

**CONTRACT DOCUMENTS
FOR**

**Raw Water Intake Structure Walkway
Edgard Water Treatment Plant**

April 2011

**ST. JOHN THE BAPTIST PARISH,
LOUISIANA**



EES PROJECT NO. 0933

PREPARED BY:

ENVIRONMENTAL ENGINEERING SERVICES, INC.

610 BELLE TERRE BOULEVARD

LAPLACE, LA 70068

PHONE (985) 653-0185

FAX (985) 653-0182

TABLE OF CONTENTS

	<u>Sheet</u>
Title Page	
Table of Contents	1 to 4

ADMINISTRATIVE SECTION

<u>Section Number</u>	<u>Description</u>	
00010	Advertisement for Bids	1 to 2
00100	Instruction to Bidders	1 to 8

BIDDING FORMS

<u>Section Number</u>	<u>Description</u>	
00300	Bid Form (<i>Yellow Sheets</i>)	1
00410	Bid Bond (<i>Yellow Sheet</i>)	1 to 2
00480	Affidavit (<i>Yellow Sheets</i>)	1 to 2
00485	Certificate as to Corporate Principal (<i>Yellow Sheets</i>)	1

CONTRACT FORMS

<u>Section Number</u>	<u>Description</u>	
00500	Agreement	1 to 4
00510	Affidavit	1
00520	Payment & Performance Bonds	1 to
00550	Hold Harmless Agreement	1
00560	Certificate of Owner's Attorney	1
00600	Notice of Award	1 to 3
00602	Notice to Proceed	1 to 2
00604	Change Order	1
00606	Certificate of Substantial Completion	1
00620	Application for Payment	1 to 2
00650	Work Change Directive	1 to 2

CONTRACT CONDITIONS

<u>Section Number</u>	<u>Description</u>	
00700	General Conditions of the Construction Contract (<i>Blue Sheets</i>)	1 to 34

DRAWINGS AND DETAILS

<u>Section Number</u>	<u>Description</u>	
00850	Drawings and Details	1

TABLE OF CONTENTS (CONTINUED)

TECHNICAL SECTION

DIVISION 1 - GENERAL REQUIREMENTS

<u>Section</u> <u>Number</u>	<u>Description</u>	<u>Sheet</u>
01010	Summary of Work	1 to 5
01025	Measurement and Payment	1 to 2
01030	Alternates/Alternatives	1
01035	Modification Procedures	1 to 3
01041	Project Coordination	1 to 7
01046	Modifications to Existing Structures, Piping, and Equipment	1 to 3
01048	Utilities Coordination	1 to 5
01050	Field Engineering	1 to 2
01060	Regulatory Requirements	1 to 2
01091	Reference Standards	1
01092	Abbreviations	1 to 17
01100	Special Project Procedures	1 to 8
01200	Project Meetings	1 to 3
01300	Submittals	1 to 2
01310	Progress Schedules	1 to 2
01340	Shop Drawings, Project Data, and Samples	1 to 8
01370	Schedule of Values	1 to 2
01380	Construction Photographs	1 to 5
01400	Quality Control	1
01410	Testing Laboratory Services	1 to 2
01420	Inspection Services	1 to 3
01435	Geotechnical Investigation Report	1
01505	Mobilization	1 to 2
01510	Temporary Utilities	1 to 3
01600	Material and Equipment	1 to 10
01700	Contract Closeout	1 to 5
01710	Cleaning	1 to 2
01720	Project Record Documents	1 to 3

DIVISION 2 - SITE CONSTRUCTION

<u>Section</u> <u>Number</u>	<u>Description</u>	<u>Sheet</u>
02030	Chain Link Security Fence	1 to 3

DIVISION 5 - METALS

<u>Section</u> <u>Number</u>	<u>Description</u>	<u>Sheet</u>
05010	Structural Steel	1 to 4
05020	Miscellaneous Steel Items, Fabrication and Erection	1 to 2

APPENDIX

<u>Section Number</u>	<u>Description</u>	<u>Sheet</u>
A	Geotechnical Investigation	1 to 24
B	Permits	1 to 19

ADMINISTRATIVE SECTION

ADVERTISEMENT FOR BIDS

St. John the Baptist Parish Council (herein referred to as the “Owner”)

Sealed bids shall be received by the Owner for the construction of the project described as follows:

Raw Water Intake Structure Walkway Edgard Water Treatment Plant

Bids shall be addressed to the St. John the Baptist Parish Council and delivered to the receptionist at the Parish President’s Office in the Percy Hebert Building, 1801 West Airline Hwy., LaPlace, LA no later than 2:45 o’clock P. M. on June 14, 2011. **Bid envelope shall be marked “Sealed Bid – Raw Water Intake Structure Walkway/Edgard Water Treatment Plant.”** Any bids received after the specified time and date will not be considered. The sealed bids will be publicly opened and read aloud at 3:00 o’clock P. M. that same date in the St. John the Baptist Parish Joel S. McTopy Council Chambers located at 1801 West Airline Hwy. LaPlace, LA.

The Information for Bidders, Form of Bid Proposal, Form of Contract, Plans, Specifications and Forms of Bid Bond, Performance Bond, insurance and other contract documents may be examined at the Office of **Environmental Engineering Services, Inc.** located at **610 Belle Terre Blvd., LaPlace, LA 70068, Phone No. (985) 653-0185.** Copies may be obtained at that office upon payment of \$100.00 which constitutes the cost of reproduction and handling. Details may be viewed and electronic bids are being accepted @ www.centralbidding.com.

The Owner reserves the right to accept or reject any and all bids and to waive any irregularities or informalities incidental thereto, and to accept any bid, which the Owner feels, serves their best interest. Such action will be in accordance with Title 38 of the Louisiana Revised Statutes.

Bids shall be received from Bidders only on the Bid Form in the Bidding Documents which is issued to him in his name, as provided in the Louisiana revised Statutes R.S. 37:2162(b). A single bid shall be submitted for all portions of the Contract Work.

Each Bidder must deposit with his/her bid, security in the amount equal to five percent (5%) of the total bid in the form of a certified check, cashier’s check or bid bond.

All bidders must show proof that he/she is licensed in the State of Louisiana to perform this type of construction. ***Contractor’s license number must appear on the face of the sealed envelope containing the bid.***

*St. John the Baptist Parish Council, being a government agency, is exempt from all sales tax. The vendor awarded the contract will be provided documentation to support their tax free purchases for this project. Therefore, **the amount you bid should contain no sales tax.***

The successful bidder will be required to furnish a Performance and Payment Bond written by a company licensed to do business in Louisiana, in the amount equal to one hundred percent (100%) of the contract price. Certificates of Insurance will also be required as specified in the bid package.

No bidder may withdraw his/her bid within forty-five (45) days after the actual date of opening thereof.

The Contractor shall begin mobilization and procurement of necessary materials within ten (10) working days of the receipt of the Notice to Proceed.

Any person with disabilities requiring Special Accommodation must contact The St. John the Baptist Parish Council Office at (985) 652-9569 no later than seven (7) days prior to bid opening. Participation by minority and female owned business, as well as businesses located in this Parish is encouraged.

ST. JOHN THE BAPTIST PARISH COUNCIL

Publish:

May 18, 2011

May 25, 2011

June 1, 2011

SECTION 00100

INSTRUCTION TO BIDDERS

1. DEFINED TERMS

The term "Bidder" means one who submits a Bid directly to Owner, as distinct from a "Sub-Bidder", who submits a Bid to the Bidder. The term "Successful Bidder" means the lowest, qualified, responsible, and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) proposes to make an award. The term "Bidding Documents" includes the Advertisement for Bids, Instructions to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids.)

2. COPIES OF BIDDING DOCUMENTS

- 2.1 Complete sets of Bidding Documents in the number and for the sum stated in the Advertisement for Bids may be obtained as stated in the Advertisement for Bids.
- 2.2 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents by Bidders and their Sub-Bidders.
- 2.3 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.
- 2.4 No Bidding Documents will be issued later than twenty-four (24) hours of the date set for receiving bids, as provided by Louisiana Revised Statutes R.S. 37:2162(b).

3. QUALIFICATIONS OF BIDDERS

- 3.1 Bidders on projects in the amount of fifty thousand dollars (\$50,000) or more shall be required to have a Louisiana contractor's license for the classification applicable to the work in compliance with Louisiana Revised Statutes R.S. 37:2150 et seq.
- 3.2 The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein.
- 3.3 Either of the following reasons may be considered as being sufficient for the disqualification of a Bidder and the rejection of his Bid proposal or proposals:

- a) More than one Bid received for the same work from an individual, firm or partnership, a corporation, or association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Bid for the same work will cause rejection of all such Bids in which the bidder is interested.
 - b) If there are reasonable grounds for believing that collusion exists among the Bidders, the Bids of participants in such collusion will not be considered. Participants in such collusion will receive no recognition as Bidders for any future work until any such participant shall have been reinstated as a qualified Bidder.
 - c) Default or delinquency and failure to have completed on time any contract in force with the Owner at the time of Bid opening.
- 3.4 Should a Bidder be disqualified, a written notice will be given which contains specific language stating the proposed disqualification with all reasons therefor. The Bidder will be given the opportunity to be heard at an informal hearing to refute the reasons for the disqualification. After the hearing and prior to award of the Contract, the Bidder will be given a written note of disqualification stating the reasons therefor if disqualification is found.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- 4.1 It is the responsibility of each Bidder, before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may in any manner affect cost, progress, performance or furnishing of the work, (c) consider federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress, performance or furnishing of the Work; (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents requiring correction, clarification, or interpretation.
- 4.2 Information and data reflected in the Contract Documents with respect to underground facilities at or contiguous to the site are based upon information and data furnished to Owner and Engineer by Owners of such underground facilities or others, and Owner does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- 4.3 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

- 4.4 On request in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the site to its former condition upon completion of such explorations.
- 4.5 The lands upon which the Work is to be performed, right-of-ways and servitudes for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by the Owner unless otherwise provided in the Contract Documents.
5. INTERPRETATIONS AND ADDENDA
- 5.1 All questions about the meaning or intent of the Contact Documents are to be directed to the Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten (10) days prior to the date for opening of Bids may not be answered. Only answers to questions by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 5.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.
- 5.3 No addenda will be issued within seventy-two (72) hours of the advertised bid time, exclusive of Saturdays, Sundays, and legal holidays without automatically extending the bid period for exactly one week unless designated otherwise for up to thirty (30) days, as provided by Louisiana Revised Statutes R.S. 38:2212(c).
6. BID SECURITY
- 6.1 Each Bid must be accompanied by Bid security made payable to Owner in an amount of five percent (5%) of the Bidder's maximum Bid price and in the form of a certified or cashiers check or a Bid Bond (on form attached) issued by a surety meeting the requirements of Section 21, Qualification of Surety Companies, of these Instructions to Bidders.
- 6.2 The Bid Security of the apparent Successful Bidder will be retained until such bidder has executed the Agreement and furnished the required Payment and Performance Bonds, whereupon the Bid Security will be returned. If the apparent Successful Bidder fails to execute and deliver the Agreement and furnish the required Bonds within fifteen (15) days of the Notice of Award, Owner may annul the Notice of Award, and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the thirty-first (31st) day after the Bid opening, whereupon Bid Security of such Bidders will be returned. Bid Security of other Bidders will be returned approximately seven days after the Bid opening. The Owner and the Bidder may mutually agree to extend

the ninety (90) calendar day period for holding the Bids and the Bid Security, as provided by Louisiana Revised Statutes R.S. 38:2215.

- 6.3 The Bid Bond shall be issued by a company having a registered agent in the State of Louisiana.

7. CONTRACT TIME

The number of consecutive calendar days within which the Work is to be completed (120 days) is set forth in the Agreement.

8. LIQUIDATED DAMAGES

Provisions for liquidated damages are set forth in the Agreement.

9. SUBSTITUTE MATERIALS OR PRODUCTS

- 9.1 Where the Drawings and Specifications identify a product by a specific brand, make, manufacturer, or definite specification it is to establish the required quality standard for the product regarding style, type, character, materials of construction, function, accessories, dimensions, appearance, and durability. Products which are determined to be equivalent by the Engineer will be acceptable. Products which are specified by a specific brand, make, or manufacturer's name may also be specified by its applicable model or catalog number or other product designation.

- 9.2 Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or equal" item of material or product may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the "effective date of the Agreement". The procedure for submittal of any such application and consideration by Contractor is set forth in Paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions.

10. SUBCONTRACTORS

- 10.1 All subcontractors being assigned a portion of the Work in the amount of fifty-thousand dollars (\$50,000) or more must possess a current Louisiana contractor's license of the proper classification, as provided by Louisiana Revised Statutes 37:2162(b). If requested by the Owner or Engineer, the apparent Successful Bidder, and any other Bidder so requested, shall, within seven (7) days after the date of the request, submit to Owner an experience statement with pertinent information as to similar projects and other evidence or qualification for each such Subcontractor, person and organization. The total amount of subcontract work shall not exceed forty-nine percent (49%) of the Work. If Owner or Engineer after due investigation has reasonable objection to any proposed Subcontractor, supplier, other person or organization, either may, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Contract Price or Contract Time.

11. BID FORM

- 11.1 The Bid Form is included with the Bidding Documents.

- 11.2 Bid form shall be completed in ink or by typewriter. All blanks on the Bid Form must be completed.
- 11.3 Bids shall be submitted in the Bidder's name which appears on the official records of the Louisiana State Licensing Board for Contractors.
- 11.4 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign), and the corporate seal must be affixed and attested by the secretary or any assistant secretary. The corporate address and state of incorporation must be shown below the signature. If requested, the person signing a Bid for a corporation or partnership must produce evidence satisfactory to the Owner of the person's authority to bind the corporation or partnership.
- 11.5 Bids by partnerships must be executed in the partnership name and signed by a partner whose title must appear under the signature, and the official address of the partnership must be shown below the signature.
- 11.6 All names must be typed or printed below the signature.
- 11.7 The Bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).
- 11.8 The address and telephone number for communications regarding the Bid must be shown.

12. SUBMISSION OF BIDS

Bids shall be submitted at or before the time and at the place indicated in the Advertisement for Bids. The envelope shall be marked on the exterior "**BID FOR CONTRACT – Raw Water Intake Structure Walkway/Edgard Water Treatment Plant**" and with the name and address of the Bidder and accompanied by the Bid Security and other required documents. All envelopes containing a Bid in the amount of fifty-thousand dollars (\$50,000) or more shall bear the BIDDER'S Louisiana contractors license number, as provided by Louisiana Revised Statutes 37:2163A. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "SEALED BID ENVELOPE ENCLOSED" on the face thereof.

