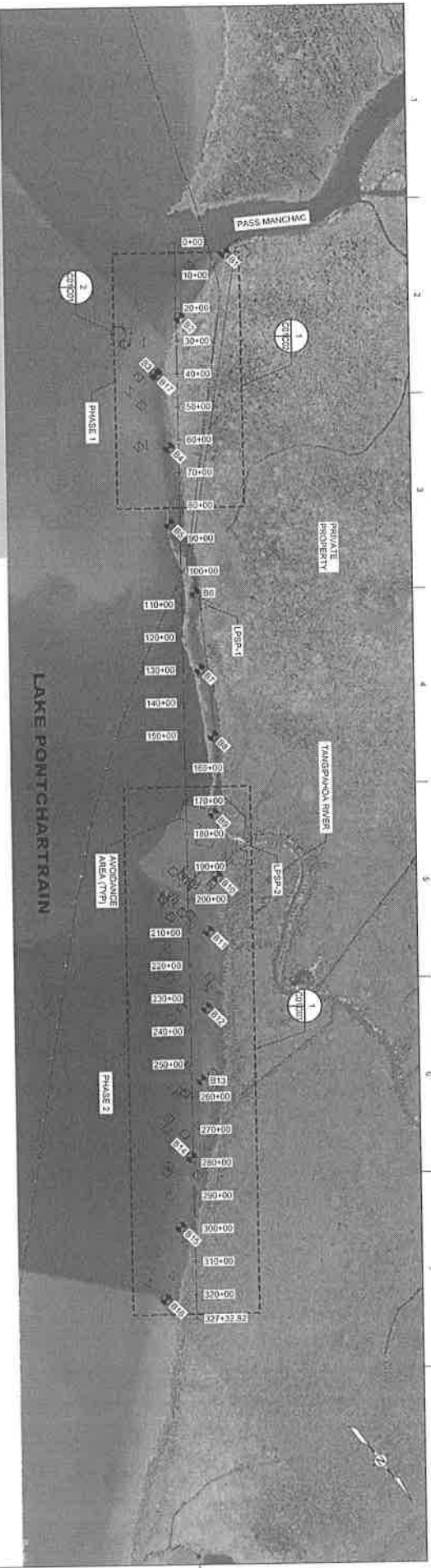
3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISIO"



2 PHOTOGRAPH - REMNANTS OF HISTORIC LIGHTHOUSE



- NOTES**
1. REFER TO GENERAL NOTE 9 ON SHEET 602 REGARDING PRESENCE OF RELIC TREES AND NATURAL TIMBER DEBRIS.
 2. REFER TO SURVEY NOTE 5 ON SHEET 602 REGARDING SURVEY CONTROL POINTS.

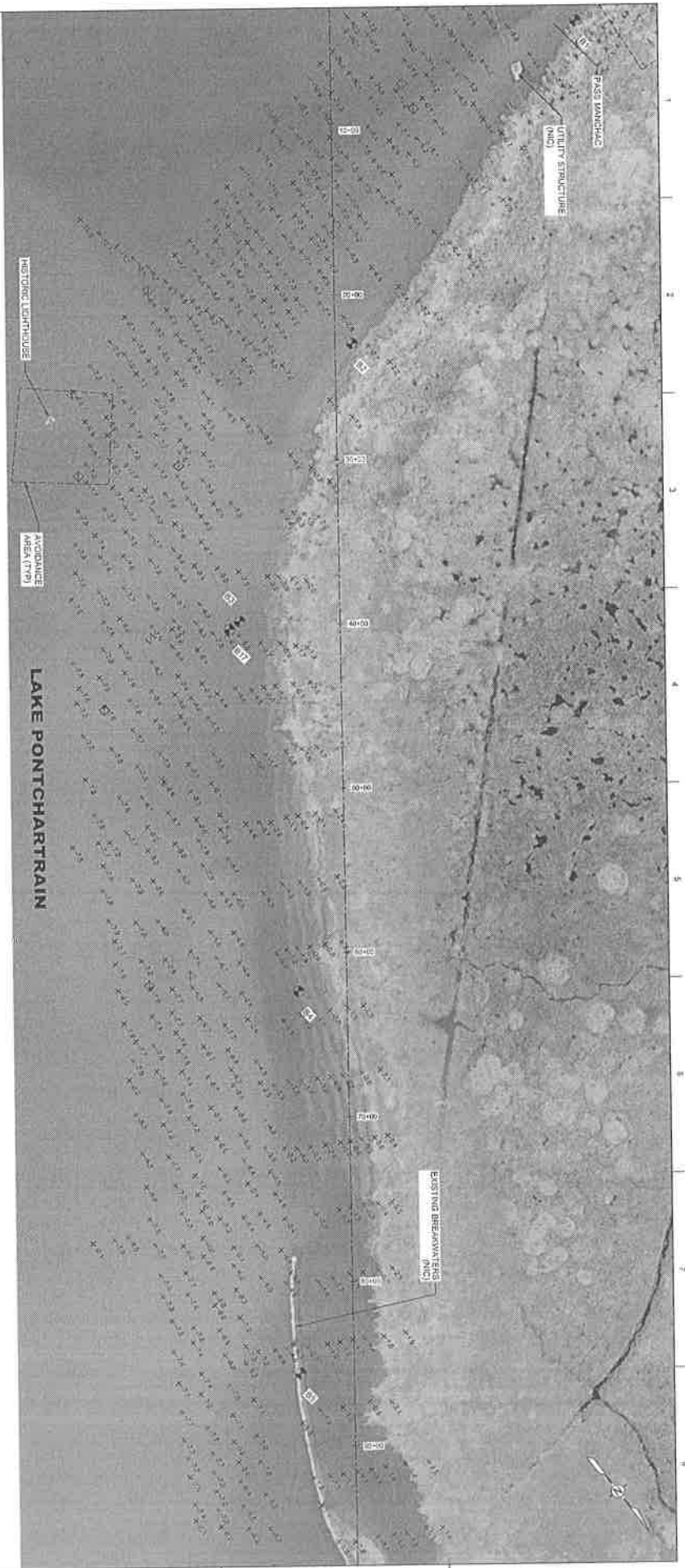


NO.	STATUS	NO. DOCUMENTS
1	ISSUED	1
2	REVISED	0
3	REVISED	0
4	REVISED	0
5	REVISED	0
6	REVISED	0
7	REVISED	0
8	REVISED	0
9	REVISED	0
10	REVISED	0

DESIGNED BY	E. ROONEY
DRAWN BY	J. BISHOP
CHECKED BY	R. GREEN
DATE	2-6-2023
DESCRIPTION	LAKE PONTCHARTRAIN SHORELINE PROTECTION



EXISTING SITE PLAN	
REVISION	DATE
SCALE	AS SHOWN
SHEET	
C01	



1 ENLARGED EXISTING SITE PLAN I
 C01/C02 500 0 500 1200
 SCALE IN FEET

NOTES
 1. REFER TO NOTES ON SHEET C01.



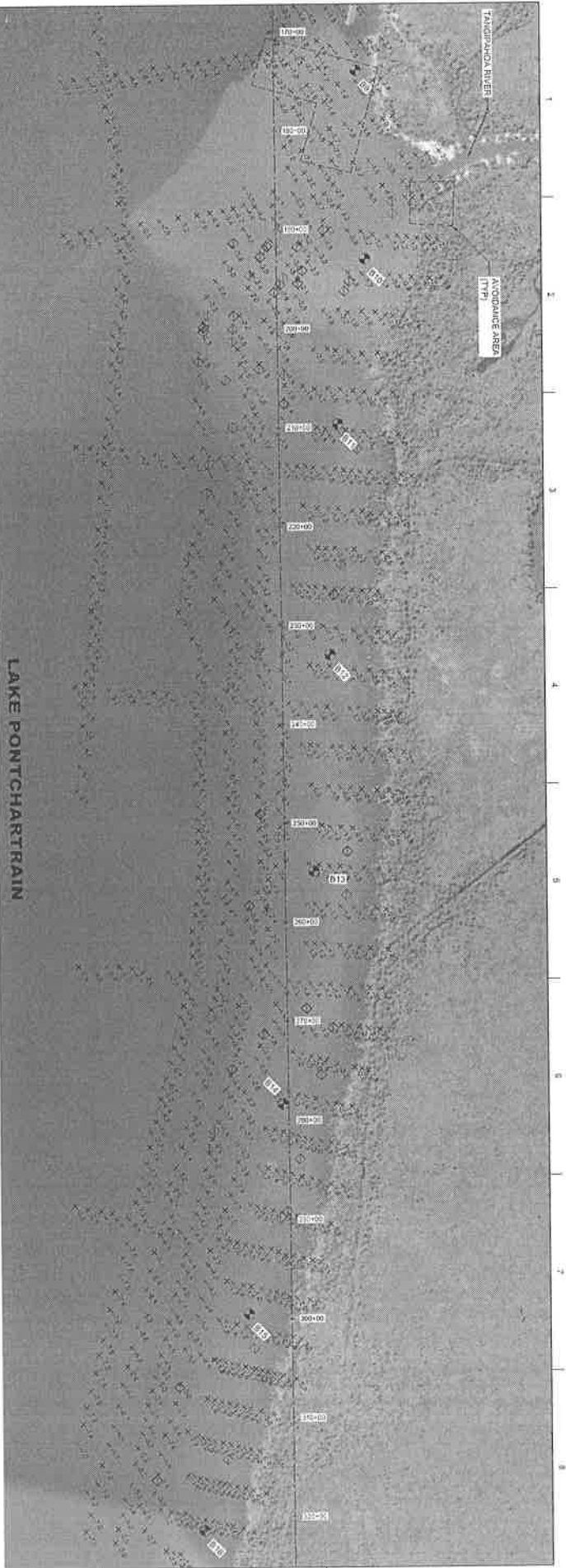
II	III	IV	V
TITLE	DATE	NO. OF DAYS	DESCRIPTION

DESIGNED BY	DRAWN BY	CHECKED BY
E. BOONE	J. BRADY	B. GIBNEY



Tampabay
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

ENLARGED EXISTING SITE PLAN I	
FILE NUMBER	C01/C02
SCALE	AS SHOWN
PROJECT	C02



LAKE PONTCHARTRAIN

1 ENLARGED EXISTING SITE PLAN II



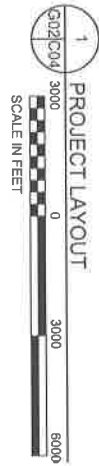
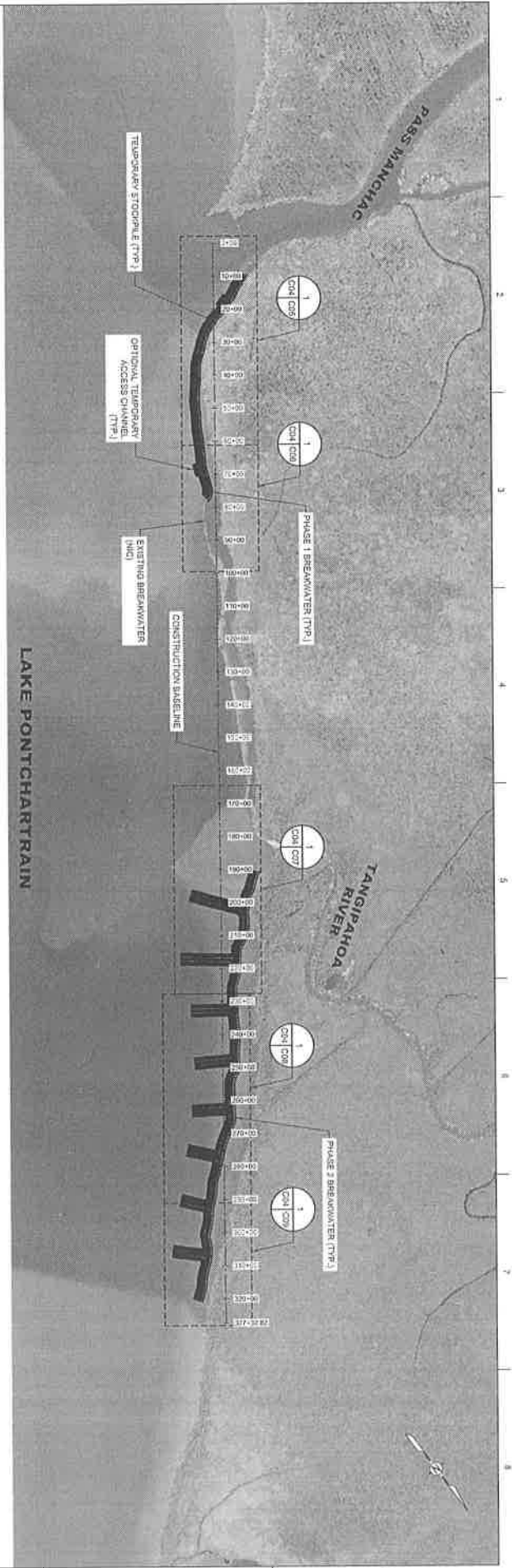
C01/C03 1000 0 1000 2000

SCALE IN FEET

NOTES:
1. REFER TO NOTES ON SHEET 001.