13. MODIFICATION AND WITHDRAWAL OF BIDS

- 13.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the deadline for submitting Bids. A request for withdrawal or a modification must be in writing and signed by a person duly authorized to do so; and, in case signed by a deputy or subordinate, the principal's proper written authority to such deputy or subordinate must accompany the request for withdrawal or modifications. Withdrawal of a Bid will not prejudice the rights of a Bidder to submit a new Bid prior to the Bid Date and Time. After expiration of the period for receiving Bids, no Bid may be withdrawn or modified.

13.2 If, within forty-eight (48) hours of the Bid opening, exclusive of Saturdays, Sundays, and legal holidays, any Bidder files a duly signed, and sworn written notice with Owner to the satisfaction of Owner that there was a patently obvious mechanical, clerical, or mathematical error in its Bid, that Bidder may withdraw its Bid and the Bid Security will be returned as provided by Louisiana Revised Statutes 38:2214A.(3).

14. OPENING OF BIDS

14.1 Bids will be opened publicly and read aloud.

15. BIDS TO REMAIN OPEN

15.1 As provided by Louisiana Revised Statutes 38:2215A., all Bids shall remain open for thirty (30) calendar days after the day of the Bid opening, but Owner may, at its sole discretion, release any Bid and return the Bid Security prior to that date.

15.2 Extensions of time when Bids shall remain open beyond the thirty-day period may be made only by mutual agreement between the Owner, the apparent successful Bidder, and the surety for the apparent successful Bidder.

16. AWARD OF CONTRACT

16.1 For reasons of just cause, as provided by Louisiana Revised Statutes 38:2214A., the Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work with the Successful Bidder, and the right to disregard all nonconforming, nonresponsive, unbalanced or conditional Bids. Bids which are unsigned or are not accompanied by the required bid security shall be irrevocably rejected. When one or more bids is rejected, the reason therefor shall be given. Bids may be considered irregular and subject to rejection if they show serious omission, unauthorized alteration of form, unauthorized alternate bids, incomplete or unbalanced unit prices, or irregularities of any kind. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. Discrepancies between words and figures will be resolved in favor of words. Discrepancies in 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.

16.2 In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data as may be requested in the bid Form or prior to the Notice of Award.

- 16.3 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- 16.4 If the contract is to be awarded, it will be awarded to the lowest responsible, responsive Bidder for the Base Bid and any alternates as selected by the Owner.

17. QUALIFICATIONS SUBMITTALS

- 17.1 It is the intention of the Owner to award this contract to a Bidder competent to perform and complete the Work in a satisfactory manner and who proposed to employ subcontractors, if any, competent to perform their portion of the Work in a satisfactory manner.
- 17.2 The Owner shall consider the Bidder qualifications, subcontractors, and suppliers in evaluating the Bidder's bid and shall have the right to reject any Bidder because of information submitted, not submitted, or fraudulently submitted.
- 17.3 Should the Owner request information about the Bidder and proposed subcontractors, Bidder shall submit within seven (7) days of Owner's request the specific additional information requested by the Owner.

18. TAXES

The Contractor shall pay all applicable sales, consumer, use and other similar taxes required by law. The Contractor is responsible for reviewing the pertinent State Statutes involving the sales tax and complying with all requirements.

19. RELATED WORK UNDER SEPARATE CONTRACTS

The Bidder's attention may be directed to the fact that the Work to be done under this contract may be only part of a Project consisting of improvements under several different contracts, that contracts may be let for the other portions of the Project, and that the success of the Project may be dependent upon the completion of the Work under this contract and the work to be done by others.

20. SIGNING OF AGREEMENT

When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within fifteen (15) days thereafter, Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds and insurance certificates. Within ten (10) days thereafter, Owner shall deliver one fully signed counterpart to Contractor.

21. QUALIFICATIONS OF SURETY COMPANIES

In order to be acceptable to the Owner, a surety company issuing Bid Guaranty Bonds, or one-hundred percent (100%) Performance/Payment bonds, and/or twenty-five percent (25%) Maintenance Bonds, called for in these Specifications, shall meet and comply with the following minimum standards:

- a. Surety must be admitted to do business in the State of Louisiana and shall comply with the provisions of Revised Statute 38:2241.
- b. Surety shall have been in business and have a record of successful continuous operations for at least five years.
- c. Attorneys-in-fact who sign bid bonds or performance/payment bonds must file with such bond a certified copy of their power of attorney to sign such bond.
- d. Agents of surety companies must list their name, address and telephone number on all bonds.
- e. Bonds shall be countersigned by a person who is contracted with the surety company as an agent, and who is licensed as an insurance agent in Louisiana and who resides in Louisiana, as provided by Louisiana Revised Statutes 38:2216A.(2).
- f. All surety companies submitting bonds shall have a rating of "A-" or better in the most current edition of the A.M. Best Insurance Report.
- g. The life of the bonds shall extend twelve (12) months beyond the date of final payment and shall contain a waiver of alteration to the terms of the Contract, extension of time and/or forbearance on the part of the Owner.

22. EXECUTION OF WRITTEN CONTRACT

The Successful Bidder will be required to execute a written contract with the Owner which has been made a part of this bid package and identified as the Agreement. Said Agreement will evidence in written form the Agreement between the parties pursuant to the award having been theretofore made by the Owner to the Successful Bidder; said execution to be accomplished with fifteen (15) days after Notice of Award.

END OF SECTION

BIDDING FORMS

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: St. John the Baptist Parish
1801 West Airline Hwy
LaPlace, LA 70068

BID FOR: Raw Water Intake Structure Walkway
Edgard Water Treatment Plant
EES Project No. 0933

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: Environmental Engineering Services, Inc., LaPlace, LA. and dated: April 2011

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):

Addendum No. ____	Addendum Date: _____	Addendum No. ____	Addendum Date: _____
Addendum No. ____	Addendum Date: _____	Addendum No. ____	Addendum Date: _____
Addendum No. ____	Addendum Date: _____	Addendum No. ____	Addendum Date: _____

TOTAL BASE BID: For all work required by the Bidding Documents, the lump sum of:

_____ Dollars (\$ _____)
(price in words) (price in numbers)

ALTERNATES: None.

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

TELEPHONE NUMBER AND E-MAIL ADDRESS: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

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

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

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

SECTION 00410

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____, as Principal (Bidder), and _____ as Surety, are hereby held and firmly bound unto St. John the Baptist Parish as Owner, in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns. Signed, this _____ day of _____, 20____. The Condition of the above obligation is such that whereas the Principal has submitted to the Owner a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the Work specified in Contract No. 0933, Raw Water Intake Structure Walkway/Edgard Treatment Plant.

NOW THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a Contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish bonds for his faithful performance of said Contract and for furnishing materials in connection therewith and shall in all other respects perform the Agreement created by the acceptance of said Bid,

then this obligation shall be void; otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal (Bidder): _____

Surety: _____

ADDRESS: _____

ADDRESS: _____

BY: _____ (SEAL)

BY: _____ (SEAL)

TITLE: _____

TITLE: _____

SIGNATURE: _____

SIGNATURE: _____

IMPORTANT - Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Louisiana, and the bond shall be countersigned by a resident agent domiciled in and who is licensed to do business in the State of Louisiana.

END OF SECTION

SECTION 00480

NON-COLLUSION AND NON-SOLICITATION AFFIDAVIT

CONTRACT NAME: Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

_____, being first duly sworn,
(Name of Authorized Representative of Bidder)
first duly sworn, deposes and says that:

1. He is the _____ of
(Owner, Partner, Officer, Representative or, Agent)
_____, the Bidder,
(Name of Bidder)
and that the Bidder has submitted the accompanying Bid for the construction of the above Contract;
2. He is fully informed respecting the preparation and contents of the Bid and of all pertinent circumstances respecting the Bid;
3. The Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affidavit, have in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm, or person to submit a collusive or sham Bid in connection with the Contract or Work for which the attached Bid has been submitted; or to refrain from bidding in connection with such Work; or have in any manner, directly or indirectly, sought by agreement, collusion, communication, or conference with any Bidder, firm, or person to fix the price or prices in the Bid or the Bid of any other Bidder; or to fix any overhead, profit, or cost elements of the Bid price or the Bid price of any other Bidder; or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the Owner, or any person interested in the proposed Work;
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any other of its agents, representatives, owners, employees, or parties in interest, including this affidavit;
6. That he has employed no one person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he is to receive payment, other than persons regularly employed by him whose services in connection with the construction of the public building or project or in securing the public contract were in the regular course of their duties for him; and that no part of the Contract Price to be received by him 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 him whose services in connection with the construction of the public building or project were in the regular course of their duties for him;

7. This affidavit is executed in compliance with the provisions of Louisiana Revised Statutes 38:2219.

Bidder _____

By _____

Title _____

Subscribed and sworn to before me

this ___ day of _____, 20___ at _____, Louisiana

My commission expires _____.

END OF SECTION

SECTION 00485

AUTHORITY TO EXECUTE CONTRACT

If the Bidder is a Corporation, attach to this page a certified copy of corporate resolutions of the Board of Directors of the Corporation authorizing an officer of the Corporation to execute the Agreement contained within this document on behalf of the Corporation.

END OF SECTION

CONTRACT FORMS

SECTION 00500

AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2011 by and between the St. John the Baptist Parish, hereinafter called the OWNER, and, _____ hereinafter called the CONTRACTOR.

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents for the above Contract. The Work is generally described as follows:

Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

ARTICLE 2. ENGINEER

The Project has been designed by **Environmental Engineering Services, Inc.** who is hereinafter called ENGINEER and who will assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

- 3.1 The CONTRACTOR shall be commence work under this Contract on a date to be specified by written order of the Engineer. Time of performance is of the essence of the Contract and the work shall be complete, as certified by the Engineer, within **100** calendar days, from the date of commencement of the work.
- 3.2 Liquidated Damages - OWNER and CONTRACTOR recognize that the OWNER will suffer direct financial loss if Work is not completed within the Contract times specified in paragraph 3.1 above plus any extensions thereof allowed in accordance with Article 12 of the General Conditions, and therefore, time is of the essence. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, CONTRACTOR agrees to forfeit and pay OWNER as liquidated damages for delay (but not as a penalty) the amount of **\$500.00** for each calendar day that expires after the Contract Time specified in paragraph 3.1 for final completion and ready for final acceptance until the Work is completed.

ARTICLE 4. CONTRACT PRICE

- 4.1 OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents in current funds at the lump sum or unit prices presented in the Schedule of Prices. The Contractor agrees to perform all of the work described in these documents for the sum of \$_____.

- 4.2 The parties expressly agree that the Contract Price is a stipulated sum except with regard to the items in the Bid which are subject to unit prices.

ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

- 5.1 Progress Payments. OWNER shall make progress payments on account of the Contract price on the basis of CONTRACTOR's Applications for Payment, as recommended by ENGINEER, on or about the thirtieth (30th) day following receipt by the OWNER.

Progress payments will be based upon estimated quantities of completed Contract unit price items or upon estimated percentages of completion of the schedule of lump sum values of labor and materials incorporated into the Work on the last day of each month or other mutually agreed regular monthly date ending the progress payment period. No allowance will be made for materials received which have not been incorporated into the Work except where the Contract price is based on a lump sum bid and is not computed on the basis of unit price items.

- 5.2 Retainage. Retainage shall be withheld and payments will be made by the OWNER in the payment amount of ninety percent (90%) of the approved Payment Applications on a Contract amount of less than five hundred thousand dollars (\$500,000) and in the payment amount of ninety-five percent (95%) of the approved Payment Applications on a Contract amount of five hundred thousand dollars (\$500,000) or more.

- 5.3 Final Acceptance and Final Payment. Upon the final completion of all Work and upon completion of the lists of items identified in the punch list prepared by the Engineer, the CONTRACTOR may request a final inspection and may make a final Application for Payment as provided by paragraph 14.12 of the General Conditions, upon the OWNER's Certificate of Completion.

The Certificate of Completion is filed by the Contractor with the Recorder of Mortgages of the Parish in which the work was done. This begins the not-less-than-forty-five (45) day lien period as prescribed for public works by Louisiana Revised Statutes 38:2248.

At the expiration of the lien period it is the CONTRACTOR's responsibility to obtain a certificate from the Recorder of Mortgages that the Contract is clear of any liens or privileges, and said certificate shall be presented to the ENGINEER for final payment and release of retainage, less any such sums as may be lawfully withheld under the Contract.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

- 6.1 CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or finishing of the Work.
- 6.2 In exercising its responsibility with respect to subsurface conditions and physical conditions at the site, Contractor has or will obtain or perform at no additional cost to the Owner such additional examinations, investigations, explorations, tests, reports, studies, or similar information or data as may be required by Contractor for such purposes.

ARTICLE 7. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR are attached to this Agreement, made a part hereof and consist of the following:

- 7.1 This Agreement.
- 7.2 Construction Performance and Payment Bonds and Insurance Certificates.
- 7.3 Notice of Award and Notice to Proceed, Change Order and Certificate of Completion.
- 7.4 General Conditions.
- 7.5 Duties, responsibilities and limitations of authority of resident project representative.
- 7.6 Technical Specifications.
- 7.7 Drawings.
- 7.8 Addenda (N/A).
- 7.9 Contractor's Bid.
- 7.10 Documentation submitted by Contractor prior to Notice of Award, if any required.
- 7.11 Non-collusive and Non-solicitation Affidavit and authority to execute contract.
- 7.12 All applicable provisions of State and Federal law and any Modification, including all Change Orders, duly delivered after execution of Agreement.

ARTICLE 8. MISCELLANEOUS

- 8.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions shall have the meanings indicated in the General Conditions, as modified in the Supplementary Conditions.

- 8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are 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 Documents. Notwithstanding the foregoing, the OWNER may assign this contract to the State of Louisiana or any political subdivision, municipality, special district or authority thereof without CONTRACTOR's consent and without recourse.
- 8.3 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
- 8.4 CONTRACTOR shall pay promptly, before final payment, any and all claims or liens incurred in and about this Work and shall execute a final receipt form.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Agreement will be effective on _____, 20__.

OWNER: St. John the Baptist Parish CONTRACTOR: _____

By Natalie Robottom

By _____

Title Parish President

Title _____

Signature _____

Signature _____

Attest _____

Attest _____

(SEAL)

(SEAL)

Louisiana State Contractor
License No. _____

(If CONTRACTOR is a corporation, attach evidence of authority to sign.)