 HDR HIGH ENGINEERING INC.		DESIGNED BY	E. ROONEY		 LAKE PONTCHARTRAIN SHORELINE PROTECTION	ENLARGED EXISTING SITE PLAN II
		DRAWN BY	L. BRADSHAW			
NO. ENGINEERED	NO. OCCASIONS	CHECKED BY	B. DUBREY	HIGH PROJECT NUMBER: INSTANTIAL	SCALE: 1/8" = 1'-0" AS SHOWN	SHEET: C03
DATE	DESCRIPTION					

Erin A. Rooney
2-6-2025

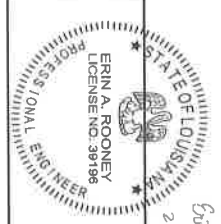


NOTES:
1. PLAN VIEW IS SCHEMATIC ONLY. SEE PROJECTIONS AND DETAILS ON SHEETS C11 THROUGH C13 FOR CONSTRUCTION REQUIREMENTS.

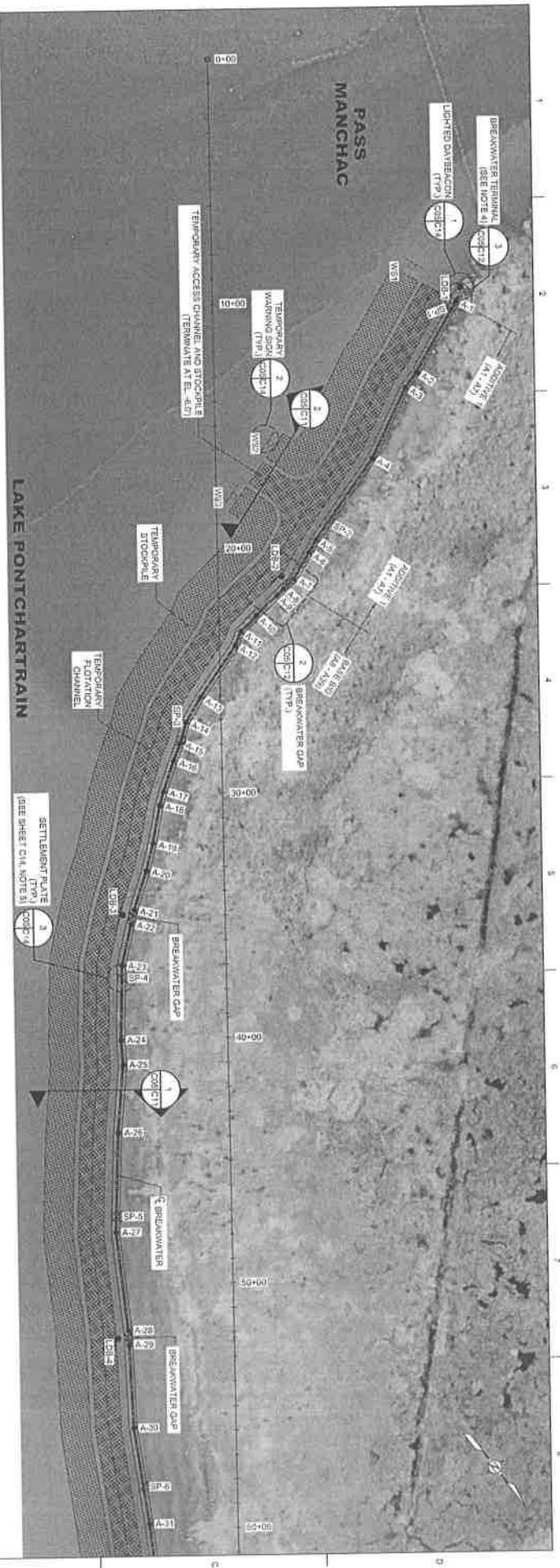


NO.	REVISION	DATE	BY	DESCRIPTION

DESIGNED BY	E. MOORE
CHECKED BY	A. SULLIVAN
DATE	8.08.2018
SCALE	AS SHOWN



PROJECT LAYOUT	
DATE	8/08/2018
SCALE	AS SHOWN
SHEET	C04



1 ENLARGED PROJECT LAYOUT I - PHASE 1
 1/4" = 1' SCALE IN FEET

- NOTES:**
1. CONSULT WITH THE U.S. COAST GUARD REGARDING SIGNAGE/SPACING REQUIREMENTS FOR TEMPORARY WARNING SIGNS. TEMPORARY WARNING SIGNS SHALL BE PROVIDED TO MARK TEMPORARY STOCKPILES ALONG WITH TEMPORARY CONSTRUCTION ACCESS CHANNELS AND TEMPORARY FLotation CHANNELS. THE LOCATION OF TEMPORARY STOCKPILES SHALL BE IDENTIFIED AT THE LOCATIONS SHOWN ON THE PLANS. CONSTRUCTION SHALL MAINTAIN TEMPORARY WARNING SIGNS WHILE STOCKPILES ARE IN PLACE.
 2. PLAN VIEW IS SEPARATE ONLY. SEE COORDINATES ON SHEET C10 AND SECTIONS AND DETAILS ON SHEETS C11 THROUGH C13 FOR CONSTRUCTION REQUIREMENTS.
 3. BREAKWATER ALIGNMENT SHALL TRANSITION SMOOTHLY BETWEEN ALIGNMENT POINTS WITH NO ABRUPT TRANSITIONS.
 4. BREAKWATER TERMINALS SHALL BE CONSTRUCTED AT THE END POINTS OF THE AWARDED BREAKWATER LENGTH. CONTRACTOR SHALL CONSTRUCT TWO TERMINALS IN PHASE 1. CONTRACTOR SHALL CONSTRUCT TWO TERMINALS IN PHASE 2 IF ANY PORTION OF PHASE 2 IS AWARDED.
 5. REFER TO NOTES ON SHEET C02.



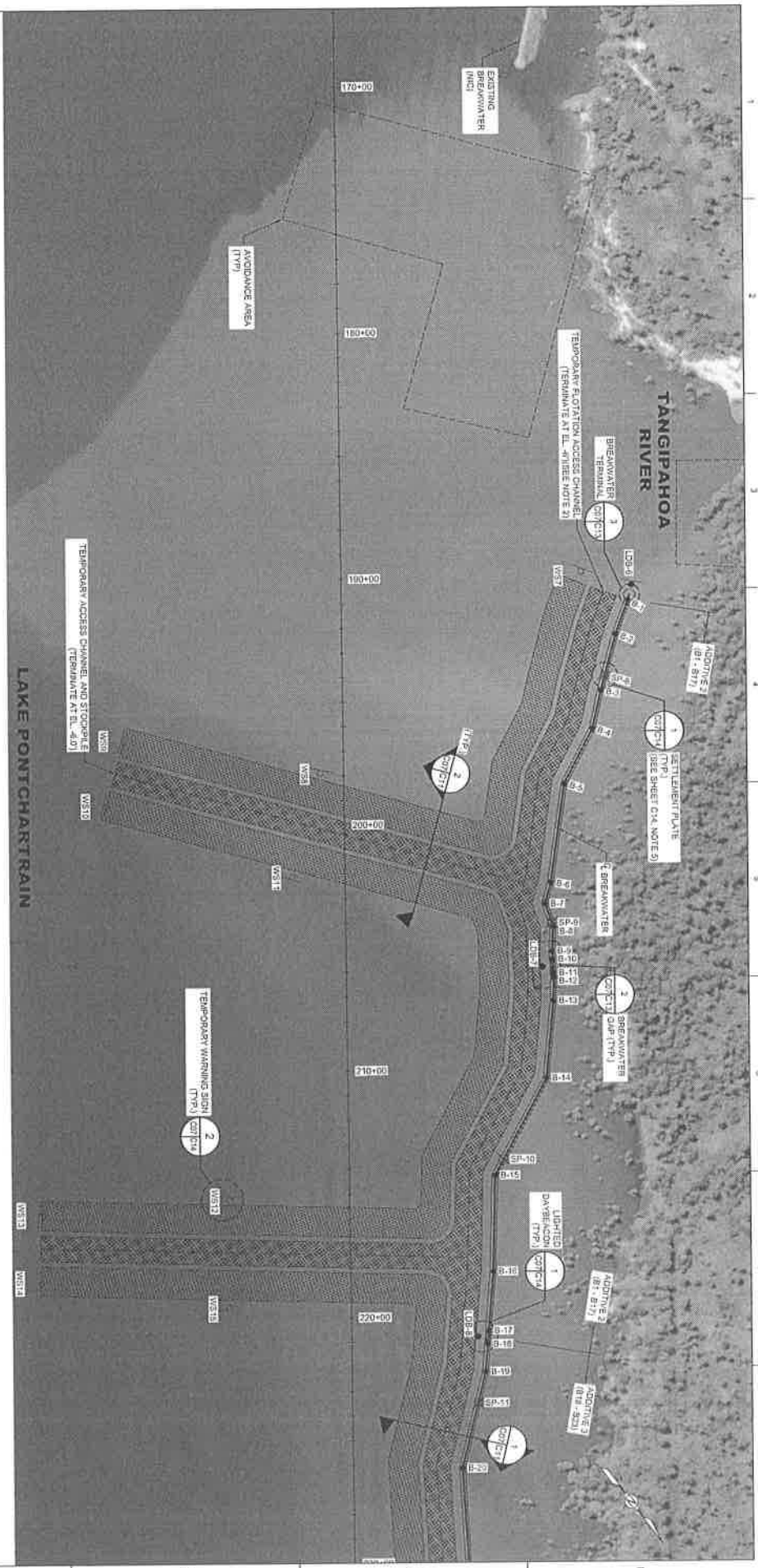
REVISION	DATE	BY	DESCRIPTION

DESIGNED BY	CHECKED BY
E. ROONEY <td>B. GIBBY </td>	B. GIBBY
J. BULLOCK <td> </td>	



Tangipahoa
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

ENLARGED PROJECT LAYOUT I - PHASE 1	SCALE: As Shown	SHEET: C05
-------------------------------------	-----------------	------------



NOTES:
 1. REFER TO NOTES ON SHEET C05 AND C06.
 2. CONTRACTOR HAS OPTION TO EITHER FLOATATION CHANNEL VIA ACCESS CHANNELS PERPENDICULAR TO BREAKWATER OR THROUGH THE FLOATATION CHANNEL WHERE IT MEETS THE TANGIPIAHOA RIVER.

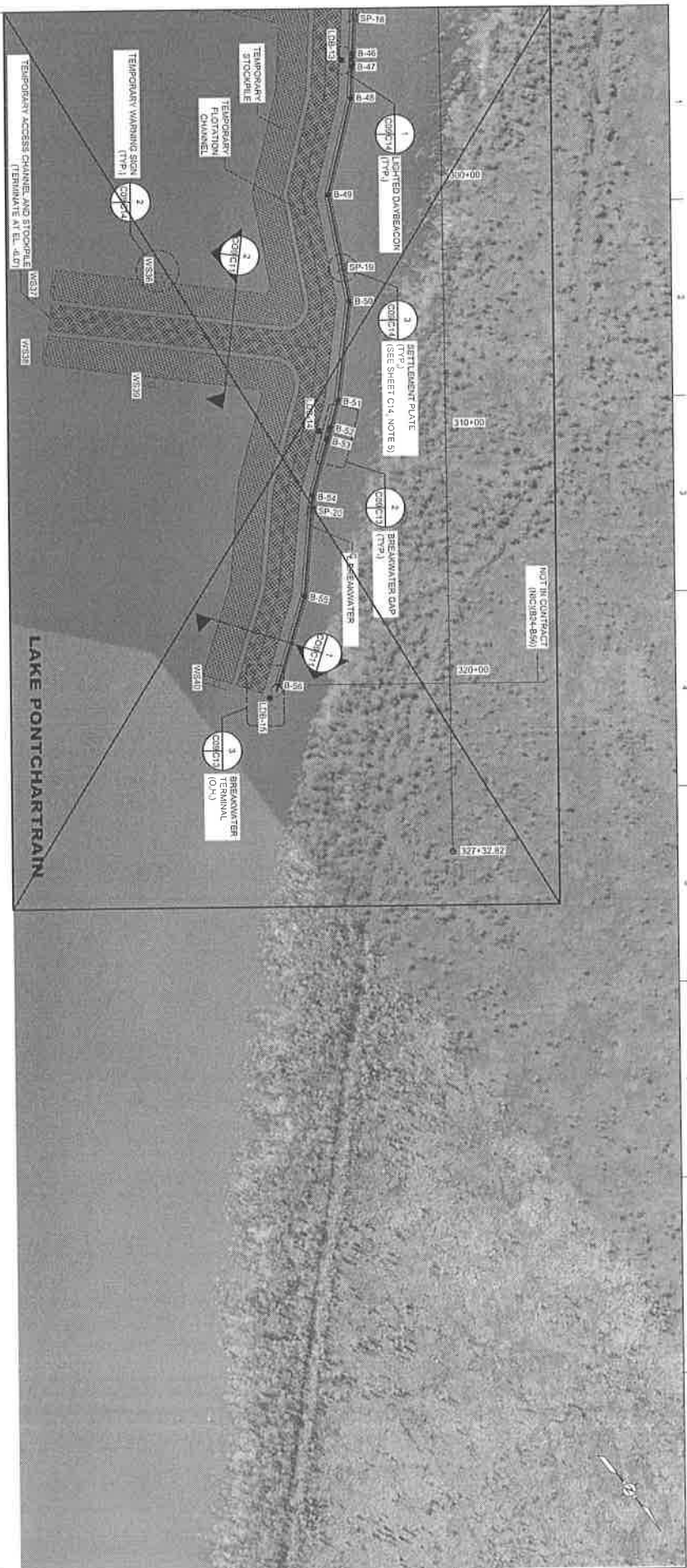


	DATE	NO. OF DOCUMENTS	DESCRIPTION
	DATE	NO. OF DOCUMENTS	DESCRIPTION
DESIGNED BY	E. JOHNSON	CHECKED BY	E. JOHNSON
DRAWN BY	J. BRUNSON	CHECKED BY	E. JOHNSON
PROJECT NUMBER	1387100		

STATE OF LOUISIANA
 PROFESSIONAL ENGINEER
 ERIN A. ROONEY
 LICENSE NO. 397190
 2-26-2023

Tangipahoa
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

ENLARGED PROJECT LAYOUT III - PHASE 2	SCALE	AS SHOWN	SHEET
			C07

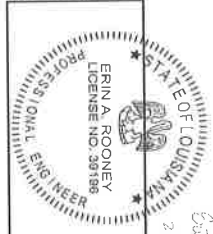


1 ENLARGED PROJECT LAYOUT V - PHASE 2
 CO4/C09 400 0 400 800
 SCALE IN FEET

NOTES:
 1. REFER TO NOTES ON SHEET C05 AND G02.



NO.	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY
1	02/06/23	NO DOCUMENTS	A. BEAUCHAMP	B. O'BRIEN
2				
3				
4				
5				
6				
7				
8				
9				
10				



ENLARGED PROJECT LAYOUT V - PHASE 2

TITLE	NO. IN SERIES	SHEET
ENLARGED PROJECT LAYOUT V - PHASE 2	1 OF 1	C09

PHASE 1

BREAKWATER ALIGNMENT COORDINATES			BREAKWATER ALIGNMENT COORDINATES		
ID	NORTHING	EASTING	ID	NORTHING	EASTING
A-1	655153	3604308	A-21	653314	3608871
A-2	655284	3604671	A-22	653615	3609915
A-3	655304	3604885	A-23	653402	3607048
A-4	655450	3604970	A-24	655701	3607238
A-5	655712	3605386	A-25	658786	3607294
A-6	655696	3605410	A-26	656692	3607480
A-7	655643	3605558	A-27	657208	3607737
A-8	655850	3605583	A-28	657854	3607843
A-9	655865	3605581	A-29	657782	3607976
A-10	655679	3605589	A-30	657982	3608171
A-11	655711	3605683	A-31	658331	3608361
A-12	655791	3606123	A-32	659012	3608677
A-13	655807	3606235	A-33	659250	3608972
A-14	655880	3606303	A-34	659394	3609093
A-15	655931	3606371	A-35	659580	3609008
A-16	655905	3606479	A-36	659737	3609106
A-17	655940	3606526	A-37	659857	3609230
A-18	655946	3606584	A-38	659976	3609336
A-20	658217	3606733	A-39	659976	3609336

PHASE 2

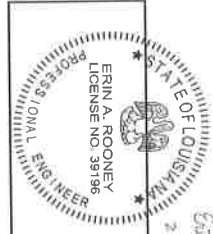
BREAKWATER ALIGNMENT COORDINATES			BREAKWATER ALIGNMENT COORDINATES			BREAKWATER ALIGNMENT COORDINATES		
ID	NORTHING	EASTING	ID	NORTHING	EASTING	ID	NORTHING	EASTING
B-1	668759	3614880	B-20	672181	3617659	B-38	675862	3621076
B-2	668839	3615106	B-21	672406	3617883	B-39	675189	3621297
B-3	668985	3615292	B-22	672805	3618112	B-40	676205	3621348
B-4	670087	3615414	B-23	672031	3618189	B-41	676205	3621375
B-5	670196	3615542	B-24	672878	3618218	B-42	676406	3621681
B-6	670482	3615808	B-25	673138	3618317	B-43	677473	3621955
B-7	670537	3616000	B-26	673400	3618560	B-44	677023	3622284
B-8	670828	3616082	B-27	673700	3618825	B-45	677198	3622408
B-9	670707	3616095	B-28	674148	3619240	B-46	677337	3622443
B-10	670724	3616113	B-29	674166	3619476	B-47	677337	3622534
B-11	670780	3616143	B-30	674166	3619476	B-48	677391	3622834
B-12	670795	3616153	B-31	674241	3619476	B-49	677991	3623309
B-13	67102	3616425	B-32	674686	3619854	B-50	678271	3623309
B-14	671102	3617074	B-33	674985	3619891	B-51	678239	3623309
B-15	671288	3616831	B-34	675290	3620098	B-52	678239	3623309
B-16	671593	3617074	B-35	675290	3620098	B-53	678239	3623309
B-17	671772	3617235	B-36	675324	3620122	B-54	678616	3623817
B-18	671813	3617271	B-37	675319	3620480	B-55	678616	3623899
B-19	671887	3617286	B-38	675703	3620757	B-56	679038	3624202

CONSTRUCTION BASELINE COORDINATES				CONSTRUCTION BASELINE COORDINATES				
STATION	NORTHING	EASTING	STATION	NORTHING	EASTING	STATION	NORTHING	EASTING
0+00	653750	3604501	176+00	667383	3616657	340+00	679398	3674058
10+00	654582	3605098	180+00	668185	3616285	350+00	679398	3674058
20+00	655354	3605695	190+00	668888	3615852	360+00	679398	3674058
30+00	656195	3606294	200+00	669788	3616450	370+00	679398	3674058
40+00	656857	3606891	210+00	670780	3617047	380+00	679398	3674058
50+00	657759	3607488	220+00	671832	3617645	390+00	679398	3674058
60+00	658661	3608086	230+00	672954	3618242	400+00	679398	3674058
70+00	659383	3608683	240+00	673956	3618839	410+00	679398	3674058
80+00	660185	3609281	250+00	674988	3619437	420+00	679398	3674058
90+00	660967	3609878	260+00	675402	3620034	430+00	679398	3674058
100+00	661789	3610476	270+00	675402	3620632	440+00	679398	3674058
110+00	662571	3611073	280+00	676204	3621229	450+00	679398	3674058
120+00	663373	3611670	290+00	677006	3621826	460+00	679398	3674058
130+00	664175	3612268	300+00	677808	3622424	470+00	679398	3674058
140+00	664977	3612865	310+00	678610	3623021	480+00	679398	3674058
150+00	665779	3613463	320+00	679412	3623619	490+00	679398	3674058
160+00	666581	3614060	337+32.87	679998	3674058			

NOTES
 1. ALIGNMENT POINTS PROVIDED ON THIS SHEET ARE BASED ON DESIGN SURVEY AND ARE SUBJECT TO REVISION BY ENGINEER DUE TO SHORELINE EROSION IN THE PROJECT AREA. ACTUAL CONSTRUCTION ALIGNMENT POINTS MAY DIFFER FROM THOSE PROVIDED HEREIN. ENGINEER WILL USE CONSTRUCTION AND PROVIDED POINTS TO CONSTRUCT ALIGNMENT AND PROVIDE REVISED ALIGNMENT POINTS TO CONTRACTOR.

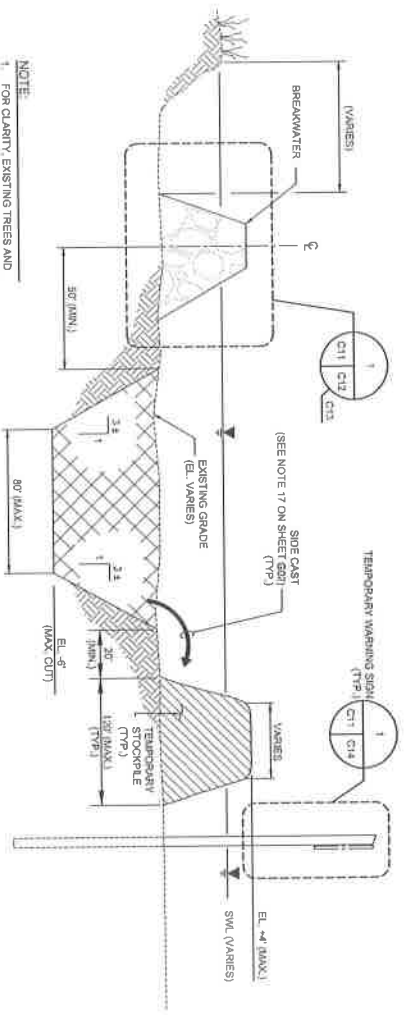


NO.	DATE	DESCRIPTION	DESIGNED BY	CHECKED BY
1	02/28/23	NO DOCUMENTS	E. ROONEY	B. GIBERT
2	03/02/23	NO DOCUMENTS	E. ROONEY	B. GIBERT
3	03/02/23	NO DOCUMENTS	E. ROONEY	B. GIBERT