SECTION 00510

CONTRACTOR'S AFFIDAVIT

STATE OF LOUISIANA
PARISH OF _____

BEFORE ME, the undersigned authority, personally came and appeared:

who, being first duly sworn did depose and say:

That he is a Contractor receiving value for services rendered in connection with the construction of the Raw Water Intake Structure Walkway/Edgard Water Treatment Plant a public project for the Parish of St. John the Baptist, Louisiana that he has employed no one person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by him whose services in connection with the construction of the public building or project or in securing the public contract were in the regular course of their duties for him; and that no part of the Contract Price received by him was paid or will be paid to any person, corporations, firm, association, or other organization for soliciting the Contract, other than the payment of their normal compensation to persons regularly employed by him whose services in connection with the construction of the public building or project were the regular course of their duties for him:

That the affidavit is executed in compliance with the provisions of L.R.S. 38:2224.

SWORN TO AND SUBSCRIBED before me, on this _____ day of _____
20____, Louisiana.

Notary Public

END OF SECTION

SECTION 00520

PAYMENT BONDS

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter
(Corporation, Partnership, or Individual)

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

St. John the Baptist Parish
(Name of Owner)

1801 West Airline Hwy., LaPlace, LA 70068
(Address of Owner)

hereinafter called Owner, in the penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum
well and truly to be made, we bind ourselves, successors, and assigns, jointly, and
severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered
into a certain Contract with the Owner, dated the _____ day of _____
20____, a copy of which is hereto attached and made a part hereof for the construction
of:

Raw Water Intake Structure Walkway

Edgard Water Treatment Plant

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the
prosecution of the work provided for in such contract, and any authorized extension or
modification thereof, including all amounts due for materials, lubricants, oil, gasoline,
coal and coke, repairs on machinery, equipment and tools, consumed or used in

connection with the construction of such work and all insurance premiums on said work and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six counterparts each on which shall be deemed an original, this the _____ day of _____, 20____.

ATTEST:

(PRINCIPAL)

(SEAL) _____
(Principal Secretary)

By _____

(Witness as to Principal)

(Address)

Address

Surety

ATTEST:

(SEAL) _____
(Surety) Secretary

By: _____

(Witness as to Surety)

Address

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter
(Corporation, Partnership, or Individual)

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

St. John the Baptist Parish
(Name of Owner)

1801 West Airline Highway, LaPlace, LA 70068
(Address of Owner)

hereinafter called Owner, in the penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum
well and truly to be made, we bind ourselves, successors, and assigns, jointly, and
severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered
into a certain Contract with the Owner, dated the _____ day of _____
20_____, a copy of which is hereto attached and made a part hereof for the construction
of:

Raw Water Intake Structure Walkway

Edgard Water Treatment Plant

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the
prosecution of the work provided for in such contract, and any authorized extension or
modification thereof, including all amounts due for materials, lubricants, oil, gasoline,
coal and coke, repairs on machinery, equipment and tools, consumed or used in
connection with the construction of such work and all insurance premiums on said work

and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six counterparts each on which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(PRINCIPAL)

(SEAL) _____
(Principal Secretary)

By _____

(Witness as to Principal)

(Address)

Address

Surety

ATTEST:

(SEAL) _____
(Surety) Secretary

By: _____

(Witness as to Surety)

Address

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

END OF SECTION

HOLD HARMLESS AGREEMENT

OWNER: St. John the Baptist Parish
1801 West Airline Hwy
LaPlace, LA 70068

ENGINEER: ENVIRONMENTAL ENGINEERING SERVICES, INC.
610 Belle Terre Boulevard
LaPlace, Louisiana 70068

The Contractor shall indemnify and hold harmless the Owner and the Engineers and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that nay such claim, damage, loss or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself), including the loss of use resulting there from: and (b) is caused in whole or in part by any negligent act or omission of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not is caused in part by a party indemnified hereunder.

In any and all claims against the Owner or the Engineers, or any of their agents or employees by any employee of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may liable, the indemnification obligation under this Agreement shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under Workmen's Compensation acts, disability benefit acts or other employee benefit acts.

The obligations of the Contractor under this Agreement shall not extend to the liability of the Engineers, their agents or employees arising out of: (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications: or (2) the giving of or the failure to give directions or instructions by the Engineers, their agents or employees provided such giving or failure to give its primary cause of the injury or damage.

CONTRACTOR: _____

By: _____

WITNESSES:

END OF SECTION

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of _____ do hereby certify as follows:

I have examined the attached contract(s) and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements have been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

SIGNATURE

TYPE OR PRINT NAME

DATE _____

SECTION 00600
NOTICE OF AWARD

Date: _____

TO: _____

PROJECT: Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

CONTRACT NAME:

Gentlemen:

You are notified that your Bid dated _____, for the above Contract has been considered. You are the apparent successful Bidder and hereby awarded the above Contract effective on the above date.

The Contract Price of this award is \$ _____ Dollars (\$ _____).

Enclosed are six (6) copies of the Contract Documents for your execution and subsequent return to this office for further processing.

You must comply with the following conditions precedent within fifteen (15) days of the date of this Notice of Award, that is by _____:

1. Execute all copies of the Agreement. Do not date the Agreement or bonds; this will be accomplished upon execution of the Contract by the Owner. Submit a power of attorney authorizing the Owner to date bonds and Agreement.
2. Submit six (6) copies of the Construction Performance and Payment Bonds. Instructions to the Surety and the Contractor for execution of the bonds are as follows:

Where the Contractor is a corporation, the Agreement and any bonds must be executed by the President or the Chairman of the Board of the corporation. The Agreement and bonds must be accompanied by a statement certified by the Secretary of the Corporation. The signatures of the persons executing the bond on behalf of the Contractor and of the Surety, respectively, shall each be dated on the signature line. If the bond

is executed by an Attorney-in-Fact for the Surety, the accompanying Power of Attorney must be executed by persons whose authority to do so is plainly identified on the face of the Power of Attorney.

Neither signatures nor the Corporate Seal may appear by facsimile unless the authority for them to appear in that form is plainly disclosed on the face of the document. The Secretary or other properly authorized Officer must certify and seal a statement declaring that the authority granted by the Power of Attorney remained in force on the date that the bond was executed by the Attorney-in-Fact.

3. Include six (6) copies of the Certificate of Insurance. The Certificate must name the Owner as an additional insured on all general liability policies and the standard cancellation clause must read as follows:

"Should any of the above described policies be cancelled or changed by restricted amendment before the expiration date thereof, the issuing Company will give thirty (30) days' written notice to the below named certificate holder."

Failure to comply with these conditions within the time specified will entitle Owner to consider the Contractor's Bid abandoned, to annul this Notice of Award and to declare the Contractor's Bid Security forfeited.

Within thirty (30) days after compliance with the above conditions, the Owner will return to the Contractor one fully signed counterpart of the Contract Documents.

If you have any questions, or if we can be of any further assistance, please do not hesitate to contact this office.

You are required to return an acknowledged copy of this Notice of Award to the Owner, by way of the Engineer.

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the Above NOTICE
OF AWARD is hereby acknowledged

by _____

this the _____ day

of _____, 20__

By _____

Title _____

END OF SECTION

SECTION 00602

NOTICE TO PROCEED

DATE: _____

TO: _____

PROJECT: Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

CONTRACT NAME:

Gentlemen:

You are hereby notified to commence work on the subject contract on _____, and are to fully complete the work within _____ calendar days. In accordance with the contract documents, the Substantial Completion date is _____, and the Final Completion date being, _____. Any extension in time will be by written change order only.

The contract provides for assessment of liquidated damages in the amount of \$_____ for each consecutive calendar day after the above established final completion date that the total work is not substantially complete and in the amount of \$_____ for each consecutive calendar day after the total above established final completion date that the total work is not complete.

By _____
(Authorized Signature)

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED
is hereby acknowledged by

this the _____ day

of _____, 20__

By _____

Title _____

END OF SECTION

SECTION 00604

CHANGE ORDER

Order No. _____

Date: _____

Agreement Date: _____

NAME OF PROJECT: Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

OWNER: St. John the Baptist Parish

CONTRACTOR: _____

The following changes are hereby made to the CONTRACT DOCUMENTS

Justification: _____

Change to CONTRACT PRICE \$ _____

Original CONTRACT PRICE \$ _____

Current CONTRACT PRICE adjusted by previous CHANGE ORDER \$ _____

The CONTRACT PRICE due to this CHANGE ORDER will be (increased or decreased) by \$ _____

The new CONTRACT PRICE including this CHANGE ORDER will be \$ _____

Change to CONTRACT TIME: _____

The CONTRACT TIME will be (increased or decreased) by _____ calendar days.

The date for completion of all work will be _____
(date)

Requested By: _____
Contractor

Approvals By: _____
Engineer

Owner

END OF SECTION

SECTION 00606

CERTIFICATE OF COMPLETION

PROJECT: Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

DATE OF COMPLETION:

The work performed under this contract has been inspected by an authorized representative of the Owner, Contractor and Engineer, and the Project is hereby declared complete.

Construction is in substantial conformance with the approved plans and specifications and no known material or construction deficiencies exist.

All required tests and measurements have been made in accordance with the specifications, to establish the quality and quantity of material and construction.

Engineer

The Contractor accepts the above CERTIFICATE OF COMPLETION

Contractor

APPROVED:

Owner

END OF SECTION

APPLICATION FOR PAYMENT

INSTRUCTIONS

A. GENERAL INFORMATION

This standard form is intended to guide only. Many projects require a much more extensive form with space for numerous items, descriptions of Change Orders, identification of variable quantity adjustments, summary of materials and equipment stored at the site and other information. It is expected that a separate form will be developed by Engineer (See next sheet) or Contractor at the time Contractor's Schedule of Values is finalized. Note also that the format for retainage must be changed if the Agreement permits (or the Law provides), and Contractor elects, the deposit of securities in lieu of retainage. Refer to Article 14 of the General Conditions for provisions concerning payments to Contractor.

B. COMPLETING THE FORM

The Schedule of Values, submitted and approved as provided in paragraphs 2.6.3 and 2.9 of the General Conditions should be copied in the space indicated on the Application For Payment Form. Note that the cost of materials and equipment is often listed separately from the cost of their installation. All Change Orders affecting the Contract Price should be identified and include such supplemental Schedules of Values as required for progress payments.

The form is suitable for use in the Final Application for Payment as well as for Progress Payments; however, the required accompanying documentation is usually more extensive for final payment. All accompanying documentation should be identified in the space provided on the form.

C. ENGINEER'S REVIEW

Engineer must review all Applications for Payment with care to avoid recommending any payments not yet earned by Contractor. All accompanying documentation of legal nature, such as lien waivers, should be reviewed by Owner's attorney, the Engineer should so advise Owner.

END OF SECTION

WORK CHANGE DIRECTIVE

(Instructions on next sheet)

NO. _____

PROJECT: Raw Water Intake Structure Walkway/Edgard Water Treatment Plant

DATE OF ISSUANCE: _____ EFFECTIVE DATE: _____

OWNER: St. John the Baptist Parish OWNER'S Contract No.: _____

ENGINEER: Environmental Engineering Services, Inc. ENGINEER'S Project No.: 0933

CONTRACTOR: _____

You are directed to proceed promptly with the following change(s):

Description:

Purpose of Work Change Directive:

Attachments: (List documents supporting change)

If a claim is made that the above change(s) have affected the Contract Price or Contract Times any claim for a change order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method of determining change in

Contract Price:

☐ Unit Prices

☐ Other _____

☐ Lump Sum

Method of determining change in

Contract Times:

☐ Contractor's Records

☐ Other _____

☐ Engineer's Records

Estimated increase (decrease in Contract Price:

\$ _____

If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Estimated increase (decrease) in Contract Times:

Substantial Completion: _____ days;

Ready for Final Payment: _____ days.

If the change involves an increase, the estimated times are not to be exceeded with further authorization.

RECOMMENDED:

ENVIRONMENTAL ENGINEERING SERVICES, INC.
ENGINEER

By: _____

Robert P. Guillot, Jr., P.E.

AUTHORIZED:

ST. JOHN THE BAPTIST PARISH
OWNER

By: _____

(Authorized Signature)

EJCDC No. 1910-8-F (1990 Edition) Prepared by the Engineers Joint Contract Documents Committee and endorsed by The Associated General Contractors of America.

WORK CHANGE DIRECTIVE

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work, which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a possible change in the Contract Price or the Contract Times a Field Order may be used.

B. COMPLETING THE WORK CHANGE DIRECTIVE FORM

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the change Work when the estimated price is reached. If the Work Change Directive is not likely to change the Contract Price, the space for estimated increase (decrease) should be marked "Not Applicable".

METHOD OF DETERMINING CHANGE, IF ANY IN CONTRACT TIMES: Mark the method to be used in determining the change in Contract Times and the estimated increase or decrease in Contract Times. If the change involves an increase in the Contract Times and the estimated times are approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the times or Contractor may stop the changed Work when the estimated times are reached. If the Work change Directive is not likely to change the Contract Times, the space for the estimated increase (decrease) should be marked "Not Applicable".

Once Engineer has completed and signed the form, all copies should be sent to Owner for authorization because Engineer alone does not have authority to authorize changes in Price or Times. Once authorized by Owner, a copy should be sent by Engineer to Contractor. Price and Times may only be changed by Change Order signed by Owner and Contractor with Engineer's recommendation.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIMES, A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

END OF SECTION

CONTRACT CONDITIONS

GENERAL CONDITIONS

SECTION 00700

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

Addenda – Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

Agreement – The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment – The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Bid – The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bonds – Bid, performance, payment and maintenance bonds and other instruments of security.

Change Order – A document recommended by ENGINEER, 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 Time, issued on or after the Effective Date of the Agreement.

Contract Documents – The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Supplementary conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements issued on or after the Effective Date of the Agreement.

Contract Price – The moneys payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement.

Contract Time – The number of days or the date stated in the Agreement for the completion of the Work.

Contractor – The person, firm or corporation with whom OWNER has entered into the Agreement.

Defective – An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to the ENGINEER'S recommendation of final payment.

Drawings – The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by the ENGINEER and are referred to in the Contract Documents.

Effective Date of the Agreement – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer – **NAME OF ENGINEER**

Notice of Award – The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

Notice to Proceed – A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR’S obligations under the Contract Documents.

Owner – The public body or authority, corporation, association, firm or person with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

Partial Utilization – Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Project – The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Resident Project Representative – The authorized representative of ENGINEER who is assigned to the site or any part thereof.

Shop Drawings – All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

Specifications – Those portions of the Contract Documents consisting of written technical descriptions of material, equipment, construction systems, standards and workmanship as applied to the work and certain administrative details applicable thereto.

Subcontractor – An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion – The Work (or a specified part thereof) has progressed to the point where, in the opinion of the ENGINEER as evidenced by ENGINEER’S definitive Certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the work (or specified part) can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due. The terms “substantially complete” and “substantially completed” as applied to any Work refer to Substantial Completion thereof.

Supplementary Conditions – The part of the Contract documents which amends or supplements these General Conditions.