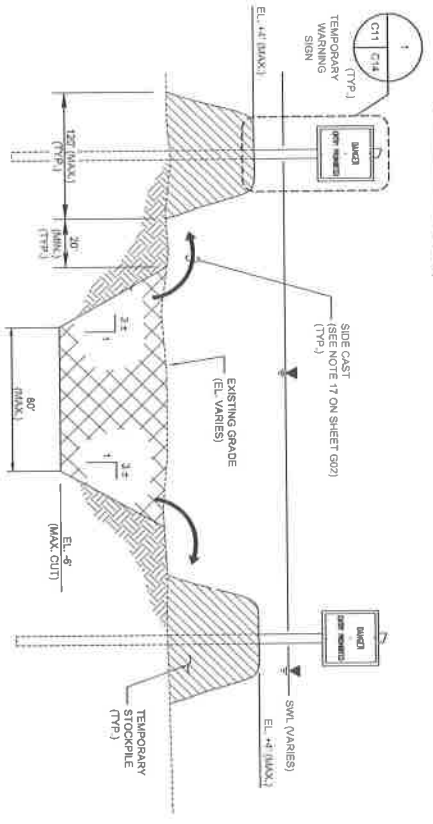


Tampabay
 LAKE PONTCARTRAIN
 SHORELINE PROTECTION

FILE NAME	PROJECT
000-0-04d	C10
LODE	NO SHEET



1
**TYPICAL SECTION - BREAKWATER/
 TEMPORARY FLotation CHANNEL**
 C06 THRU C09 C08/C11
 NOT TO SCALE



2
**TYPICAL SECTION -
 TEMPORARY ACCESS CHANNEL**
 C06 THRU C09 C08/C11
 NOT TO SCALE

Erin A. Rooney
 2-6-2023



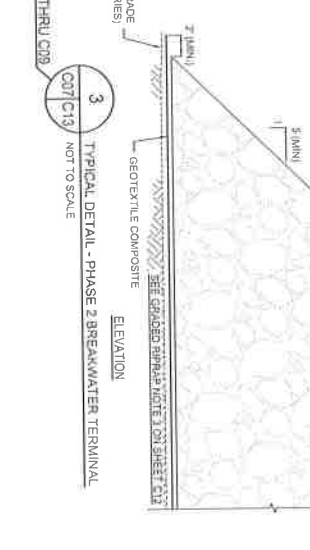
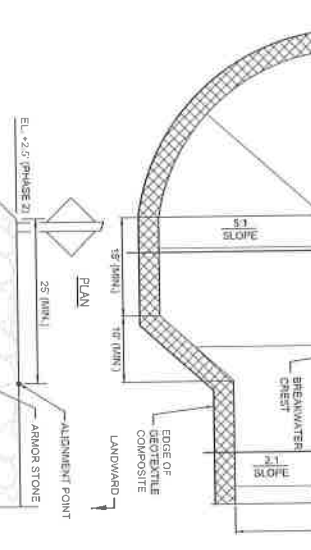
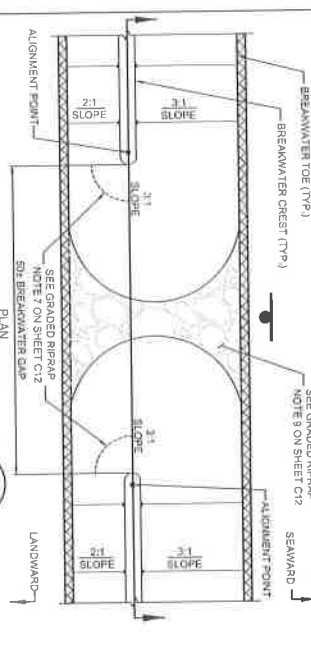
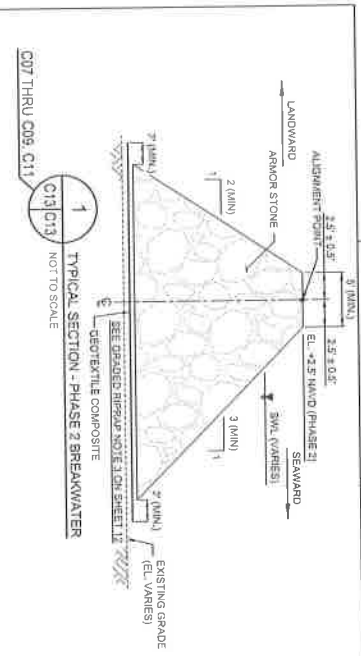
NO.	DATE	BY	DESCRIPTION
1			

DESIGNED BY	DRAWN BY	CHECKED BY	DATE
J. BROWN	J. BROWN	J. BROWN	

PROF. PROJECT NUMBER	DATE	SCALE

STATE OF LOUISIANA
 PROFESSIONAL ENGINEER
 ERIN A. ROONEY
 LICENSE NO. 38186
 2-6-2023
Tangipahoa
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

SECTION AND DETAILS 1	SHEET
	C11



NOTES:
1. SEE NOTES ON SHEET C12.



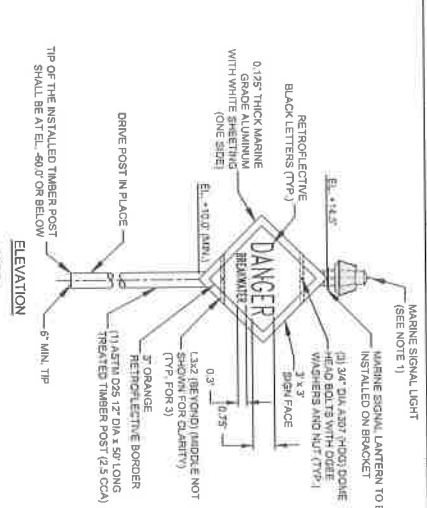
DATE	BY	REVISION

DESIGNED BY	CHECKED BY	DATE

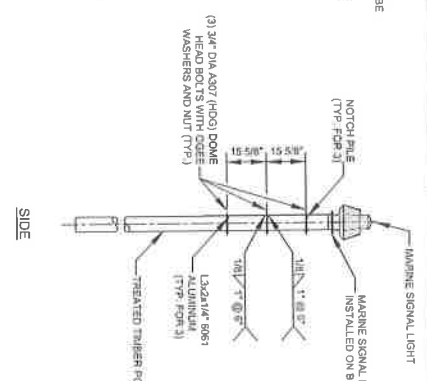


Tampabay
LAKE PONTCHARTRAIN
SHORELINE PROTECTION

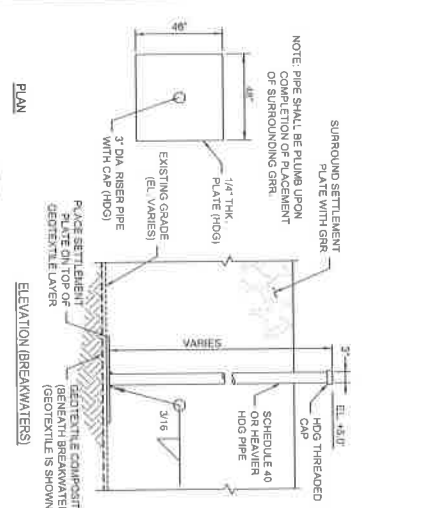
SECTION AND DETAILS III - PHASE 2	SCALE: AS SHOWN	SHEET: C13
-----------------------------------	-----------------	------------



1 DETAIL - LIGHTED DAYBEACON
NOT TO SCALE
C06 C14



2 DETAIL - TEMPORARY WARNING SIGN (TYPE 2)
NOT TO SCALE
C06 C14



3 DETAIL - SETTLEMENT PLATES
NOT TO SCALE
C06 C14

NOTES

- MARINE SIGNAL LIGHT SHALL BE PHAROS-C235 MEDIUM INTENSITY RED LENS. MARINE SIGNAL LANTERN TO BE MANUFACTURED BY PHAROS MARINE AUTOMATIC POWER, 188 TECHNOLOGY LN, GSM, LA, 70558, 882-228-9700 OR ENGINEER-APPROVED ALTERNATE. LIGHT SHALL MEET RED LENS AND HAVE AS MINIMUM, THE FOLLOWING PROPERTIES:
RANGE: 1 MILE
LENS: 1/2\"/>
- CONTRACTOR SHALL MAINTAIN TEMPORARY WARNING SIGNS UNTIL REMOVAL OF TEMPORARY STOCKPILES. REFER TO SPECIFICATION SECTION 01 00 SPECIAL CONDITIONS REGARDING PERMITS FOR TEMPORARY WARNING SIGNS.
- ALL SIGN FACES SHALL BE ORIENTED TO FACE PREDOMINANT APPROACH DIRECTION OF ONCOMING BOAT TRAFFIC.
- CONTRACTOR SHALL COORDINATE WITH U.S. COAST GUARD TO VERIFY REQUIREMENTS OF WARNING SIGNS BEFORE INSTALLATION. ANY CHANGES SHALL BE ATION COORDINATED WITH SECTION 01 00 SPECIAL CONDITIONS FOR ADDITIONAL REQUIREMENTS REGARDING WARNING SIGNS.
- SETTLEMENT PLATE LOCATIONS SHOWN ON SHEETS 555 TO 099 ARE SCHEMATIC. SETTLEMENT PLATES SHALL BE PLACED ALONG BREAKWATER CENTERLINE (CENTERLINE OF BREAKWATER PRESENT, MAXIMUM SPACING OF SETTLEMENT PLATES SHALL BE 1.00 FEET). SETTLEMENT PLATES SHALL BE IDENTIFIED IN THE BID DOCUMENTS. CONTRACTOR SHALL PROVIDE SETTLEMENT PLATE COORDINATES TO ENGINEER FOR APPROVAL AT LEAST 14 DAYS BEFORE INSTALLATION.



DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

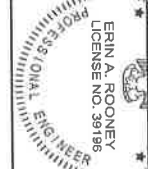
DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

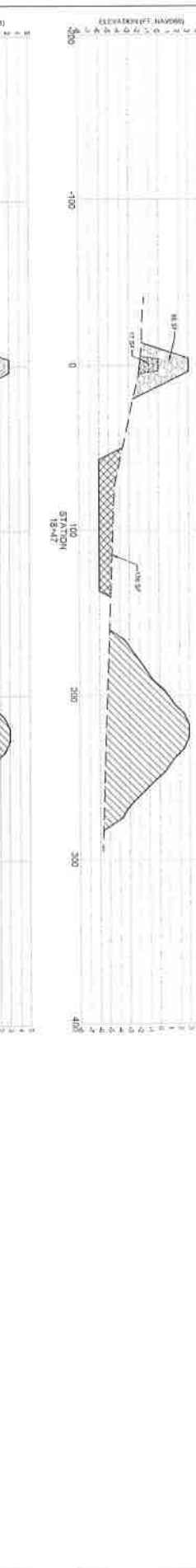
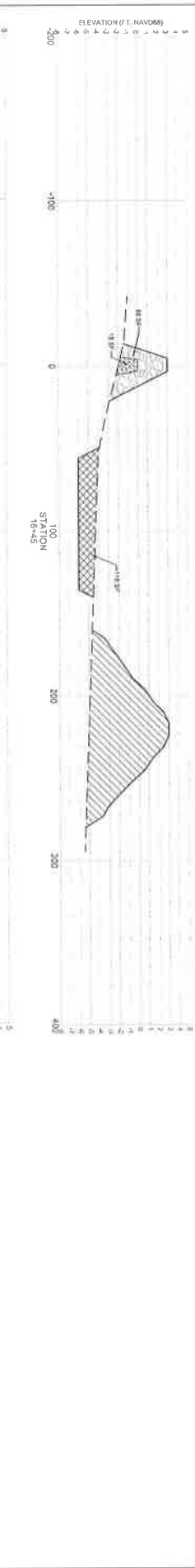
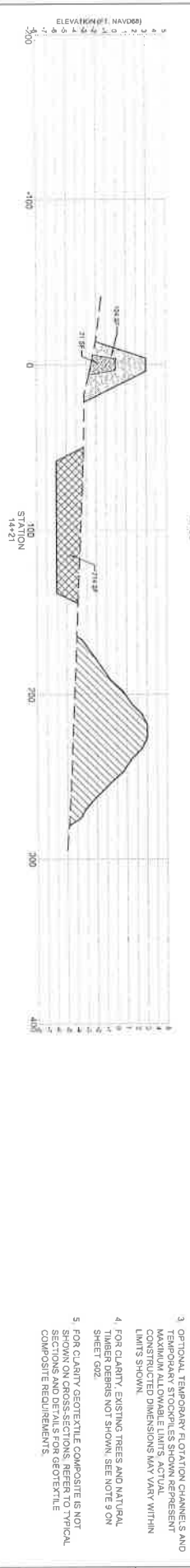
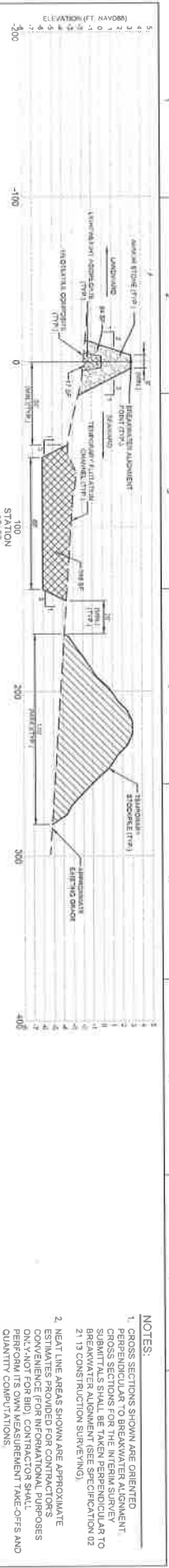
DATE	BY	NO. DOCUMENTS	DESCRIPTION
8.1.2022	ISSUED	140	DOCUMENTS

SECTIONS AND DETAILS IV
SCALE: AS SHOWN
SHEET: C14



Erin A. Rooney
2-6-2025

Tangipahoa
LAKE PONTCHARTRAIN
SHORELINE PROTECTION



- NOTES:
- CROSS SECTIONS SHOWN ARE ORIENTED PERPENDICULAR TO BREAKWATER ALIGNMENT. CROSS SECTIONS FOR TEMPORARY FLotation CHANNELS TO BE ORIENTED PERPENDICULAR TO BREAKWATER ALIGNMENT (SEE SPECIFICATION 02 21 13 CONSTRUCTION SURVEYING).
 - NEAT LINE AREAS SHOWN ARE APPROXIMATE ESTIMATES PROVIDED FOR CONTRACTORS CONVENIENCE (FOR INFORMATIONAL PURPOSES ONLY - NOT FOR BID). CONTRACTOR SHALL PERFORM ITS OWN MEASUREMENT TAKE-OFFS AND QUANTITY COMPUTATIONS.
 - OPTIONAL TEMPORARY FLotation CHANNELS AND TEMPORARY STOCKPILES SHOWN REPRESENT MAXIMUM ALLOWABLE LIMITS. ACTUAL DIMENSIONS MAY VARY WITHIN LIMITS SHOWN.
 - FOR CLARITY, EXISTING TREES AND NATURAL TIMBER DEBRIS NOT SHOWN. SEE NOTE 9 ON SHEET 002.
 - FOR CLARITY, GEOTEXTILE COMPOSITE IS NOT SHOWN ON CROSS SECTIONS. REFER TO TYPICAL SECTIONS AND DETAILS FOR GEOTEXTILE COMPOSITE REQUIREMENTS.



REV	DATE	DESCRIPTION
02/08/23	02/08/23	ISSUE FOR PERMIT

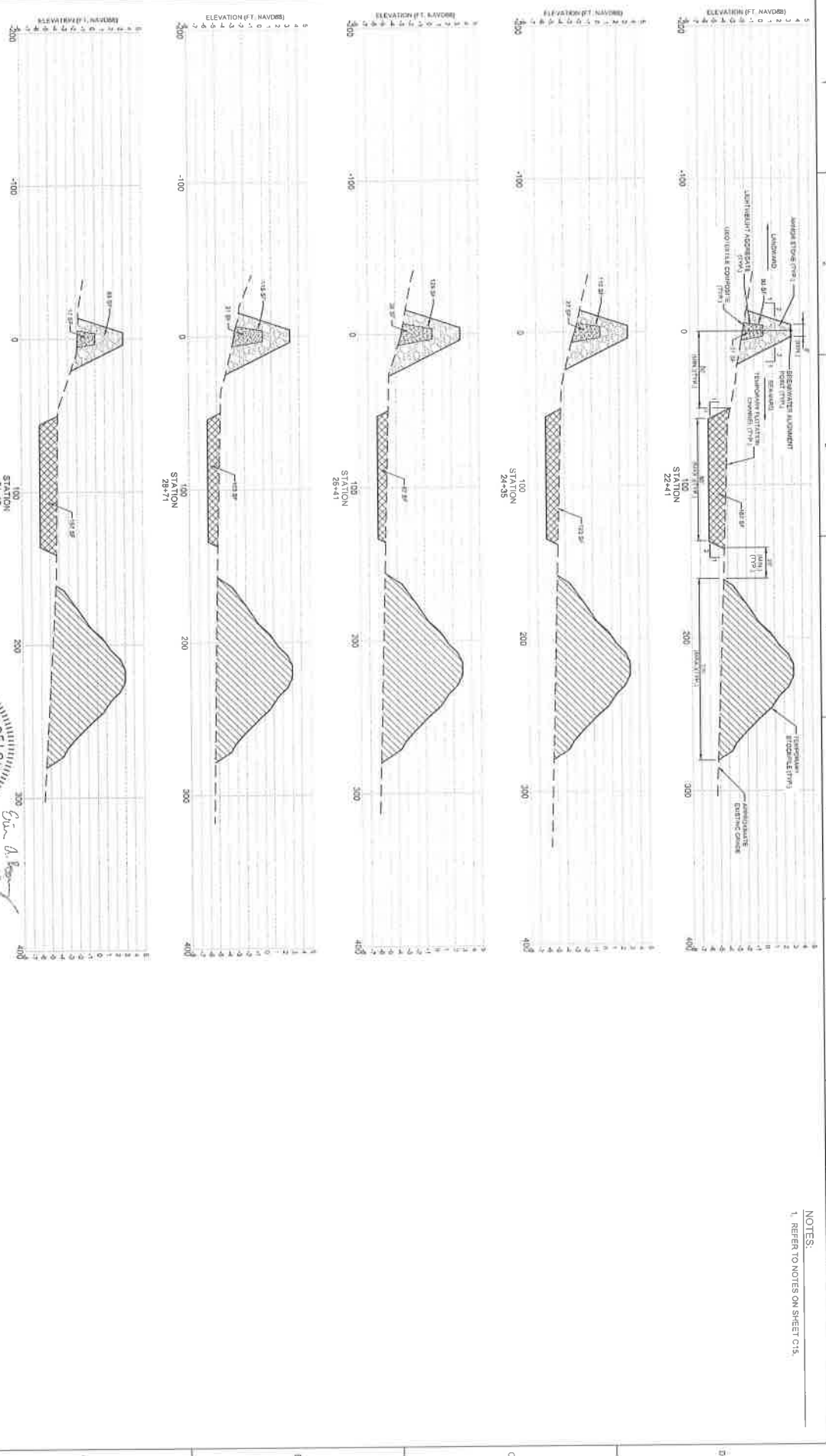
DESIGNER	CHECKER
E. ROONEY	J. BEAUCHAMP
D. HANLEY	C. CHERRY



Tangipahoa
LAKE PONTCHARTRAIN
SHORELINE PROTECTION

CROSS SECTIONS 1	
FILENAME	002-11.dwg
SCALE	AS SHOWN
CAD	C15

NOTES:
1. REFER TO NOTES ON SHEET C15.



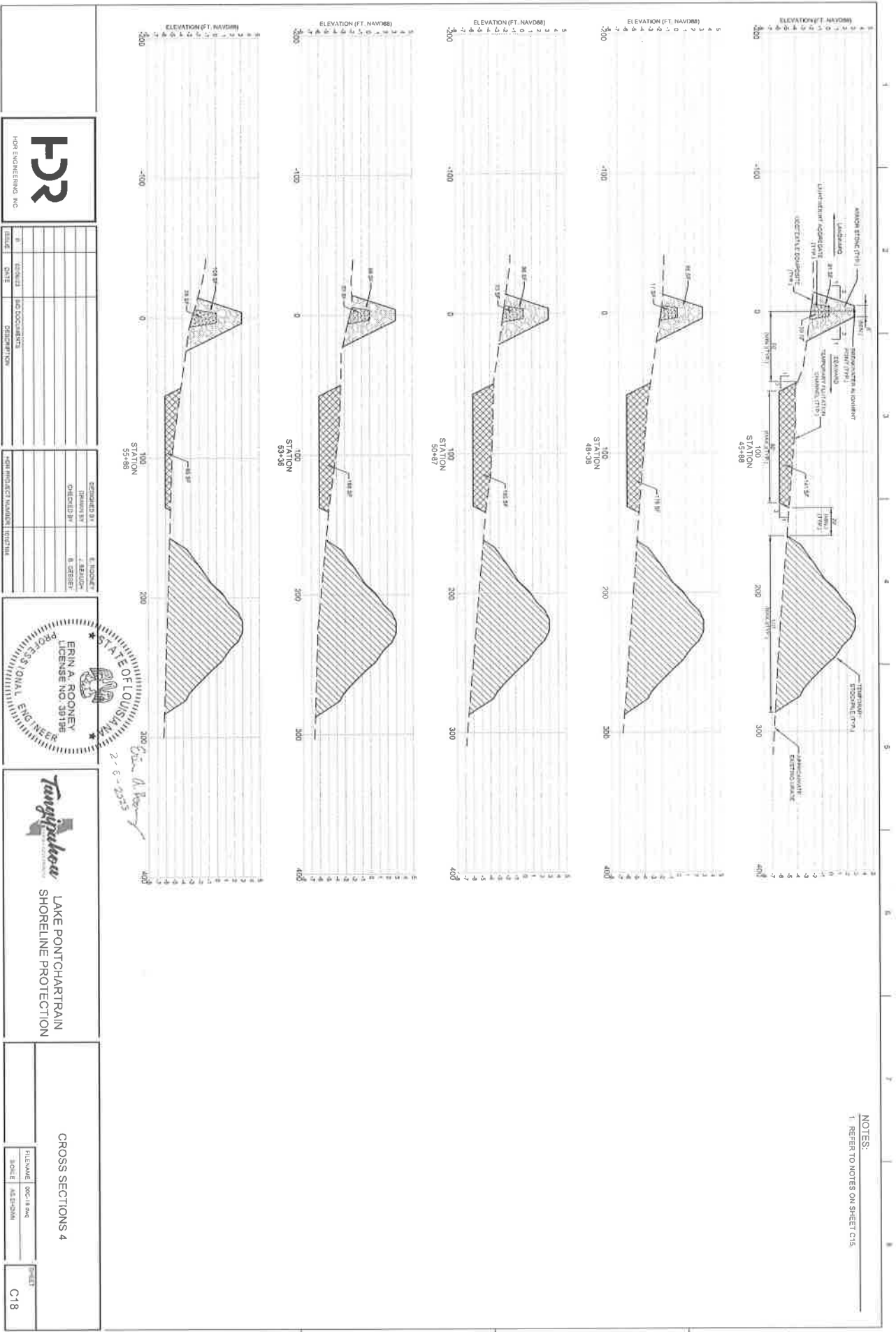
DATE	DWTS	DESCRIPTION
11/20/23	100	NO DOCUMENTS