Underground Facilities – All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following materials; electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work – Work to be paid for on the basis of unit prices.

Work – The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

ARTICLE 2 – PRELIMINARY MATTERS

Copies of Documents

- 2.1 OWNER shall furnish to CONTRACTOR up to ten copies (unless otherwise specified in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

Notice to Proceed

- 2.2 A notice to proceed may be given at any time within thirty days after the Effective Date of the Agreement. The contract Time will commence at the time specified in such notice, or if no notice is given, thirty days following the Effective Date of Agreement, provided that the Notice to Proceed may not specify a time of commencement later than 60 days after the Effective Date of the Agreement.

Starting of the Project

- 2.3 CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

Before Starting Construction

- 2.4 Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

- 2.5 Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review:
- 2.5.1 an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;
 - 2.5.2 a preliminary schedule of Shop Drawing submissions; and
 - 2.5.3 a preliminary schedule of values for all of the work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission.

Certificate of Insurance

- 2.6 Before any Work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy to ENGINEER, Certificates of Insurance which CONTRACTOR is requested to purchase and maintain in accordance with the requirements of the General Conditions.

Preconstruction Conference

- 2.7 Within twenty days after the Effective Date of the Agreement, but before CONTRACTOR starts the work at the site, a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to establish a working understanding among the parties as to the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: AMENDING AND REUSE

Intent

- 3.1 If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ENGINEER in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from ENGINEER; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

Reuse of Documents

- 3.2 Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall 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; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER.

ARTICLE 4 – REFERENCE POINTS

Reference Points

- 4.1 OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER'S judgement are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or required relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

ARTICLE 5 – INSURANCE

Contractor's Liability Insurance

- 5.1 CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR'S performance and furnishing of the Work and CONTRACTOR'S other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone else for whose acts any of them may be liable:
- 5.1.1 Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts;
 - 5.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR'S employees;
 - 5.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR'S employees;
 - 5.1.4 Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (b) by any other person for any other reason;
 - 5.1.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;
 - 5.1.6 Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and
 - 5.1.7 Claims 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 insurance required by this paragraph 5.1 shall include the specific coverages and be written for not less than the limits of liability and coverages provided in this paragraph as listed below, or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and ENGINEER by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective work. In addition, CONTRACTOR shall maintain such completed operations insurance for at least two years after final payment and furnish OWNER with evidence of continuation of such insurance at final payment and one year thereafter.

All liability insurance policies shall name the OWNER AND THE ENGINEER as additional insured. The limits of liability for the insurance required by paragraph 5.1 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by laws and regulations:

5.1.1 and 5.1.2 Workers' Compensation, etc.

1. State: Coverage A Statutory
2. Employer's Liability: Coverage B - \$100,000 each accident

5.1.3, 5.1.4, 5.1.5, and 5.1.6 Comprehensive General Liability against all claims and liability for bodily injury, death or property damage arising out of the performance of Work under this Agreement.

1. Bodily Injury and property damage (combined)
\$1,000,000 single limit
\$1,000,000 annual aggregate
2. Property damage liability insurance will provide explosion, collapse and underground coverages where applicable.

5.1.8 Comprehensive Automobile Liability:

1. Bodily Injury and property damage (combined)
\$1,000,000 single limit
\$1,000,000 each accident

Contractual Liability Insurance

5.2 The comprehensive general liability insurance required by paragraph 5.1 will include contractual liability insurance applicable to CONTRACTOR'S obligations under paragraphs 6.30 and 6.31.

Property Insurance

5.3 CONTRACTOR shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these General conditions or required by law). This insurance shall include the interests of OWNER, CONTRACTOR, Subcontractors, Engineer, and Engineer's Consultants in the Work, all of whom shall be listed as insured or additional insured parties, shall insure against perils of fire and extended coverage, shall include "all risk" insurance for physical loss

and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these General conditions, and shall include damages, losses, and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to, fees and charges of engineers, architects, attorneys, and other professionals). If not covered under the "all risk" insurance or otherwise provided in these General conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with paragraph 5.3 shall contain a provision that the coverage afforded will not be cancelled or materially changed until at least thirty days' prior written notice has been given to OWNER.

- 5.4 OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of CONTRACTOR, Subcontractors or others in the Work to the extent of any deductible amounts. The risk of loss within the deductible amount will be borne by CONTRACTOR. Subcontractor or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

Waiver of Rights

5.5.1 OWNER and CONTRACTOR waive all rights against each other for all losses and damages caused by any of the perils covered by the policies of insurance provided and any other property insurance applicable to the Work and also waive all such rights against the Subcontractors, ENGINEER, ENGINEER'S consultants and all other parties named as insureds in such policies for losses and damages so caused. Each subcontract between CONTRACTOR and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of OWNER, CONTRACTOR, ENGINEER, ENGINEER'S consultants and all other parties named as insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

5.5.2 OWNER and CONTRACTOR intend that any policies provided shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Accordingly, all such policies shall 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 of the parties names as insureds or additional insureds, and if the insurers require separate waiver forms to the signed by ENGINEER or ENGINEER'S consultant OWNER will obtain the same, and is such waiver forms are required of any Subcontractor, CONTRACTOR will obtain the same.

Receipt and Application of Proceeds

- 5.6 OWNER and made payable to OWNER as trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.7. OWNER shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as

the parties in interest may reach. If no other special agreement is reached the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order or Written Agreement.

- 5.7 OWNER as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to OWNER'S exercise of this power. If such objection be made, OWNER as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, OWNER as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of such duties.

Acceptance of Insurance

- 5.8 If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with paragraphs 5.1 and 5.2 on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing thereof within ten days of the date of delivery of such certificates to OWNER. If CONTRACTOR has any objection to the coverage afforded by or other provisions of the policies of insurance required to be purchased and maintained by OWNER on the basis of their not complying with the Contract Documents, CONTRACTOR shall notify OWNER in writing thereof within ten days of the date of delivery of such certificates to CONTRACTOR. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided by each as the other may reasonably request. Failure by OWNER or CONTRACTOR to give any such notice of objection within the time provided shall constitute acceptance of such insurance purchased by them other as complying with the Contract Documents.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence

- 6.1 CONTRACTOR shall supervise 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. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- 6.2 CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

Labor, Materials and Equipment

6.3 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 at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to ENGINEER.

6.3.1 Regular working hours are defined as up to 8 hours per day, Monday through Friday, beginning no earlier than 7:00 AM and ending no later than 7:00 PM, excluding holidays. Whenever the CONTRACTOR in performing any part of the Work, with the exception of equipment maintenance and cleanup, OWNER'S representation and/or inspection will be required. Requests to work other than regular working hours must be submitted to the OWNER'S designated representative at least 48 hours prior to any such proposed work or proposed weekend work to give the OWNER ample time to arrange for representation and/or inspection during those periods. Periodic unscheduled overtime on weekdays will be permitted provided that two hours notice is provided to the OWNER'S designated representative. Maintenance and cleanup may be performed during hours other than regular working hours.

6.4 Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all 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 furnishing, performing, testing, start-up and completion of the Work.

6.5 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to ENGINEER, or any of ENGINEER'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of these General Conditions.

Adjusting Progress Schedule

6.6 CONTRACTOR shall submit to ENGINEER for acceptance adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

Substitutes or "Or-Equal" Items

6.7.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the

type, function and quality required. Unless the name is followed by words indicated that no substitution is permitted, materials or equipment of other Suppliers may be accepted by ENGINEER if sufficient information is submitted by CONTRACTOR to allow ENGINEER to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by ENGINEER will include the following. Requests for review of substitute items of material and equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of Substantial Completion on time, whether or not acceptance of the substitute for use 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 work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs and delays that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

- 6.7.2 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to ENGINEER, if CONTRACTOR submits sufficient information to allow ENGINEER to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents.
- 6.7.3 ENGINEER will be allowed a reasonable time within which to evaluate each proposed substitute. ENGINEER will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without ENGINEER'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee, or other surety with respect to any substitute. ENGINEER will record time required by ENGINEER and ENGINEER's consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby.

Concerning Subcontractor's, Suppliers or Others

- 6.8.1 CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection.

CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or to perform any of the Work against whom CONTRACTOR has reasonable objection.

- 6.9 CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.
- 6.10 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- 6.11 All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER and contains waiver provisions.

Patent Fees and Royalties

- 6.12 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 a particular 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 shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees and court and arbitration costs) arising out of 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, and shall defend all such claims in connection with any alleged infringement of such rights.

Permits

- 6.13 Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction 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 opening of Bids, or if there are no bids on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall

pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

Laws and Regulations

- 6.14.1 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.
- 6.14.2 If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give ENGINEER prompt written notice thereof, and any necessary changes will be authorized. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to ENGINEER, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Taxes

- 6.15 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.

Use of Premises

- 6.16 CONTRACTOR shall confine construction equipment, the storage of materials, and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or areas, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ENGINEER by any such OWNER or occupant because of the performance of the work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance of the Work.
- 6.17 During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

- 6.18 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 property to stresses or pressures that will endanger it.

Record Documents

- 6.19 CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders and written interpretations and clarifications in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to ENGINEER for OWNER.

Safety and Protection

- 6.20 CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- 6.20.1 all employees on the Work and other persons and organizations who may be affected thereby;
 - 6.20.2 all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
 - 6.20.3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (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 either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR that the Work is acceptable.

- 6.21 CONTRACTOR shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR's superintendent unless otherwise designated in writing by CONTRACTOR to OWNER.

Emergencies

- 6.22 In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or OWNER, is obligated to act to prevent threatened 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 thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Change Order will be issued to document the consequences of the changes or variations.

Shop Drawings and Samples

- 6.23 After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, CONTRACTOR shall submit to ENGINEER for review and approval in accordance with the accepted schedule of Shop Drawing submissions or for other appropriate action if so indicated in the Supplementary Conditions, five copies (unless otherwise specified in the General Requirements) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as ENGINEER may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable ENGINEER to review the information as required.
- 6.24 CONTRACTOR shall also submit to ENGINEER for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.
- 6.25.1 Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.
- 6.25.2 At the time of each submission, CONTRACTOR shall give Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to ENGINEER for review and approval of each such variation.

- 6.26 ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but ENGINEER's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. 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.
- 6.27 ENGINEER's review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing call ENGINEER's attention to each such variation at the time of submission as required by paragraph 6.25.2 and ENGINEER has given written approval of each such variation by a specific written notification thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.25.1.
- 6.28 Where a Shop Drawing or sample is required by the Specifications, any related work performed prior to ENGINEER's review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

Continuing the Work

- 6.29 CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No work shall be delayed or postponed pending resolution of any disputes or disagreements unless the CONTRACTOR and OWNER agree in writing.

Indemnification

- 6.30 To the fullest extent permitted by Laws and Regulations CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and their consultants, agents and employees from and against all claims, damages, losses, and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

- 6.31 If any and all claims against OWNER or ENGINEER or any of their consultants, agents or employees by any employee of CONTRACTOR, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.30 shall 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 or other person or organization under workmen's compensation acts, disability benefit acts or other employee benefit acts.
- 6.32 The obligations of CONTRACTOR under paragraph 6.30 shall not extend to the liability of ENGINEER, ENGINEER's consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications.

ARTICLE 7 – OTHER WORK

Related Work at Site

- 7.1 OWNER may perform other work related to the Project at the site by OWNER's own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these.
- 7.2 CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.
- 7.3 If any part of CONTRACTOR's Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to ENGINEER in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR's failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work except for latent or non-apparent defects and deficiencies in the other work.
- 7.4 The parties expressly acknowledge that work may be done on the Project by other contractors and that the Work to be done by the CONTRACTOR under this contract may interface with the Work of these other contractors. Thus, in addition to the foregoing paragraphs in this Article 7, the following provisions apply:
- 7.4.1 The CONTRACTOR shall cooperate with all other contractors who may be performing work in behalf of the OWNER in the vicinity of the Work

to be done under this contract, and he shall conduct his operations as to interfere to the least possible extent with the work of such contractors.

7.4.2 The CONTRACTOR shall promptly make good, at his own expense, any injury or damage that may be caused by him to other contractors or employees or subcontractors or suppliers thereof.

7.4.3 Any difference or conflict which may arise between the CONTRACTOR and other contractors in regard to their respective work shall be adjusted and determined by the ENGINEER. Whenever there is interference with work under other contracts, the Engineer shall decide the manner in which the work under each contract shall proceed. Where connections are required between components of the work the general principal to prevail is that the last contractor to complete its work shall make and bear the expense of the connection.

7.4.4 If the work is delayed because of any acts or omissions of any other contractor, the CONTRACTOR shall have no claim against the OWNER on that account other than an extension of the Contract Time.

ARTICLE 8 – OWNER’S RESPONSIBILITIES

8.1 OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.2 In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER.

8.3 OWNER shall furnish the data required of OWNER under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due.

ARTICLE 9 – ENGINEER’S STATUS DURING CONSTRUCTION

Owner’s Representative

9.1 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 Documents and shall not be extended without written consent of OWNER and ENGINEER.

Visits to Site

9.2 ENGINEER will make visits to the site at intervals appropriate to the various stages on construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous on-site inspections 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 to the Contract Documents. On the basis of such visits and on-site observations as an experienced and qualified design professional, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

Project Representation

- 9.3 The ENGINEER may if requested by the OWNER furnish a Resident Project Representative to assist ENGINEER in observing the performance of the Work. The duties, responsibilities and limitations of authority of this Resident Project Representative and assistants are set forth in other parts of these Contract Documents.

Clarifications and Interpretations

- 9.4 ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification or interpretation justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree to the amount or extent thereof, CONTRACTOR may make a claim.

Authorized Variations in work

- 9.5 ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These will be binding on OWNER, and also on CONTRACTOR who shall perform the Work involved promptly. If CONTRACTOR believes that the change justifies an increase in the Contract Price or an extension of the Contract time and the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim.

Rejecting Defective Work

- 9.6 ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, and will also have authority to require special inspection or testing of the Work whether or not the Work is fabricated, installed or completed.

Determinations for Unit Prices

- 9.7 ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR 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 decisions thereon will be final and binding upon OWNER and CONTRACTOR, unless, within ten days after the date of any such decision, either OWNER or CONTRACTOR delivers to the other party to the Agreement and to ENGINEER written notice of intention of appeal from such a decision.

Decisions on Disputes

- 9.8 ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims in respect to changes in the

Contract Price or Contract Time will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph, which ENGINEER will render in writing within a reasonable time. A Written notice of each such claim, dispute and other matter will be delivered by the claimant to ENGINEER and the other party to the Agreement promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within sixty days after such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim.