DESIGNED BY	DRAWN BY	CHECKED BY	DATE
E. ROONEY	J. BLANCH	B. GREENE	



LAKE PONTCHARTRAIN
SHORELINE PROTECTION

CROSS SECTIONS 2	
FILE NAME	100-1100
SCALE	AS SHOWN
SHEET	C16



NOTES:
1. REFER TO NOTES ON SHEET C15

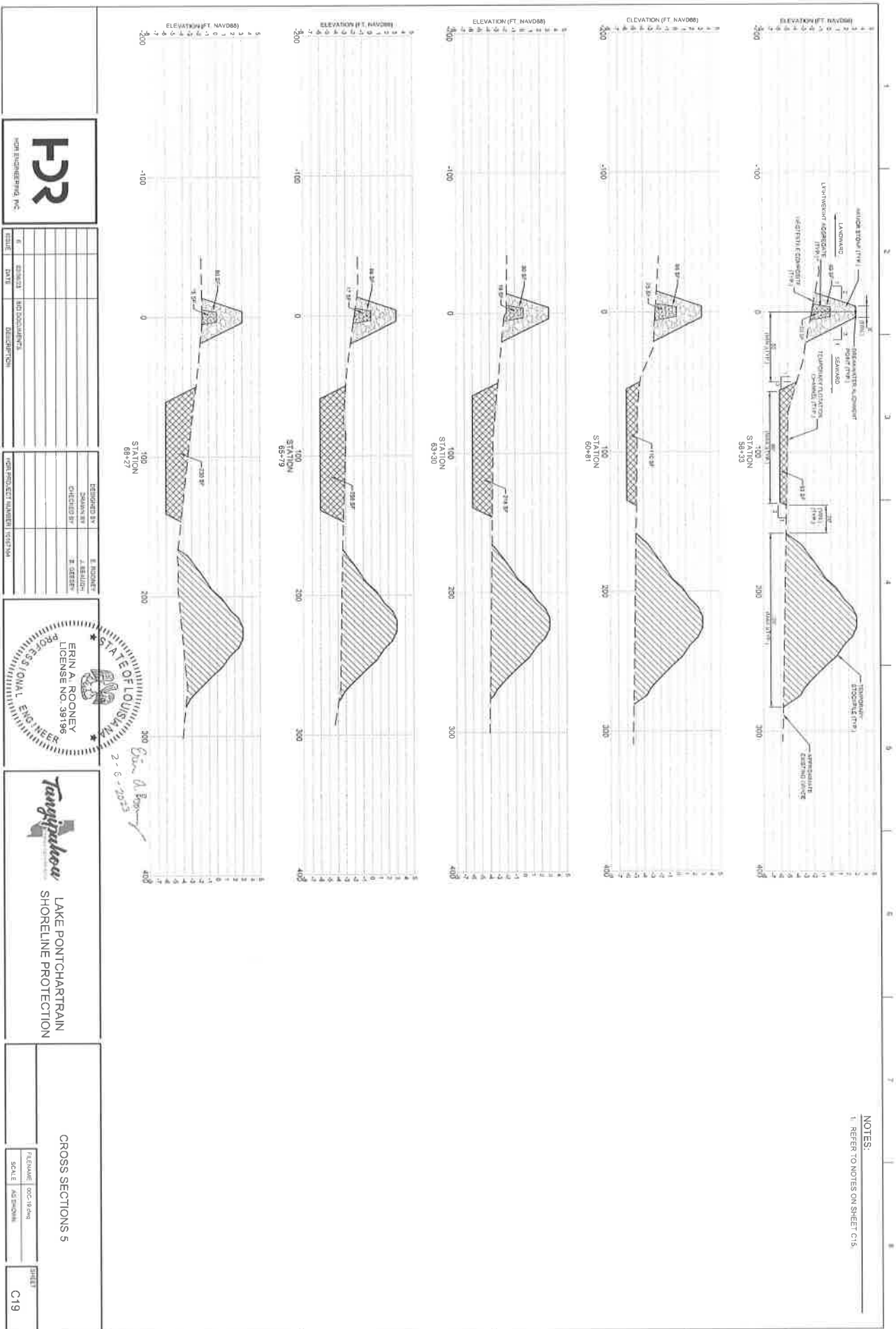


DATE	BY	REVISION	DESCRIPTION

ERIN A. ROONEY
PROFESSIONAL ENGINEER
LICENSE NO. 38188

Tangipahoa
LAKE PONTCHARTRAIN
SHORELINE PROTECTION

FILENAME	DATE	SCALE	PROJECT
000118.dwg		AS SHOWN	C18



NOTES:
 1. REFER TO NOTES ON SHEET C18



REVISION	DATE	BY	DESCRIPTION

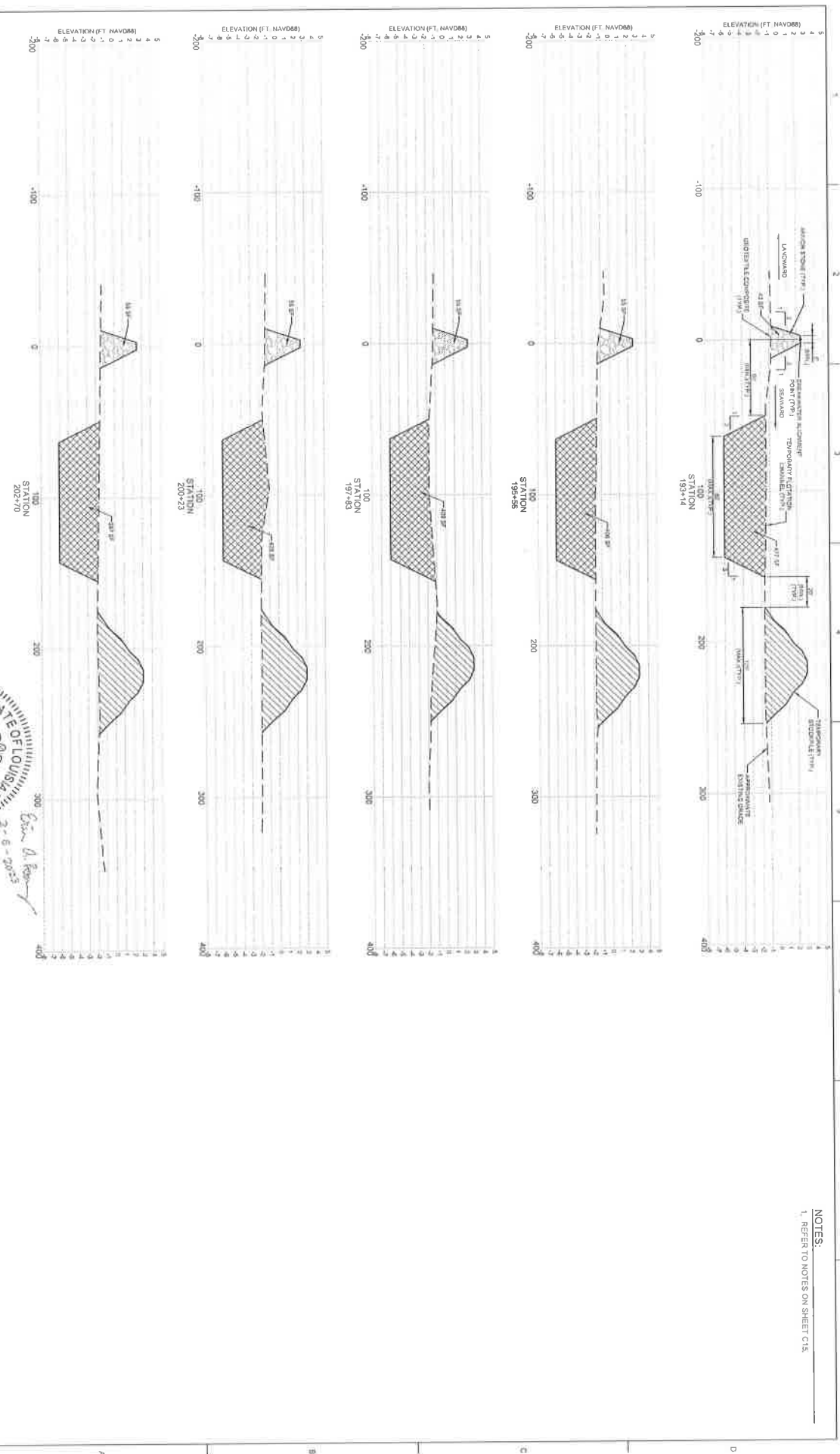
DESIGNED BY	E. TUCKER
CHECKED BY	J. BEALL
DATE	2/6/2025
PROJECT NUMBER	100374



Tangipahoa
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

CROSS SECTIONS 5
FILE NAME: 000-19.dwg
SCALE: AS SHOWN
PRINT: C19

NOTES:
1. REFER TO NOTES ON SHEET C15.



NO.	REVISIONS	DATE	BY	DESCRIPTION	HDR PROJECT NUMBER

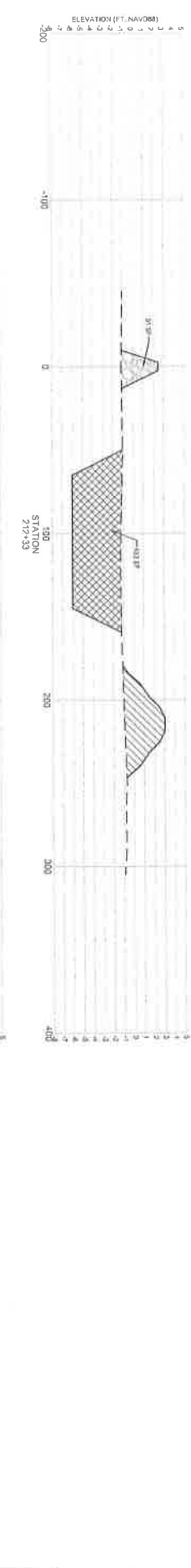
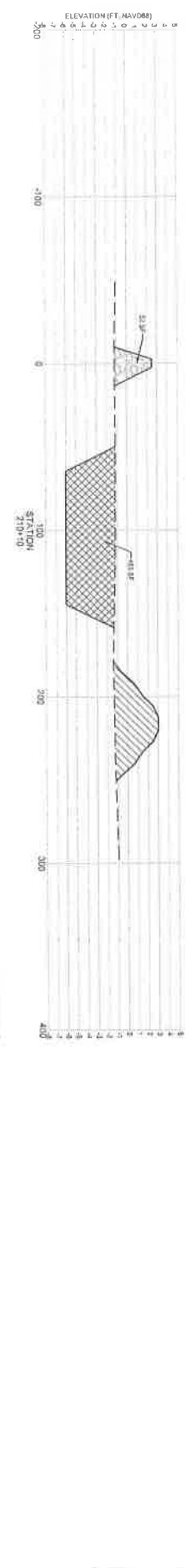
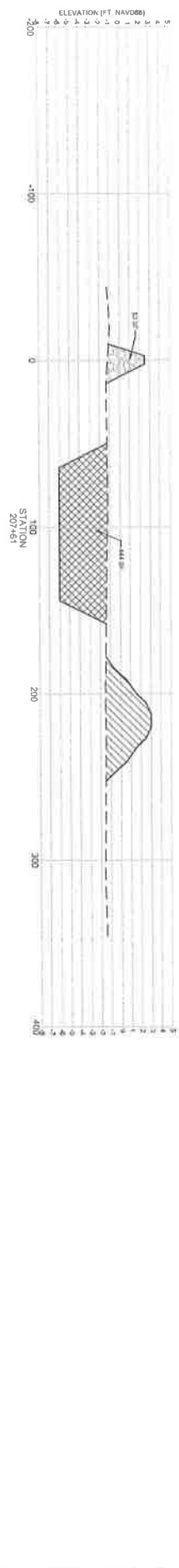
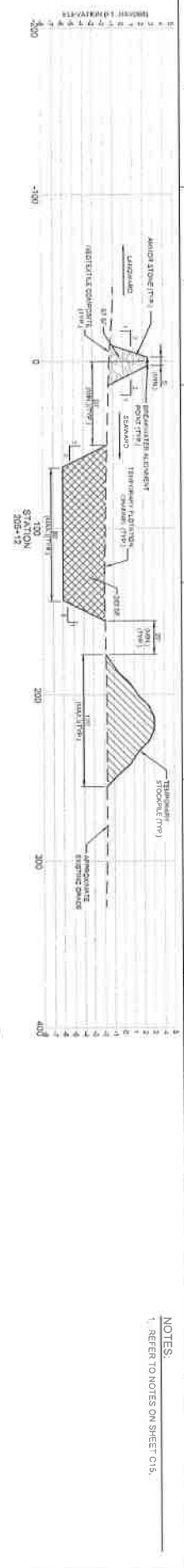
DESIGNED BY	E. ROONEY
DRAWN BY	J. BRADSHAW
CHECKED BY	E. GREENE



Tangipahoa SHREVEPORT
LAKE PONTCHARTRAIN
SHORELINE PROTECTION

CROSS SECTIONS	7
FILE NAME	189+14
SCALE	AS SHOWN
SHEET	C21

NOTES:
 1. REFER TO NOTES ON SHEET C15.