Limitations of ENGINEER's Responsibilities

- 9.9 Neither ENGINEER's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.
- 9.10 Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgement of ENGINEER as to the Work, it is intended that such requirements, direction, review or judgement will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.11 or 9.12.
- 9.11 ENGINEER will not be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the work in accordance with the Contract Documents
- 9.12 ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 10 – CHANGES IN THE WORK

- 10.1 Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the work; these will be authorized by a Written Amendment or a Change Order. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- 10.2 CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any work performed that is not required by the Contract Documents as amended, modified and supplemented.

- 10.3 OWNER and CONTRACTOR shall execute appropriate Change Orders covering:
- 10.3.1 changes in the Work which are ordered by OWNER pursuant to paragraph 10.1, are required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14, or are agreed to by the parties:
 - 10.3.2 changes in the Contract Price or Contract Time which are agreed to by the parties; and
 - 10.3.3 changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.8.
- provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule.
- 10.4 If notice 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 Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility, and the amount of each applicable Bond will be adjusted accordingly.
- 10.5 At any time ENGINEER may request a quotation from CONTRACTOR for a proposed change in the Work. Within thirty (30) calendar days after receipt of a request for a quotation for a proposed change, CONTRACTOR shall submit a written and detailed proposal for an increase or decrease in the Contract Price or Contract Time for the proposed change. ENGINEER shall have thirty (30) calendar days after receipt of the detailed proposal to respond in writing. The proposal shall include an itemized estimate of all costs and time for performance that will result directly or indirectly from the proposed change. Unless otherwise directed, itemized estimates shall be in sufficient detail reasonably to permit an analysis by the Engineer of all material, labor, equipment, subcontracts, overhead costs and fees, and shall cover all Work involved in the change, whether such Work was deleted, added, changed or impacted. Any amount claimed for subcontracts shall be similarly supported. Notwithstanding the request for quotation, Contractor shall carry on the Work and maintain the progress schedule. Delays in the submittal of the written and detailed proposal will be considered non-prejudicial.
- 10.6 The adjustment in Contract Price and/or Contract Time stated in a Change Order shall comprise the total price and/or time adjustment due or owed the Contractor for the work or changes defined in the Change Order. By executing the Change Order, the Contractor acknowledges and agrees that the stipulated price and/or time adjustments include the costs and delays for all work contained in the Change Order, including costs and delays associated with the interruption of

schedules, extended overheads, delay, and cumulative impacts or ripple effect on all other non-affected work under this contract. Signing of the Change Order constitutes full and mutual accord and satisfaction for the adjustment in contract price and/or time as a result of increases or decreases in costs and time of performance caused directly and indirectly from the change, subject to the current scope of the entire work as set forth in the Contract Documents. Acceptance of this waiver constitutes an agreement between Owner and Contractor that the Change Order represents an equitable adjustment to the Contract and that Contractor waives all rights to file a claim on this Change Order after it is properly executed.

ARTICLE 11 – CHANGE OF CONTRACT PRICE

- 11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.
- 11.2 The Contract Price may only be changed by a Change Order or by a Written Amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than twenty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within fifty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined by ENGINEER in accordance with paragraph 9.8 if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph.
- 11.2 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
- 11.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
- 11.3.2 By mutual acceptance of a lump sum (which may include an allowance for overhead and profit).

ARTICLE 12 – CHANGE OF CONTRACT TIME

- 12.1 The Contract Time may only be changed by a Change Order or a Written Amendment. Any claim for an extension or shortening of the Contract Time shall

be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by ENGINEER in accordance with paragraph 9.8 if OWNER and CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph.

- 12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefor as provided in paragraph 12.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 7, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.
- 12.3 All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) for delay by either party.

ARTICLE 13 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

Warranty and Guarantee

- 13.1 CONTRACTOR warrants and guarantees to OWNER and ENGINEER that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

Access to Work

- 13.2 ENGINEER and ENGINEER's representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

Tests and Inspections

- 13.3 CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for required inspections, tests or approvals.
- 13.4 If Laws or Regulations of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with OWNER's or ENGINEER's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by OWNER (unless otherwise specified).
- 13.5 All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by ENGINEER if so specified).
- 13.6 If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation. Such uncovering shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.
- 13.7 Neither observations by ENGINEER nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR's obligations to perform the Work in accordance with the Contract Documents.

Uncovering Work

- 13.8 If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.
- 13.9 If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, 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, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and

charges of engineers, architects, attorneys and other professionals), and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

Owner May Stop the Work

13.10 If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, 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 shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

Correction or Removal of Defective Work

13.11 If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or if the Work has been rejected by ENGINEER, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

13.11.1 The Contractor shall not be entitled to an extension of the Contract Time for correcting or removing defective Work.

One Year Correction Period

13.12 If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by

CONTRACTOR. 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 time may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

Acceptance of Defective Work

- 13.13 If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

Owner May Correct Defective Work

- 13.14 If CONTRACTOR fails within a reasonable time after written notice of ENGINEER to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and 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, take possession of Contractors tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by ENGINEER, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. Such direct, indirect and consequential

costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration cost sand all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

Schedule of Values

- 14.1 The schedule of values established will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

Application for Progress Payment

- 14.2 At least twenty days before each progress payment is scheduled (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. 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 shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER's interest therein, all of which will be satisfactory to OWNER. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

Contractor's Warranty of Title

- 14.3 CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment

- 14.4 ENGINEER will, within ten days after receipt of each Application for Payment, 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. Thirty days after presentation of the Application for Payment with ENGINEER's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by OWNER to CONTRACTOR.
- 14.5 ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's on-site observations of the Work in progress as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of ENGINEER's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents; and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or OWNER to withhold payment to CONTRACTOR.
- 14.6 ENGINEER's recommendation of final payment will constitute an additional representation by ENGINEER to OWNER that the conditions precedent to CONTRACTOR's being entitled to final payment as set forth in paragraph 14.12 have been fulfilled.
- 14.7 ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make such representations to OWNER. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:
- 14.7.1 the Work is defective, or completed Work has been damaged requiring correction or replacement,
- 14.7.2 the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.14, or

14.7.4 of ENGINEER's actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

OWNER may refuse to make payment of the full amount recommended by ENGINEER because claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling OWNER to a set-off against the amount recommended, but OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action.

Substantial Completion

14.8 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 (except for items specifically listed by CONTRACTOR as incomplete). Within a reasonable time thereafter, 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.

14.9 Use by OWNER of any finished 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 useable part of the Work that can be used by OWNER without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.9.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Work is substantially complete. 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.

14.9.2 OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to ENGINEER and within a reasonable time thereafter OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of

the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize the list of items to be completed or corrected and will deliver such list to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection

14.10 Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will 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 is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment

14.11 After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents and other documents – all as required by the Contract Documents, and after ENGINEER has indicated that the Work is acceptable (subject to the provisions of paragraph 14.15), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the work for which OWNER or OWNER's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

Final Payment and Acceptance

- 14.12 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 – all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, ENGINEER will return the Application 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. Thirty days after presentation to OWNER of the Application and accompanying documentation, in appropriate form and substance, and with ENGINEER's recommendation and notice of acceptability, the amount recommended by ENGINEER will become due and will be paid by OWNER to CONTRACTOR.
- 14.13 Not less than forty-five (45) days after filing the formal acceptance of the work with the Recorder of Mortgages, provided that all work done under the Contract is at that time found to be in good condition insofar as the Contractor is responsible for it, the Owner will pay the contractor the retained portion of the Contract Price, after deducting therefrom such sums as may be lawfully withheld under any of the provisions of this Contract, the said payment being conditional on the Contractor furnishing to the Owner a certificate from the Recorder of Mortgages that the Contract is clear of any liens or privileges and furnishing acceptable documentation of release from any liens that may have been filed and were subsequently satisfied.

Contractor's Continuing Obligation

- 14.14 CONTRACTOR's obligation to perform and complete the work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ENGINEER, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.12, nor any correction of defective work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.15).

Waiver of Claims

14.15 The making and acceptance of final payment will constitute:

- 14.15.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.10 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR's continuing obligations under the Contract Documents; and
- 14.15.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work

- 15.1 OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.
 - 15.1.1 Notwithstanding Paragraph 15.1, if the OWNER stops Work under Paragraph 13.10 or suspends the CONTRACTOR's services under Paragraph 13.14, or suspends the Work or any portion thereof because of the CONTRACTOR's failure to prosecute the Work without endangering persons and property, the CONTRACTOR shall be entitled to no extension of Contract Time or increase in Contract price.

Owner May Terminate

- 15.2 Upon the occurrence of any one or more of the following events:
 - 15.2.1 If CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at the time relating to the bankruptcy or insolvency;
 - 15.2.2 If a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a

petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to the bankruptcy or insolvency;

- 15.2.3 If CONTRACTOR makes a general assignment for the benefit of creditors;
- 15.2.4 If a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR's creditors;
- 15.2.5 If CONTRACTOR admits in writing an inability to pay its debts generally as they become due;
- 15.2.6 if CONTRACTOR persistently fails 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.
- 15.2.7 If CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;
- 15.2.8 If CONTRACTOR disregards the authority of ENGINEER, or
- 15.2.9 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents'

OWNER may, after giving CONTRACTOR (and the surety, if there be one) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), 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 finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by ENGINEER and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

- 15.3 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. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.
- 15.4 Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right of remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs.

Contractor May Stop Work or Terminate

- 15.5 If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted, or OWNER fails for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

ARTICLE 16 – MISCELLANEOUS

Giving Notice

- 16.1 Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of the Time

- 16.2.1 When any period of time is referred to in the Contract Documents 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.

16.2.2 A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

General

- 16.3 Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.
- 16.4 The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR and all of the rights and remedies available to OWNER and ENGINEER thereunder, 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 Documents, and 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. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

END OF SECTION

DRAWING DETAILS

SECTION 00850
DRAWING AND DETAILS

The following is a list of drawings on this project:

<u>DRAWING NUMBER</u>	<u>DESCRIPTION</u>
	Title
D01	Demolition Plan
C01	Existing Site Plan & Profile
S01	Proposed Walkway
S02	Structural Details
GN	General Notes

TECHNICAL SECTION

DIVISION ONE

GENERAL REQUIREMENTS

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 LOCATION OF WORK

All of the Work of this Contract is located in rights-of-way servitudes, or on property owned by the Owner.

1.02 WORK TO BE DONE

A. The Contractor shall furnish all labor, materials, equipment, tools, services and incidentals to complete all Work required by these Specifications and as shown on the drawings, all as prepared by Environmental Engineering Services, Inc.

B. The Contractor shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration, including restoration of vegetative cover required as a result of damages caused during this construction.

C. All materials, equipment, skills, tools and labor which are reasonably and properly inferable and necessary for the proper completion of the Work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not.

D. The Contractor shall comply with all Federal, State, and Local codes, which are applicable to the proposed construction works.

1.03 GENERAL DESCRIPTION OF WORK TO BE PERFORMED

A. The Work included in the Contract shall be described in the Construction Contract.

B. All Work shall be done as described in the Specifications and as shown on the drawings, complete, tested and ready for operation.

1.04 WORK SEQUENCE

A. A sequence of construction must be developed so as to minimize the temporary loss of electrical power, water and gas to all buildings on all streets within and around the limits of the project. Driveways and pedestrian entrances to all buildings or residences must be provided and maintained at all times. No direct pay will be made for minimizing temporary loss of utilities and providing and maintaining driveways and entrances.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01010 - SUMMARY OF WORK

B. If the Owner is desirous of performing certain portions of the Project prior to other portions, the sequence of Work shall be performed in accordance with the Contract Documents and shall be stated in the drawings. The Contractor shall advise the Owner of any adverse effects the desired sequence of work may have on the successful completion or operation of the Project.

1.05 SCHEDULING OF WORK

A. Prior to commencement of work, a pre-construction conference shall be conducted and a proposed schedule of work and sequence of construction shall be submitted to the Engineer by the Contractor for approval. If the presence of a Project Engineer is required, the Contractor will be required to schedule work so that such personnel will not be required to be on duty on Sundays.

B. The Contractor shall cooperate fully with all utility forces of the Owner or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the Work, and shall schedule the work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

C. The Contractor shall schedule and perform the Work in such a manner as to result in the least possible disruption to the public's use of roadways, driveways, and utilities. Utilities shall include but not be limited to water, sewage, drainage structures, ditches, and canals, gas, and telephone. The Contractor shall also deliver notice to property occupants (private and public) of all planned disruption to roadways, driveways, and utilities 72 hours in advance of the disruption.

D. After Work has begun on any portion or designated part of the Project, it shall be carried forward to its final completion. All Work shall conform to the provisions of the approved Contractor's schedule.

E. Prior to commencement of any phase of Work, the Contractor is required to notify the Engineer 24 hours in advance.

1.06 SPECIFICATIONS AND DRAWINGS

A. Specifications - The Technical Specifications consist of three parts: General, Products, and Execution. The General Section contains general requirements, which govern the Work. The Products and Execution sections modify and supplement these by detailed requirements of the Work and shall always govern whenever there appears to be a conflict.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01010 - SUMMARY OF WORK

B. Intent - All Work called for in the specifications applicable to the Contract but not shown on the drawings in their present form or vice versa shall be of like effect as if shown or mentioned in both. Work not specified in either the drawings or in the specifications but involved in carrying out their intent or in the complete and proper execution of the Work is required and shall be performed by the Contractor as though it were specifically delineated or described.

The apparent silence of the specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specification shall be made upon that basis.

C. Conflict between Drawings and Specifications - Where an obvious conflict exists between the drawings and specification, the Engineer shall decide which governs and the Contractor shall comply with the decision. Such decision shall not be grounds for additional payment to the Contractor, i.e., the Contractor shall include the price of the most expensive alternative in his bid.

1.07 CONTRACTOR'S RESPONSIBILITY CONCERNING DRAWINGS AND SPECIFICATIONS

A. All drawings, project specifications and addenda are mechanically reproduced. The Contractor is responsible for checking his sets of drawings and specifications to assure they are complete in number and all sheets are legible. The Engineer will replace any copies of sheets as necessary without additional charge to the Contractor when notified.

B. Contractor is responsible for compliance with all drawings, drawing revisions, specifications and addenda to specifications, whether or not the set(s) issued to the Contractor are complete and totally legible.

C. It shall be understood that the failure of the Contractor to review and verify his set(s) of drawings, drawing revisions, project specifications, and addenda for completeness and legibility which results in additional costs to the Contractor shall in no way increase the cost of the Project to the Owner or the Owner's Engineer after bids are received.

D. Contractor shall have present on the jobsite at all times a minimum of two (2) complete sets of construction drawings and specifications. One (1) set shall be used for record keeping for preparation of record drawings upon completion of Project.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01010 - SUMMARY OF WORK

1.08 RIGHTS OF LAND USAGE

A. Refer to Article 4 and 8.05 of the General Conditions. All permanent lands, rights-of-way, and easement for utility lines or access to the work, as indicated on the drawings, shall be furnished by the Owner. The location and limits of both permanent and temporary lands for the work, if not shown on the drawings, will be indicated in detailed survey plats, descriptions and titles. Copies of available documents will be furnished by the Owner upon request. Copies of permits issued to the Owner will be made available upon request. The Contractor shall keep his work within the limits of the lands for the work. Storage of the Contractor's material and equipment on privately owned lands which are outside the limits of land for the work or are inside the limits of lawful use of publicly owned lands shall only be done with written agreement between the property owner and the Contractor, subject to notification of the Engineer and the Owner by the Contractor.

B. The land available for the Contractor's use during the performance of the work is limited to the area defined by that area which is shown on the plans.

C. Nothing in this contract shall imply that the Contractor has exclusive use of roadways or public and/or private land employed to perform the Work.

D. In addition, areas of privately owned land may be made available through a right-of-way document executed by the property owner and the Owner for the Contractor's use subject to provisions of the right-of-way document. These areas and their use limitations are as follows:

1. The Contractor's use of this area shall be limited to the direct performance of the Work and shall not be used for storage of materials and/or equipment. Existing pavements, sidewalks, landscape and all miscellaneous items within the boundaries shall be removed as required to perform the work and be immediately restored to an equal or better condition upon successful completion of the work, all in accordance with the Contract Documents.

2. The Contractor is hereby made aware that the area is an active site and special measures will be required to maintain traffic and access to the property at all times. All Work in this area must be coordinated with the Owner and the Contractor shall minimize any disruption to the normal activities of the Owner.

E. All other land deemed necessary by the Contractor for the storage of materials and equipment and other facilities or required for the performance of the work shall be arranged for by the Contractor at no additional cost to the Owner.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01010 - SUMMARY OF WORK

1.09 RAIN DAYS

A. If requested the Contractor shall be granted time extensions for excessive rain days, beyond the reasonably anticipated days of adverse weather. This time extension must be requested monthly. The following are considered reasonably anticipated days of adverse weather on a monthly basis.

January	<u>11</u>	days	July	<u>6</u>	days
February	<u>10</u>	days	August	<u>5</u>	days
March	<u>8</u>	days	September	<u>4</u>	days
April	<u>7</u>	days	October	<u>3</u>	days
May	<u>5</u>	days	November	<u>5</u>	days
June	<u>6</u>	days	December	<u>8</u>	days

1.10 OWNER OCCUPANCY

Owner will have full access to and use of all existing Owner-owned facilities during the entire period of construction for the conduct of his normal operations. Cooperate with Engineer in all construction operations to minimize conflict and to facilitate Owner usage. A listing of the Owner's existing facilities in conjunction with this project may be shown in the drawings.

1.11 PARTIAL OWNER OCCUPANCY

The Contractor shall schedule his operations for completion of portions of the Work, as designated, for the Owner's occupancy prior to Substantial Completion of the entire Work. Refer to paragraph 1.04 Work Sequence for completion schedule.

1.12 OWNER FURNISHED ITEMS

Items to be furnished by the Owner on this Project shall be listed in the Supplementary Conditions. If no items are listed in the Supplementary Conditions, it is understood by all parties that materials and/or equipment furnished on this Project shall be by the Contractor.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SCOPE

The scope of this Section defines the basis for which a Contractor will be paid for his work. Measurement and payment for all work shall be made either by (1) Lump Sum; and/or (2) Unit Prices.

1.02 LUMP SUM WORK

Prior to commencement of Work, the Contractor shall submit to the Engineer for review and approval, a schedule of values for all Work. The schedule of values shall include all quantities and prices of items aggregating the Contract Price and will subdivide the work into component parts in sufficient detail to serve as a basis for progress payments.

1.03 UNIT PRICE WORK

Work completed under a unit price contract shall be measured and payment made based on actual quantities installed, tested, and accepted at the unit price stated in the Contract.

A. Any items of work appearing in this measurement and payment section and which are not listed in the Bid Proposal, but are necessary for completion of the work in accordance with the Drawings and Specifications, shall be included in the cost of the other items listed and bid in the Proposal.

B. Further, any items of work not appearing in this Measurement and Payment Section and not listed in the Bid Proposal, including those items on the drawing which are labeled “No Direct Payment”, but are necessary for completion of the Work in accordance with the Drawings and Specifications, shall also be included in the cost of the other items listed and bid in the Proposal.

C. Final payment shall only be made for items that are installed and are complete, tested, workable, and accepted. The measurement of unit price items for payment shall be only within the pay limits shown on the Drawings, listed in the Bid Proposal of the Specification, and/or authorized in writing by the Owner in an approved Change Order. Quantities measured for payment shall be in accordance with the foregoing qualification for only those amounts which conform to the original Contract Orders or Field Changes, but in no case will measurement be made for more work than was authorized in writing nor for more work than was actually installed and accepted.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01025 - MEASUREMENT AND PAYMENT

1.04 MEASUREMENTS

Measurement of unit price and lump sum items will generally be by the standard inch-pounds system of units commonly used in the United States, which are defined by the U.S. National Bureau of Standards.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SPECIFICATIONS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01030 - ALTERNATES/ALTERNATIVES

PART 1 - GENERAL

1.01 SCOPE

This Section identifies each alternate/alternative allowance on major equipment and/or material by the Engineer.

1.02 BIDDING REQUIREMENTS

A. In the bid form, the bidder shall identify the type of material or manufacturer of equipment proposed for this project in the blanks provided.

B. When required by these specifications, pre-qualifications of certain material and/or equipment will be required during the bidding phase of the project. A list of pre-qualified material and/or equipment shall be stated in paragraph III of the Bid Qualifications.

C. The pre-qualification process requires all data and information of material and/or equipment not listed in the technical specification but desiring consideration for this project be submitted to the Engineer, seven (7) working days prior to the receipt of bids. No submittals will be considered within seven (7) working days prior to the receipt of bids.

1.03 PRE-QUALIFIED MATERIAL AND/OR EQUIPMENT

A. If pre-qualified material and/or equipment are specified; only those items listed in the specification or addenda will be permitted to be incorporated into the Project.

B. Those items, which are not listed as pre-qualified materials and/or equipment in the Supplementary Conditions shall be submitted for consideration as product substitutions and options as required by Section 01600.

1.04 APPROVAL OF PRE-QUALIFIED MATERIAL AND/OR EQUIPMENT ALTERNATES/ALTERNATIVES

If an alternate material and/or equipment is approved by Addendum, the Contractor shall be responsible for providing design calculations and drawing revisions for alternate products which affect the existing design, specifications and drawings, including, but not limited to, hydraulics, structural, piping, and electrical. The Contractor shall pay for the cost of these revisions. The Engineer prior to incorporation into the Project shall approve all design changes.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01035 - MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. Refer to Articles 10, 11 and 12 of the General Conditions with regards to changes in Contract Price and Contract Time.
- B. Promptly implement Change Order procedures.
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time and material/force account basis.
 - 3. Provide full documentation to Engineer on request.
- C. Designate in writing the member of Contractor's organization:
 - 1. Who is authorized to accept changes in the work?
 - 2. Who is responsible for informing others in the Contractor's employ of the authorization of changes in the work?
- D. Owner will designate in writing the person who is authorized to execute Change Orders.

1.02 DOCUMENTATION

- A. Contractor may initiate a change by submitting a written notice to the Engineer containing:
 - 1. Description of the proposed change.
 - 2. Statement of the reason for making the change.
 - 3. Statement of the effect on the Contract Price and the Contract Time.
 - 4. Statement of the effect on the work of other Contractors.
 - 5. Documentation supporting any change in Contract Price or Contract Time as appropriate and adequate for proper review by the Engineer.
- B. If not required by any U.S. Government Agencies, Change Order form shall be E.J.C.D.C. Form No. 1910-8-B or the latest revision thereof. Change Order request shall be within thirty (30) days of the occurrence with the exception of inclement weather as outlined by other Sections of this Specification.

1.03 CONSTRUCTION CHANGE AUTHORIZATION

- A. Change Orders will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change and will designate the method of determining any change in the Contract Sum and any change in Contract Time.
- B. Change orders must have the Owner and Contractor's approvals. Change orders on projects funded in whole or in part by loans or grants from agencies of the U.S. Government must be approved by the respective agency prior to their incorporation into the Project.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01035 - MODIFICATION PROCEDURES

1.04 DOCUMENTATION OF PROPOSALS AND CLAIMS

A. Contractor shall support proposed lump sum proposal pricing and each unit price, which has not previously been established with sufficient substantiating data to allow the Engineer to evaluate the pricing.

B. Contractor shall provide the following data to support proposed time and pricing of both lump sum proposals, unit pricing, and time and material proposals:

1. Labor required.
2. Equipment required.
3. Products required.
 - a. Recommended source of purchase and unit cost.
 - b. Quantities required.
4. Taxes, insurance and bonds.
5. Credit for work deleted from Contract, similarly documented.
6. Overhead and profit.
7. Justification for any change in Contract Time.

C. In addition, Contractor shall support each claim for work done on a time and material/force account basis with the following additional information:

1. Dates and times work was performed and by whom.
2. Time record, summary of hours worked, and hourly rates paid.
3. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing quantities purchased.
 - c. Subcontractors used, showing the same data as above.

1.05 PREPARATION OF CHANGE ORDERS

A. Engineer will prepare each Change Order.

B. Form: E.J.C.D.C. No. 1910-8-B

C. Change Order will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.

D. Change Order will provide an accounting of the adjustment in the Contract Price and in the Contract Time.

1.06 LUMP SUM/FIXED PRICE CHANGE ORDER

A. Engineer initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor or requests from Owner or both.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01035 - MODIFICATION PROCEDURES

B. Once Engineer has completed and signed the form, all copies will be sent to Contractor for execution. The Contractor shall execute the change order documents and return it to the Engineer within seven (7) days. After execution by Contractor, all copies will be sent to the Owner for execution. Engineer will make distribution of executed copies.

1.07 UNIT PRICE CHANGE ORDERS

A. Content of Change Orders will be based on either:

1. Engineer's definition of the scope of the required changes.
2. Contractor's proposal for a change, as recommended by Engineer.
3. Survey of complete work.

B. The amounts of the unit prices to be:

1. Those stated in the Contract Bid Form.
2. Those mutually agreed upon between Owner and Contractor.

1.08 CORRELATION WITH CONTRACTOR'S SUBMITTALS

A. Contractor shall revise monthly the Schedule of Values and Application for Payment forms to record each Change Order as a separate item of work and to record the adjusted Contract Price.

B. Contractor shall revise monthly the Construction Schedule to reflect each change in Contract Time, to include sub schedules to show changes for other items of work affected by the changes.

C. Upon completion of work under a Change Order, the Contractor shall enter pertinent changes in Record Documents.

1.09 PROCEEDINGS WHEN CONTRACTOR DOES NOT EXECUTE THE CHANGE ORDERS

It is anticipated that at the time of submittal to the Contractor, negotiations will have been completed with all parties agreeing to the change(s) in the work, change in Contract Price, and change in Contract Time. In the event that no agreement can be reached and the Contractor fails to execute the Change Order within the specified time limit, the Owner may issue a Change Order without signature of the Contractor establishing a change to Contract Price or Contract Time in accordance with the provisions of Article 10 of the General Conditions. The Contractor will then be paid or assessed time on the basis of the Change Order for the change in work with the Contractor not relinquishing his rights to submit a claim in accordance with Articles 11 and 12 of the General Conditions.

PART 2 - PRODUCT - NOT USED
PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 WORK PROGRESS

The Contractor shall furnish personnel and equipment which will be efficient, appropriate and large enough to secure a satisfactory quality of Work and a rate of progress which will insure the completion of the work within the time stipulated in the Contract. If at any time such personnel appear to the Engineer to be inefficient, inappropriate, or insufficient for performing the quality of work required or for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character or increase the personnel and equipment, and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to perform the Work at the specified quality and rate of progress.

1.02 PRIVATE LAND

A. The Contractor shall be aware that his work will be performed adjacent to private property. The Contractor shall notify all property owners adjacent to and along the route of construction by means of either a printed circular or form letter of the general details of the construction. The letter shall also include names and telephone numbers for key project personnel so that property owners can report problems. These contact telephone numbers shall be given so that appropriate personnel can be contacted 24 hours a day, seven days a week.

B. The Contractor shall not enter or occupy private land outside the Owner's land, rights-of-way, or servitudes except by written permission of both the Owner and the Owner of the private land. Such permission shall be obtained by and at the expense of the Contractor and at no additional cost to the Owner.

C. Owners of adjacent private land shall be inconvenienced as little as possible by the construction Work. Where possible, the Contractor shall maintain access across or over the work to adjacent property. At locations where an adjacent property has more than one access point for vehicular traffic, such as paved or aggregate surfaced driveways, grassed ramps, gaps, etc., the Contractor shall schedule his work so that at least one access point is usable by the property owner, his associates, or his clientele in the case where the adjacent property is a business establishment.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

1.03 WORK LOCATIONS

Structures and pipelines shall be located substantially as indicated on the drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons. Where fittings are noted on the drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.

1.04 OPEN EXCAVATIONS

A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights, and other means to prevent accidents to persons and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by the public, Owner's and Engineer's personnel, and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of open trench, prohibiting the stacking of excavated material in the street, and requiring that the excavations shall not remain open overnight.

B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles, which could be dangerous to the public, shall be barricaded and well lighted at all times when construction is not in progress.

1.05 TEST PITS

Test pits for the purpose of locating underground utilities or structures, which may interfere with installation of the Work shall be excavated in advance of the Work and backfilled by the Contractor. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the Engineer. The cost for such test pits, except as provided for in the Bid Form, shall be included in the cost of the work for which the test pits benefit. Backfill shall comply with the Specifications for backfill of pipe. The maximum number of test pits to be excavated shall be equivalent to two for each structure and one for each 200 lineal feet of pipeline.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

1.06 MAINTENANCE OF TRAFFIC

A. Open pits, trenches, unpaved streets, debris, or other obstructions due to construction that will prevent the normal flow of traffic during an extended construction stoppage, for any reason, shall be minimized. In the event an extended construction stoppage is found to be necessary, Contractor shall provide for normal traffic flow during extended construction stoppage, regardless of the cause.

B. All excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If the Contractor's operation causes traffic safety hazards, he shall repair the road surface, provide temporary roadways, erect wheel guards or fences, or take other measures for safety satisfactory to the Engineer. All excavations shall be covered, backfilled, or protected as directed by the Engineer, fully delineated at night when the Work is not in progress.