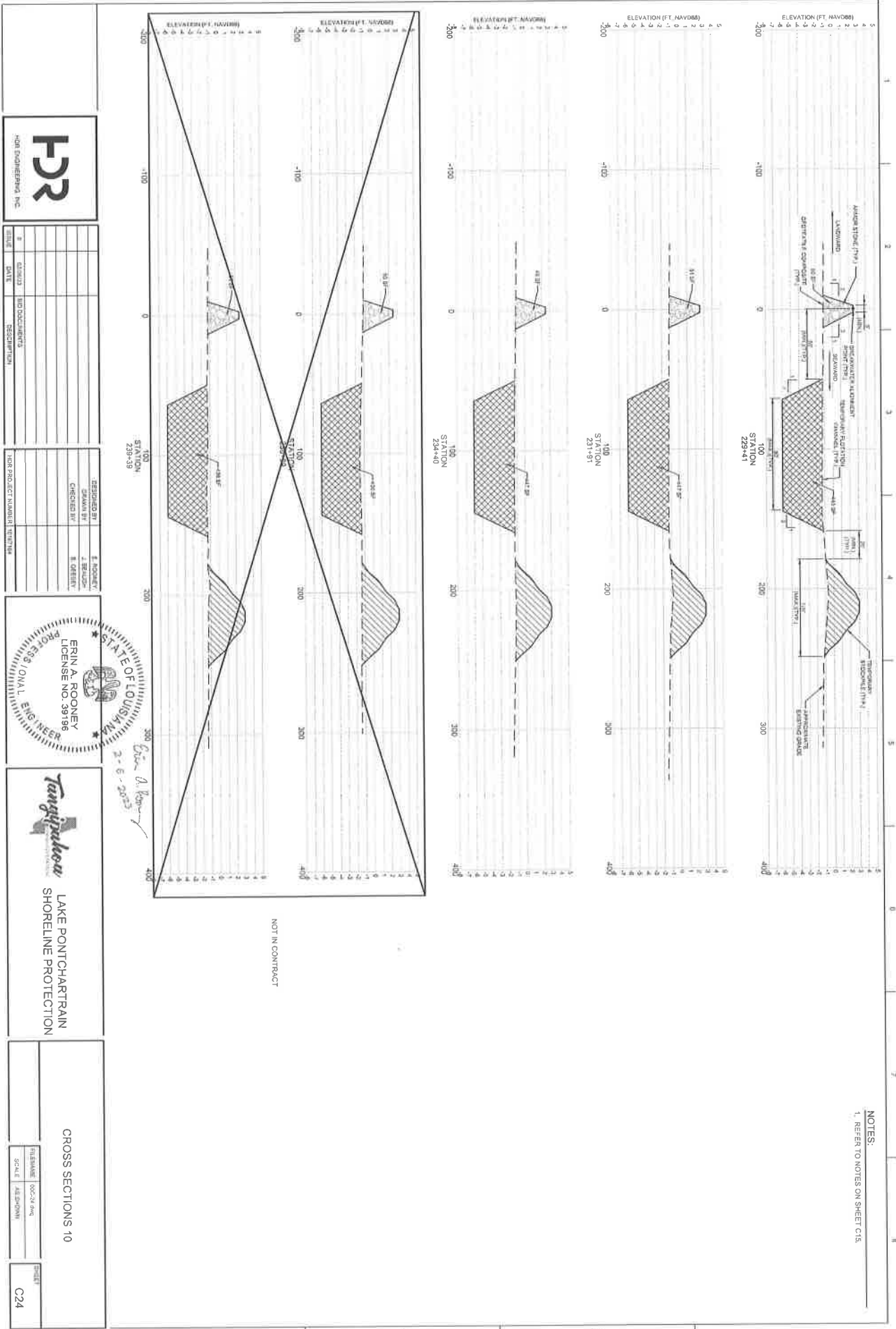
NO.	REVISION	DATE	BY	DESCRIPTION

DESIGNED BY	CHECKED BY	DATE
J. BEULCH	R. GIBBY	



Tampabay
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

CROSS SECTIONS 8	
DATE: 08-22-09	PROJECT: C22
SCALE: AS SHOWN	



NOTES:
1. REFER TO NOTES ON SHEET C15



NO.	DATE	REVISIONS	DESCRIPTION

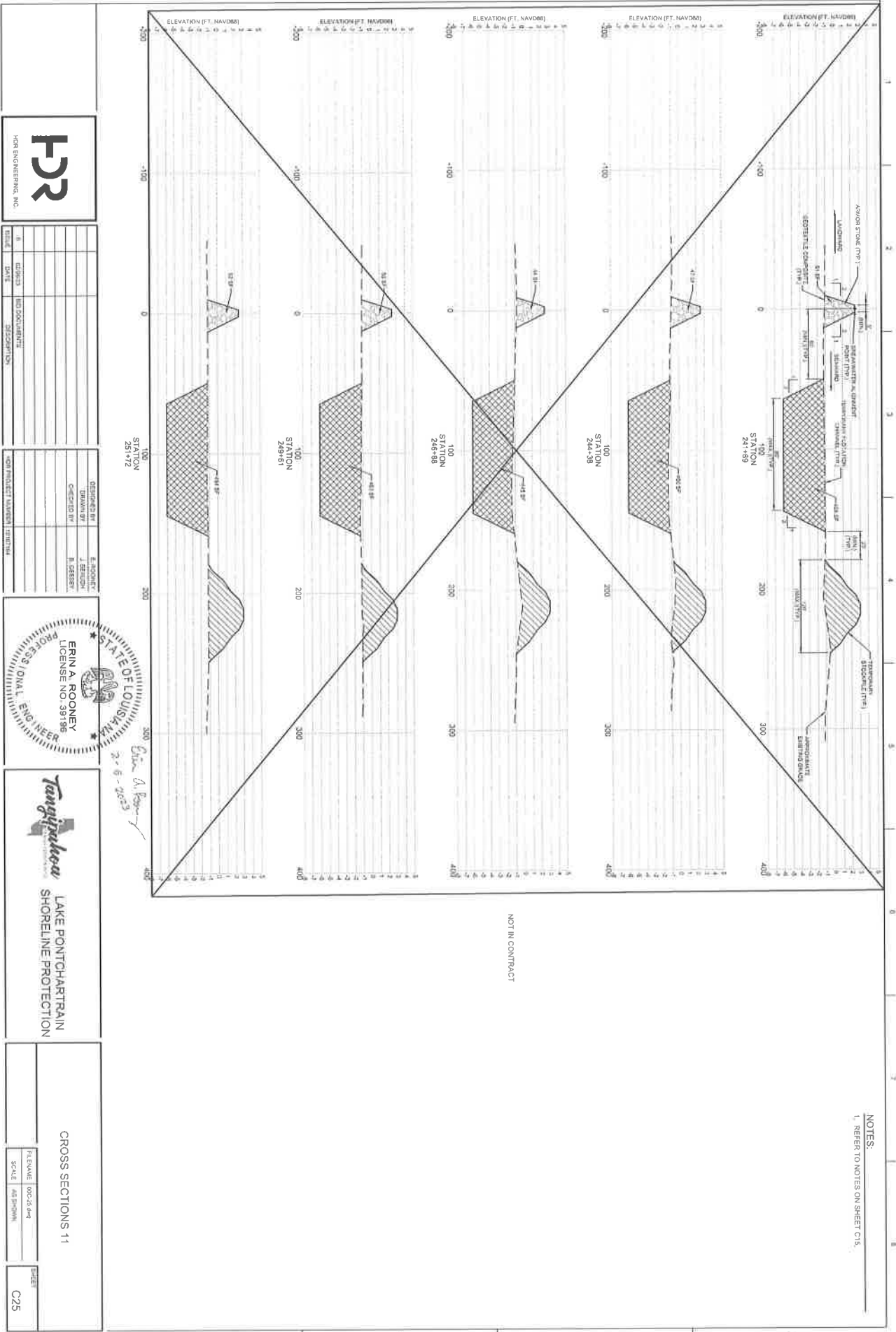
DESIGNED BY	E. ROONEY
CHECKED BY	J. BRADY
DATE	2-6-2023
PROJECT NUMBER	229-39



Tampabay
SHORELINE PROTECTION

CROSS SECTIONS 10	SCALE: AS SHOWN	DATE: C24
-------------------	-----------------	-----------

NOT IN CONTRACT



NOTES:
 1. REFER TO NOTES ON SHEET C15.

NOT IN CONTRACT



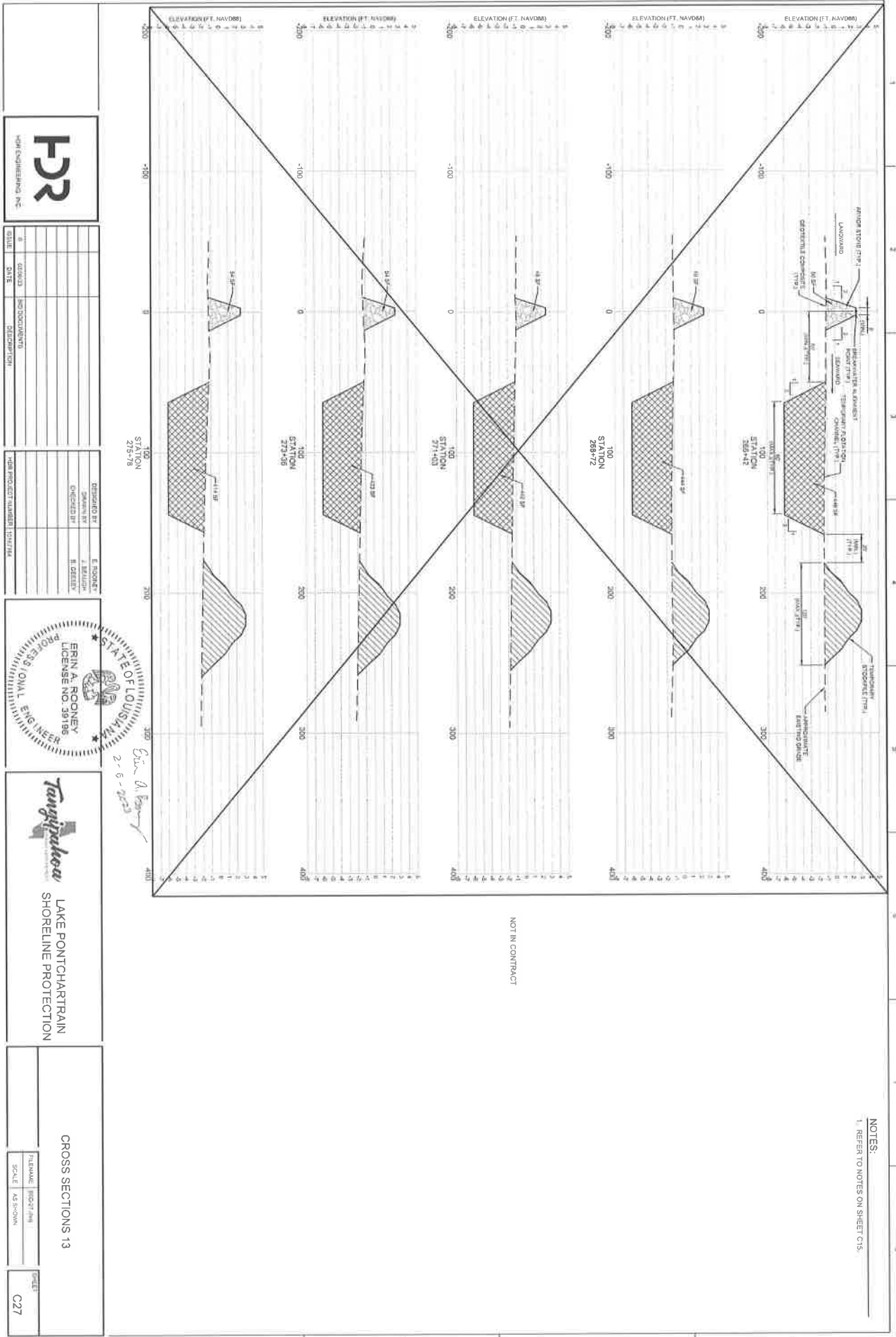
NO.	REVISION	DATE	BY	DESCRIPTION

DESIGNED BY D. WILSON	ENGINEER E. ROONEY
CHECKED BY R. GIBSON	PROJECT MANAGER S. BENTLEY



Tampabay
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

CROSS SECTIONS 11	
FILE NAME 00025.dwg	SHEET C25
SCALE AS SHOWN	



NOT IN CONTRACT

NOTES:
1. REFER TO NOTES ON SHEET 015.