C. Detours around construction areas will be subject to the approval of the Owner and the Engineer. Where detours are permitted the Contractor shall provide all necessary barricades and signs as required to divert the flow of traffic. While traffic is detoured, the Contractor shall expedite construction operations. The periods when traffic may be detoured will be strictly controlled by the Owner.

1.07 CARE AND PROTECTION OF PROPERTY

A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the Engineer.

B. All sidewalks, which are disturbed by the Contractor's operations, shall be restored to their original or better condition by the use of similar or comparable materials. All curbing shall be restored in a condition equal to the original construction and in accordance with the best modern practice.

C. Along the location of this Work, all fences, walks, brushes, trees, shrubbery, and other physical features shall be protected and restored in a thoroughly workmanlike

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

manner.

Fences and other features removed by the Contractor shall be replaced in the location indicated by the Engineer as soon as conditions permit. All grass areas beyond the limits of construction, which have been damaged by the Contractor, shall be re-graded and sodded.

D. Trees close to the Work shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are liable to damage because of his operations, but in no case shall any tree be cut or removed without prior notification of the Engineer. All injuries to bark, trunk, limbs and roots of trees shall be repaired by dressing, cutting, and painting according to approved methods, using only approved tools and materials.

E. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the Proposal.

F. Where fences must be removed for construction purposes or access, they shall immediately be reconstructed or replaced. The Contractor shall provide adequate temporary fence and gates as necessary to contain or restrict domestic farm animals within their proper areas during the life of this Contract and shall provide reasonable safe and convenient means of access where and when required.

1.08 MAINTENANCE OF FLOW

The Contractor shall maintain the flow of sewers, drains, and watercourses interrupted during the progress of the Work, including complete pumped bypass systems where necessary. The Contractor shall immediately remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow. All temporary works installed for flow maintenance shall be removed when the permanent work is finished and the areas cleaned and restored to good condition. Pavement removal and replacement, which, in the opinion of the Contractor, is necessitated by placement of temporary flow control facilities, shall be considered as an item for convenience to the Contractor. Such costs for pavement removal and replacement shall, therefore, be born by the Contractor. Such costs for pavement removal and replacement shall, therefore, be born by the Contractor at his own cost as required for other flow control measures. The intent of this

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

Specification is that pavement removal is limited to the least amount possible and the Contractor shall investigate alternative methods for flow control, which require the least amount of pavement removal.

1.09 CONNECTION TO WORK BY OTHERS

It is anticipated that pipeline construction by others may occur at the same time and in the same areas as work being done under this Contract. The Contractor will, therefore, conduct his operations as follows:

A. Sewer Lines:

1. If shown on the Drawings, sewers built by others may be connected to sewers and/or manholes constructed under this Contract.
2. If the sewers and/or manhole by others have already been constructed, the manholes and/or sewers under this Contract shall be built at the exact locations of the connection as actually exist in the field. The Contractor is responsible for pot holing the connection points in advance of constructing manholes and/or sewers under this Contract to ensure the proper alignment at the connection point.
3. If the sewers and/or manholes by others have not been constructed, the sewers shall be built at the exact locations of the connection as shown on the drawings and plugged.

B. Force Mains & Waterline:

1. Where shown on the drawings, force mains constructed under this Contract shall be connected to pipelines to be built by others. All connections at the Contract limits of force mains shall be terminated with a standard mechanical joint bell end and plugged with a standard mechanical joint plug.
2. If the force main or waterlines by others have already been constructed, the force mains built under this Contract will be connected to the force mains constructed by others by removing all necessary plugs and making the connection(s). The Contractor shall pothole connection points in advance of development of laying schedules for all pipe sizes of 16 inches and larger to ensure the proper alignment at the connection point. Upon completion of the tie-in connection(s), Contractor shall deliver all removed plugs to the Owner's facility.
3. If the force mains or waterlines have not been constructed by others, the force mains or waterlines under this Contract shall be laid to the required line and grade, terminated with a plug at the location of the connection indicated on the drawings, backfilled and marked with a stake.
4. The notation on the drawings at tie-in points does state that the Contractor shall tie to facilities constructed by others or provide a plug. The intent of this instruction is that, if a tie-in cannot be made, the Contractor shall furnish and install a plug at the terminal end as defined above.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

1.10 PROTECTION OF CONSTRUCTION AND EQUIPMENT

A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed. The Contractor at his own expense shall reconstruct all portions injured.

B. All structures shall be protected in a manner approved by the Engineer. Should any of the floors or other parts of the structures become heaved, cracked or otherwise damaged, all such damaged portions of the Work shall be completely repaired and made good by the Contractor at no additional cost to the Owner and to the satisfaction of the Engineer. Special attention is directed to substructure bracing requirements, described in other sections. If, in the final inspection of the work, any defects, faults or omissions are found, the Contractor shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein for at least the guarantee period described in the Contract.

C. The Contractor shall take all necessary precautions to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the Owner.

D. After the buildings or structures have been made weather tight and ready for the installation of pumps, motors, piping and other equipment, the interior temperature shall be maintained at a minimum temperature of 50°F, and thereafter until the completion of the contract, temperature shall not be allowed to drop below 50°F.

1.11 CLEANUP DURING CONSTRUCTION

During the course of the Work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. He shall dispose of all residues resulting from the construction work and, at the conclusion of the Work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the Work in a neat and orderly condition.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01041 - PROJECT COORDINATION

1.12 COOPERATION WITHIN THIS CONTRACT

A. All firms or persons authorized to perform any work under this Contract shall cooperate with the General Contractor and his subcontractors or trades, and shall assist in incorporating the work of other trades where necessary or required.

B. Cutting and patching, drilling, and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01046 -MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT

PART 1 - GENERAL

1.01 SCOPE OF WORK

Furnish all labor, materials, equipment, and incidentals required to modify, alter and/or convert existing structures as shown or specified and as required for the installation of new mechanical equipment, pumping units, piping, and appurtenances. Work shall be performed within the requirements of Special Project Procedures in Section 01100 and required Progress Schedules in Section 01310. Existing pumping units, piping, and equipment shall be removed and dismantled as necessary for the performance of structural alterations in accordance with the requirements herein specified.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION

3.01 GENERAL

- A.** The Contractor shall dismantle and remove all existing pumping units, equipment, piping, electrical conduit and wiring, electrical panels, and other appurtenances required for the completion of the work. Where called for or required, he shall cut existing pipelines for the purpose of making connections thereto. Anchor bolts for equipment and structural steel removed shall be cut off one inch below the concrete surface. Surface shall be finished as specified in Division 3.
- B.** No existing structure, equipment, or appurtenance shall be shifted, cut, removed, or otherwise altered except with the express approval of and to the extent approved by the Engineer.
- C.** When removing materials or portions of existing structures and when making openings in walls and partitions, the Contractor shall take all precautions and use all necessary barriers and other protective devices so as not to damage the structures beyond the limits necessary for the new work and not to damage the structures or contents by falling or flying debris.
- D.** Materials and equipment removed in the course of making alterations and additions shall remain the property of the Owner, except that items not salvageable, as determined by the Engineer and the Owner shall become the property of the Contractor

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01046 -MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT

to be disposed of by him off the site of the work at his own place of disposal. Operating equipment shall be thoroughly cleaned and then lubricated and greased for protection during prolonged storage as specified in other sections.

E. All work of altering existing structures shall be done at such time and in such manner as will comply with the approved time schedule. So far as possible before any part of the Work is started, all tools, equipment, and materials shall be assembled and made ready so that the work can be completed without delay.

F. All workmanship and new materials involved in constructing the alterations shall conform to the Specifications for the classes of work insofar as such specifications are applicable.

G. All cutting of existing masonry or other material to provide suitable bonding to new work shall be done in a manner to meet the requirements of the respective Section of these Specifications covering the new work. When not covered, the work shall be carried on in the manner and to extent directed by the Engineer.

H. Where holes in existing masonry are required to be sealed, unless otherwise herein specified, they shall be sealed with cement mortar or concrete. The sides of the openings shall be provided with keyed joints and shall be suitably roughened to furnish a good bond and make a watertight joint. All loose or unsound material adjacent to the opening shall be removed, and if necessary, replaced with new material. The method of placing the mortar seal shall provide a suitable means of releasing entrapped air.

I. Surfaces of seals visible in the completed work shall be made to match as nearly as possible the adjacent surfaces.

J. Non shrink grout shall be used for setting wall castings, sleeves, leveling pump bases, doweling anchors into existing concrete and elsewhere as shown.

K. Where necessary or required for the purpose of making connections, the Contractor shall cut existing pipelines in a manner to provide an approved joint. Where required, he shall weld bends, flanges, or provide Dresser couplings, all as required.

L. The Contractor shall provide flumes, hoses, piping, etc., to divert or provide suitable plugs, bulkheads, or other means to hold back the flow of wastewater, water, or other liquids, all as required in the performance of the Work under this Contract.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01046 -MODIFICATIONS TO EXISTING STRUCTURES, PIPING AND EQUIPMENT

3.02 WALL PENETRATIONS

Unless otherwise shown on the Drawings or specified herein, wall penetrations for pipes or conduits shall be made using a modular sealing strip such as the Link-Seal as manufactured by Thunderline Corporation, Wayne, Michigan, or approved equal. Wall sleeves for use with the sealing strips shall be Schedule 40, galvanized steel pipe. A suitable water stop approximately 1/4-inch thick by 2-inch wide shall be welded to the sleeve completely around the periphery of the pipe. The use of such sealing strips shall not relieve the Contractor of his responsibility of providing a guaranteed watertight seal. Wall penetrations will be permitted only with the expressed approval of the Engineer. Wall seals exposed to sewage or sewage gasses shall be rated for corrosive service.

3.03 CLEANING EXISTING STRUCTURES

- A.** After dewatering and before commencing work on each structure, the Contractor shall remove and dispose of, away from the site and at a properly permitted disposal site, any sand, sludge, and other solids remaining in such structure.
- B.** The use of explosives will not be permitted to complete any work under this Contract. Care shall be taken not to damage any part of existing buildings or foundations or outside structures.

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01048 - UTILITIES COORDINATION

PART 1 - GENERAL

1.01 UTILITIES

Utilities for the purpose of these Specifications shall be considered as including, but not limited to: pipelines, conduits, cables, transmission lines and appurtenances of Public Utilities and those of Special Utility Districts, Cities or Towns, businesses or individuals solely for their own use or for use of their tenants; and storm drains, sanitary sewers, street lighting, traffic signal and fire alarm systems, except those owned or under the direct control of the Owner.

1.02 UNDERGROUND INSTALLATIONS

Existing underground pipelines and utilities are indicated on the Drawings only to the extent such information was made available to or discovered by Engineer in preparing drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof is expressly disclaimed by the Owner and the Engineer.

1.03 UTILITIES LOCATED IN OWNER'S RIGHT-OF-WAY

Unless otherwise provided or accepted herein, the removal, adjusting, relocation, or replacement of utility structures or facilities within the Owner's right-of-way, which may be necessary for construction of the work being done, in accordance with these Contract Documents, shall be at the expense of the owners of the utilities. While it is the utility owner's responsibility to perform any work and bear any expense involved in relocations and adjustments within Owner's right-of-way, it shall be the Contractor's responsibility to protect and maintain those utilities which, in the opinion of the Engineer, do not need to be disturbed in order to accomplish the work required by the Contract.

1.04 RELOCATIONS OF EXISTING GAS LINES, TELEPHONE LINES, ELECTRIC LINES, CABLE TV LINES, AND WATER LINES

The Contractor shall notify the proper authority of the utility involved when relocation of these lines is required. The Contractor shall coordinate all work by the utility so that the progress of construction will not be hampered.

PART 2 - PRODUCT - NOT USED

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01048 - UTILITIES COORDINATION

PART 3 - EXECUTION

3.01 GENERAL

The Contractor, when the Notice to Proceed is received, shall notify the owners of utilities affected by the Work, the approximate date upon which he will begin work, and shall submit a progress schedule of the proposed work. This shall be deemed sufficient notice if the project progresses according to the progress schedule submitted with the notification. If changes in the schedule of the work occur, the Contractor shall appraise both the owner of the utility affected, and the Engineer so that adjustments in the work schedule of the utility can be made. The Contractor shall be responsible for damages to the utility facility and construction delays resulting from failure to notify the utility and the Engineer of changes in procedure or location.

3.02 UTILITY CROSSINGS

It is intended that wherever existing utilities such as water, gas, telephone, electrical, drains, or other service lines must be crossed by a force main or waterline, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated on the drawings. However, when in the opinion of the Owner or Engineer this procedure is not feasible, he may direct the use of fittings for a utility crossing as detailed on the drawings.

3.03 TEST PITS

A. Test pits for the purpose of locating underground pipelines or structures shall be excavated prior to development of laying schedules for all pipe sizes of 16 inches and larger. The test pits shall be for the purpose of accurately locating underground utilities and structures both horizontally and vertically. Underground utilities' and structures' locations shall be referenced to the project baseline by station and offset distance, left or right and measured perpendicular to the baseline, along with the elevation of the top of the utility or structure. The data shall also include the size and depth or diameter of the utility or structure.

B. This procedure shall be completed for the entire project and all underground utilities and structures shall be located as described above in conformance with the requirements of the field engineering provision of Section 01050. The data collected shall be used to develop a pipe laying schedule with accurately depicts the location of

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01048 - UTILITIES COORDINATION

underground utilities and structures and details both horizontal and vertical deflections and adjustments of the proposed force main pipe required to eliminate conflicts. This laying schedule shall be submitted to the Engineer for approval prior to fabrication of the pipe.

C. Test pits shall be excavated and backfilled prior to both the preparation of the pipe laying schedule and the commencement of construction. The test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer. The costs of the test pit excavations shall be included in the various bid items for which the test pits benefit, except as otherwise allowed by Section 01025, Measurement and Payment.

3.04 PROTECTION OF EXISTING UTILITIES

A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering water, gas, telephone, electrical or other utility lines not shown on the drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the Owner.

B. The Contractor shall assume full responsibility for the protection of all utilities, public and private, including poles, services to buildings, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the drawings. The Contractor shall carefully support and protect all such utilities from injury of any kind. Any damage resulting from the Contractor's operation shall be repaired by him at his expense. The protection and preservation of utility facilities, which are located within the right-of-way, but outside the normal limits of construction, as determined by the Engineer, shall be the responsibility of the Contractor. The Contractor shall be responsible for all damage to utilities, which are due to his negligence.

C. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01048 - UTILITIES COORDINATION

D. If, in the opinion of the Engineer, permanent relocation of a utility owned by the Owner is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work under Article 10 of the General Conditions. If relocation of a privately owned utility is required, the Contractor will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the Owner and Utility and shall have no claim for delay due to such relocation.