DATE	REVISED	BY	REASON

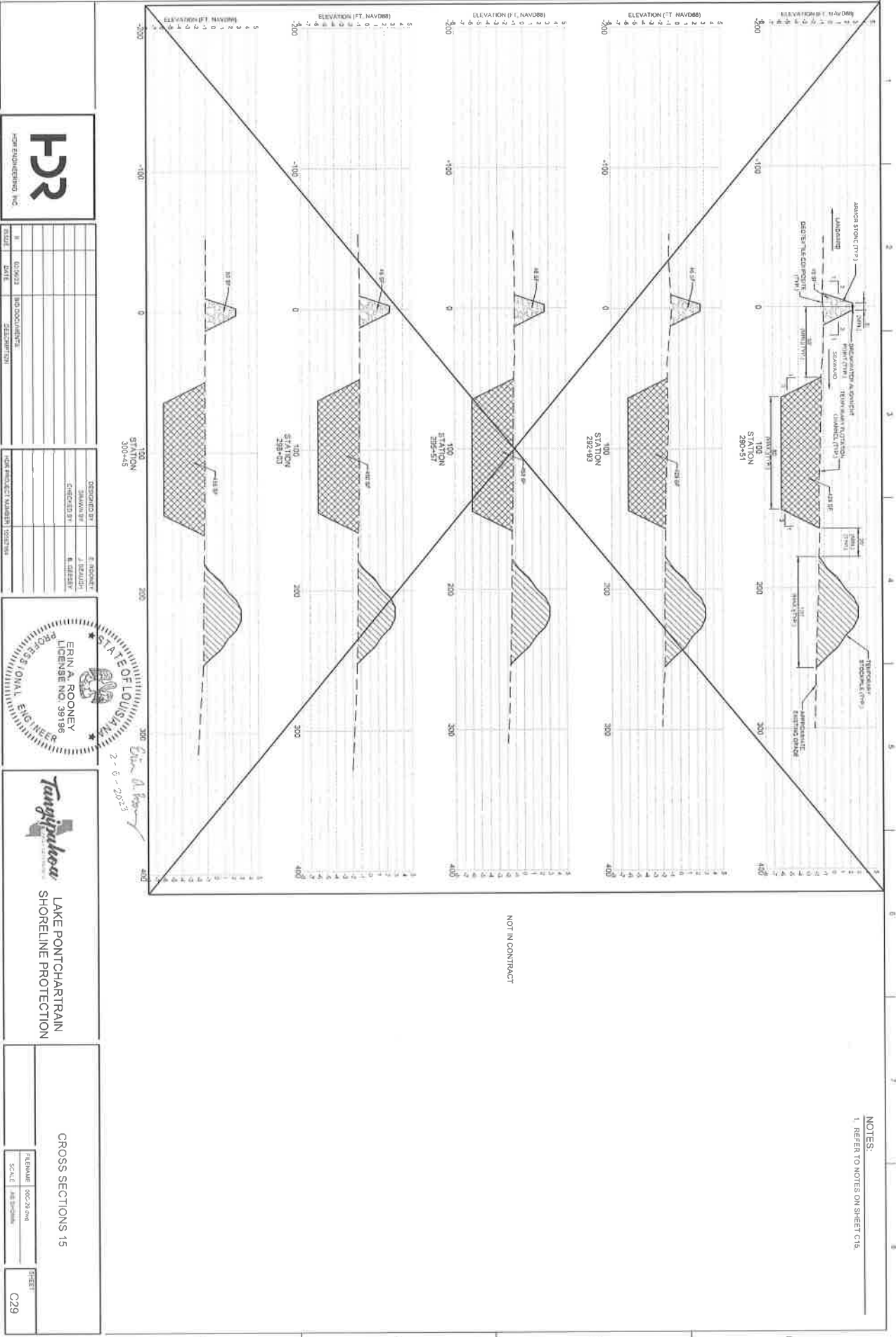
DATE	BY	REASON

DESIGNED BY: E. ROONEY
 CHECKED BY: J. BULLOCK
 DATE: 2-6-2023

STATE OF LOUISIANA
 PROFESSIONAL ENGINEER
 ERIN A. ROONEY
 LICENSE NO. 39196

Tampabay
 LAKE PONTCHARTRAIN
 SHORELINE PROTECTION

CROSS SECTIONS 13
 FILENAME: 13027.rvt
 SCALE: AS SHOWN
 SHEET: C27



NOTES:
1. REFER TO NOTES ON SHEET C15.



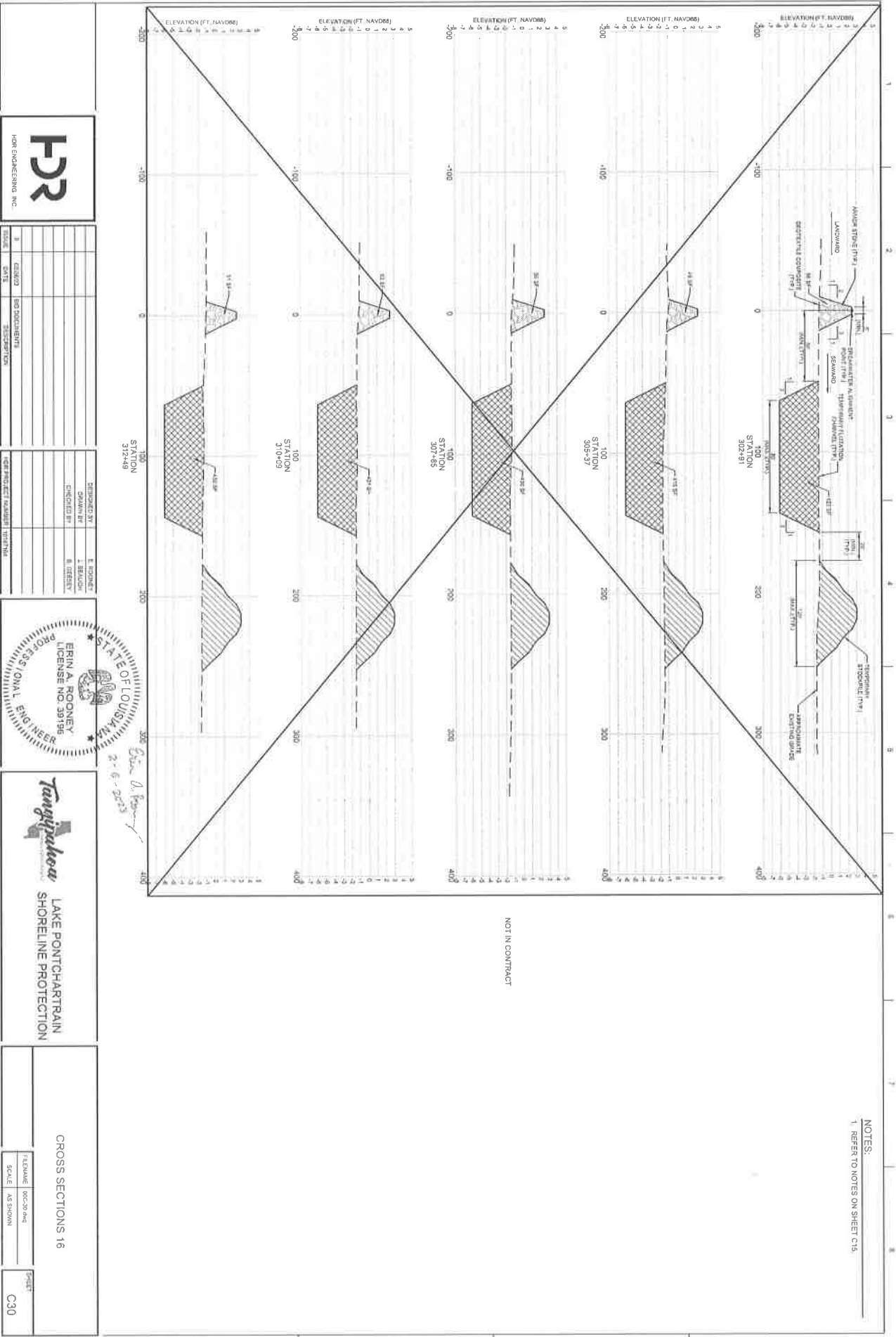
II	DESIGN	NO. 0000000000
III	DATE	00/00/00
IV	NO. 0000000000	0000000000

DESIGNED BY	SHAWN W.	E. PROJECT
CHECKED BY	J. BRADY	
DATE	00/00/00	



LAKE PONTCHARTRAIN
SHORELINE PROTECTION

CROSS SECTIONS 15
TITLEBLOCK SCALE: 1/8"=1'-0"
SHEET C29



NO.	REVISION	DATE	BY	DESCRIPTION
1	ISSUED			

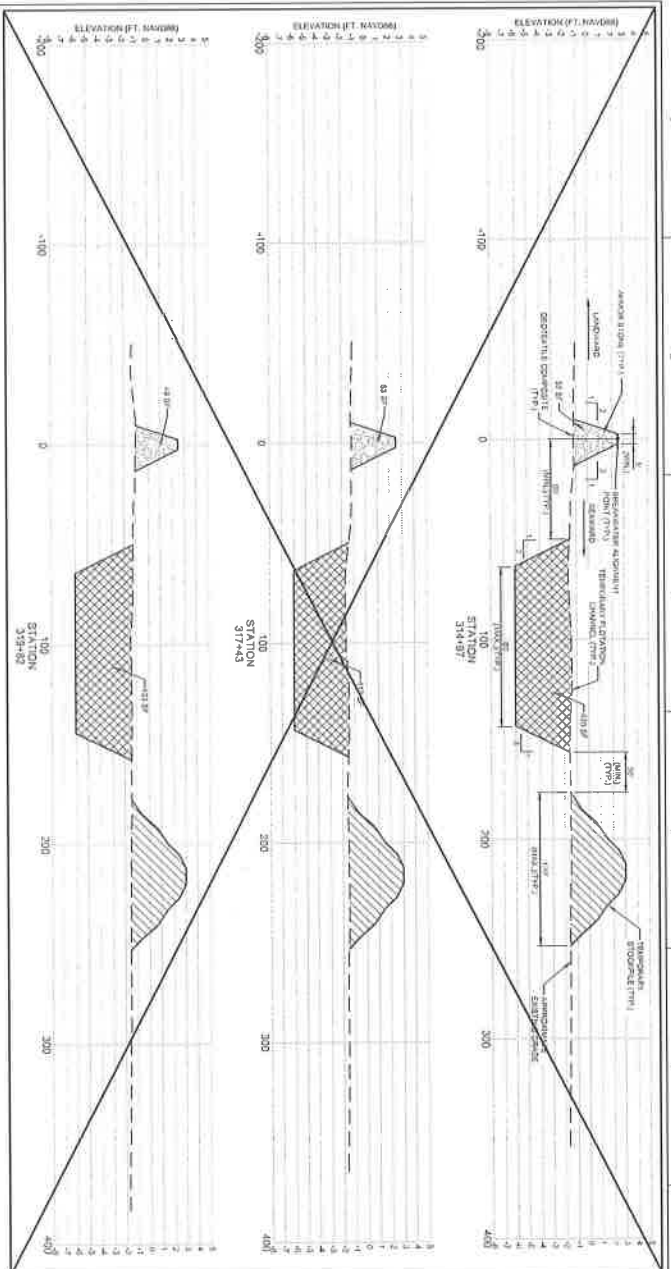
DESIGNED BY	CHECKED BY
E. KOONEY	B. GREENEY
DRAWN BY	



Tampabay
LAKE PONTCHARTRAIN
SHORELINE PROTECTION

CROSS SECTIONS 16	
TITLEBLOCK	SCALE AS SHOWN
PROJECT	
C30	

NOTES:
1. REFER TO NOTES ON SHEET C15.



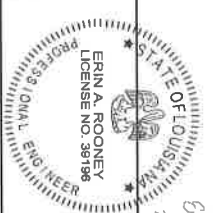
NOT IN CONTRACT

NOTES:
1. REFER TO NOTES ON SHEET C15.



NO.	REVISION	ISSUE DATE	DESCRIPTION

DESIGNED BY	J. BOALCH
CHECKED BY	E. GREEN
DATE	
PROJECT NUMBER	



Erin A. Rooney
2-6-2025



LAKE PONTCHARTRAIN
SHORELINE PROTECTION

CROSS SECTIONS 17	
RELEASED SCALE	AS SHOWN
SHEET	C31