E. The Contractor shall notify public and private utility companies in writing at least two, but not more than five full days (excluding Saturdays, Sundays, and legal holidays) before excavating near their utilities.

F. The Owner will not be responsible for any delay or inconvenience to the Contractor in carrying out the work resulting from the existence, removal or adjustment of any public utility. Additional costs incurred as a result thereof shall be the expense of the Contractor.

3.05 UTILITIES TO BE ADJUSTED

The owners of utility facilities, which required relocation, removal, adjustment or replacement, shall, if possible and feasible, perform this work prior to the commencement of the Contractor's work. Where utility work must be done in conjunction with the Contractor's work on the project or in conjunction with the work of other utilities, arrangements for when, how and where the operation is to proceed shall be worked out among the parties concerned. If disputes arise, the Engineer shall decide the course of action to be taken.

3.06 UTILITIES CONFLICTING WITH OPERATIONS

Those utility facilities which do not conflict with the improvement, but which are obstructions to the operations required for installation or which present unusual difficulty due to their close proximity to the area of the operations shall be located with certainty by the owners of the utility prior to the arrival of the Contractor's operation which would be hindered by the utility facility. The Contractor is required to preserve the utility facility in place without damage and shall be responsible for damages sustained, if the utility owner has located the facility by exposing it to the view of the Contractor or has otherwise shown the Contractor, with certainty, the location of the facility. Any other arrangements that the Contractor may make with a utility

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01048 - UTILITIES COORDINATION

owner as a substitute for the requirements of this Section shall require the approval of the Engineer, in writing.

3.07 MIS-LOCATED UTILITIES

The owner of a utility shall be wholly responsible for the proper location of his facilities, which are affected by construction work performed according to these Specifications. Improperly located or mis-located facilities, which are damaged during construction, shall be the responsibility of the utility, providing proper notification has been given.

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01050 - FIELD ENGINEERING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A.** The Contractor shall provide and pay for field engineering services for the following:
- 1.** Survey work required in execution of Work.
 - 2.** Civil, structural, or other professional engineering services specified or required to execute the Contractor's construction method.
- B.** The method of field staking for the construction of the Work shall be at the option of the Contractor. The Owner shall provide the engineering surveys to establish reference points that in his judgment are necessary to enable the Contractor to proceed with his Work.
- C.** The accuracy of any method of staking shall be the responsibility of the Contractor. All engineering for vertical and horizontal control shall be the responsibility of the Contractor.
- D.** The Contractor shall be held responsible for the preservation of all stakes and marks. If any stakes or marks are carelessly or willfully disturbed by the Contractor, the Contractor shall not proceed with any work until he has reestablished such points, marks, lines and elevations as may be necessary for the prosecution of the Work.
- E.** The Contractor shall retain the services of a competent surveyor, registered in the State of Louisiana, to layout the work and maintain a survey during construction. The Contractor shall be solely responsible for proper location of the Work.

1.02 SURVEY REFERENCE POINTS

Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.

- A.** Make no changes or relocations without prior written notice to the Engineer.
- B.** Report to the Engineer when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.
- C.** Require surveyor to replace control points, which may be lost or destroyed. Establish replacements based on original survey control.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01050 - FIELD ENGINEERING

1.03 PROJECT SURVEY REQUIREMENTS

- A. Establish temporary benchmarks as needed, referenced to data established by survey control points. Record locations with the horizontal and vertical data on the Record Drawings.
- B. Establish lines and levels, and locate and lay out, by instrumentation and similar appropriate means:
 - 1. Site improvements, including utility slopes and invert elevations.
 - 2. Batter boards for structures.
 - 3. Controlling lines and levels required for mechanical and electrical trades.
- C. From time to time, verify layouts by same methods.
- D. Establish all lines and grades prior to construction of pipe work at 100-foot increments.

1.04 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.
- B. At Contract closeout, submit a survey of installation of structures and pipelines at the same scale as the Engineer's drawings indicating elevations and stationing at 100-foot increments and at all valve and fitting locations when applicable.

1.05 SUBMITTALS

- A. On request of the Engineer, submit documentation to verify accuracy of field engineering work including cut sheets when applicable.
- B. Submit Drawings showing locations of all pipes and structures constructed. These drawings shall be included with the Record Drawings.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01060 - REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Abbreviations and acronyms used in Contract Documents to identify reference standards are illustrated in Section 01092 - Abbreviations.

1.02 QUALITY ASSURANCE

A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents or applicable codes establish stricter standards.

B. Publication Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

C. Merchantable timber must be harvested and sold commercially to satisfy requirements of the State of Louisiana Forestry Commission.

D. Siltation and sedimentation control shall be practiced to satisfy requirements of the State of Louisiana Department of Wildlife and Fisheries.

E. Detailed requirements such as fertilizer and seeding types, application rates, and seasons shall be subject to modification by the local Soil and Water Conservation District.

1.03 FINANCING BY GOVERNMENTAL AGENCIES

A. When projects are funded by Federal or State agencies, the regulations and rules of the funding agency shall be strictly adhered to.

B. Contractor shall secure from the Owner or the funding agency the regulation applicable to his work and organization including all labor requirements.

C. The Contractor shall be responsible to comply with all rules and regulations as outlined by the funding agency.

1.04 COMPLIANCE WITH REGULATIONS

A. The Contractor shall observe and comply with all Federal, State, and local laws, ordinances, codes, orders, and regulations, which in any manner affect those engaged or employed on the work, the materials used in the work, or the conduct of the work. If any discrepancy or inconsistency should be discovered in this Contract in relation to

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01060 - REGULATORY REQUIREMENTS

any such law, ordinance, code, order, or regulation, the Contractor shall report the same in writing to the Engineer. Any particular law or regulation specified or referred to elsewhere in these specifications shall not in any way limit the obligation of the Contractor to comply with all other provisions of Federal, State and Local laws and regulations.

B. The Contractor shall be responsible for securing all permits and licenses required and shall pay all fees required to complete the job.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01091 - REFERENCE STANDARDS

PART 1 - GENERAL

1.01 UNIT OF MEASURE

The standard units of measure shall be the inch-pound as defined by the U.S. National Bureau of Standards. Metric conversion shall be in accordance with ASTM E380.

1.02 STANDARD STATUS

A. All Standards referred to shall be current with latest addenda and supplements as of the date of the Contract Documents.

B. All work shall comply with all governing building and safety laws, ordinances and regulations relating to building and public health and safety laws having jurisdiction.

1.03 REFERENCE MATERIAL

All reference material utilized in the formation of these specifications can be obtained from local libraries or from the Engineer at the costs of reproduction.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. The following standards are referenced in the Contract Documents. The Contractor shall obtain copies of reference standards directly from the publication source when needed for proper performance of Work or when required for submittal by Contract Documents.

AA	Aluminum Association 900 19 th Street, NW, Suite 300 Washington, DC 20006	202/862-5100
AABC	Associated Air Balance Council 1518 K Street NW, Suite 503 Washington, DC 20005	202/737-0202
AAMA	American Architectural Manufacturer's Association 1827 Walden Office Square, Suite 550 Schaumburg, IL 60173	847/303-5664
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, Suite 225 Washington, DC 20001	202/624-5800
AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 Research Triangle Park, NC 27709	919/549-8141
ABMA	American Boiler Manufacturers Association 950 North Glebe Road, Suite 160 Arlington, VA 22203-1824	703/522-7350
ACCA	Air Conditioning Contractors of America 2025 Southern Avenue Shreveport, LA 71104	318/868-2785
ACI	American Concrete Institute 3880 Country Club Drive Farmington Hills, MI 48331	248/848-3700
ACIL	American Council of Independent Laboratories 1629 K Street NW Washington, DC 20006-1633	202/887-5872
ACPA	American Concrete Pipe Association 8300 Boone Boulevard, Suite 400 Vienna, VA 22182	703/821-1990

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

ADC	Air Diffusion Council 1901 N.Roselle Road, Suite 800 Schaumburg, IL 60195	847/706-6750
AEICI	Association of Edison Illuminating Companies, Inc. 600 N. 18 th Street Birmingham, AL 35203	205-254-3568
AGA	American Gas Association 400 N.Capitol St., NW Washington, DC 20001	202/824-7000
AGCA	Associated General Contractors of American 1901 Pennsylvania Avenue NW Washington, DC 20006	202/530-1188
AGMA	American Gear Manufacturers Association 1500 King Street, Suite 201 Alexandria, VA 22314	703/684-0211
AHA	American Hardboard Association 1210 West Northwest Highway Palatine, IL 60067	847/934-8800
AHAM	Association of Home Appliance Manufacturers 1111 19 th Street NW Washington, DC 20036	202/872-5955
AI	Asphalt Institute 2696 Research Park Drive Lexington, KY 40511-8480	859/288-4960
AIA	American Institute of Architects 1735 New York Ave. NW Washington, DC 20006	202/626-7300
A.I.A.	American Insurance Association 1130 Connecticut Avenue, NW, Suite 1000 Washington, DC 20036	202/828-7100
AIHA	American Industrial Hygiene Association 345 White Pond Drive Akron, OH 44320	216/762-7294
AISC	American Institute of Steel Construction One East Wacker Drive, Suite 3100 Chicago, IL 60611	312/670-8332
AISI	American Iron and Steel Institute 1140 Connecticut Avenue NW, Suite 705 Washington, DC 20036	202/452-7100

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

AITC	American Institute of Timber Construction 7012 S.Revere Pkwy Englewood, CO 80112	303/792-9559
ALI	Associated Laboratories, Inc. 500 S. Vermont Street Palatine, IL 60067	313/335-6114
ALSC	American Lumber Standards Committee P.O. Box 210 Germantown, MD 20875-0210	301/972-1700
AMCAI	Air Movement and Control Association International, Inc. 30 W. University Drive Arlington Heights, IL 60004	847/394-0150
ANLA	American Nursery & Landscape Association 1000 Vermont NW, Suite 300 Washington, DC 20005-4914	202/789-2900
ANSI	American National Standards Institute 25 W 43 rd Street New York, NY 10036	212/642-4900
AOAC	Association of Official Analytical Chemists 481 N. Frederick Avenue Gaithersburg, MD 20877	301/924-7077
APA	American Plywood Association – The Engineered Wood Association P.O. Box 11700 Tacoma, WA 98411	206/565-6600
A.P.A.	American Parquet Association 2900 First Commercial Building Little Rock, AR 72201	501/375-5561
APHA	American Public Health Association 1015 15 th Street N.W. Washington, DC 20005	202/789-8670
API	American Petroleum Institute 1220 L Street NW Washington, DC 20005	202/682-8000
ARCA	Asphalt Removing Contractors Association 237 Branston Road Burton Upon Trent Staffordshire DE14 3BT Canada	01283 531126
AREA	American Railway Engineering Associates 50 F Street NW, Suite 7702 Washington, DC 20001	202/639-2190

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

ARMA	Asphalt Roofing Manufacturers Association 1156 – 15 th Street, NW, Suite 900 Washington, DC 20005	202/207-0917
ACRTI	Air Conditioning and Refrigeration Technology Institute 4100 North Fairfax Drive, Suite 200 Arlington, VA 22203	703/524-8800
AGCA	Associated General Contractors of America 333 John Carlyle Street, Suite 200 Alexandria, VA 22314	703/548-3118
ASA	Acoustical Society of America 2 Huntington Quadrangle Melville, NY 11747	516/576-2360
ASC	Adhesive and Sealant Council Inc. 7979 Old Georgetown Road Bethesda, MD 20814	301/986-9700
ASCE	American Society of Civil Engineers 1535 West Loop S. Houston, TX 77027	281/624-7153
ASHRACE	American Society of Heating, Refrigerating & Air Conditioning Engineers 1791 Tullier Circle NE Atlanta, GA 30329	404/636-8400
ASME	American Society of Mechanical Engineers Three Park Avenue New York, NY 10016-7722	800/843-2763
ASMI	ASM International 9639 Kinsman Road Novelty, OH 44072	440/338-5151
ASNDT	American Society for Non-Destructive Testing 1711 Arlingate Lane Columbus, OH 43228	614/274-6003
ASPE	American Society of Plumbing Engineers 8614 W.Catalpa Avenue Chicago, IL 60656	773/693-2773
ASSE	American Society of Sanitary Engineering 901 Canterbury Road Westlake, OH 44145	440/835-3040
ASTB	American Standards Testing Bureau, Inc. 1075 New Dehaven Street Conshohocken, PA 19428	610/825-2010

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

ASTM	American Society for Testing and Materials 100 Bar Harbor Drive Conshohocken, PA 19428-2956	610/832-9500
ATT	American Telephone and Telegraph Company 295 N. Maple Avenue Basking Ridge, NJ 07920	908/221-4191
AWI	Architectural Woodwork Institute 1952 Isaac Newton Sq. W. Reston, VA 22206	703/733-0600
AWPA	American Wood Preservers' Association 5001 Comache Vista Court Granbury, TX 76049	517/326-6300
AWPI	American Wood Preservers' Institute 2750 Prosperity Avenue Fairfax, VA 22031	703/204-0500
AWS	American Welding Society 550 NW 42 nd Avenue or 550 Le Jeune Road NW Miami, FL 33126	305/443-9353 or 800/443-9353
AWWA	American Water Works Association 6666 W. Quincy Ave. Lakewood, CO 80235	303/347-0388
BANC	Brick Association of the Carolinas 8420 University Exec. Park Drive Charlotte, NC 28262	704/510-1500
BELLCORE	Bellcore 2101 1 Street NW Lbby Washington, DC 20037	202/776-5400
BIA	Brick Institute of America 4194 Fulton Drive NW Canton, OH 44718	330/492-0303
BOBS	Board of Building Standards 6606 Tussing Road Reynoldsburg, OH 43068	
BOCAI	Building Officials and Code Administrators Int'l, Inc. 10830 East 45 th Street Tulsa, OK 74146	918/664-4434
BOR	Bureau of Reclamation 11056 W. Country Road 18 E Loveland, CO 80537	970/667-4410

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

CAGI	Compressed Air and Gas Institute 1300 Sumner Avenue Cleveland, OH 44115	216/241-7333
CAUS	Color Association of the United States 343 Lexington Avenue New York, NY 10016	212/683-9531
CDA	Copper Development Association 260 Madison Avenue New York, NY 10016	212/251-7200
CDC	Centers for Disease Control 4770 Buford Highway Atlanta, GA 30341	770/451-7443
CEA	Cement Employers Association 122 East Board Street Bethlehem, PA 18018	610/868-8060
CEMA	Conveyor Equipment Manufacturers Association 6724 Lone Oak Blvd. Naples, FL 34109	239/514-3441
CFR	Code of Federal Regulations Government Printing Office Washington, DC 20402	
CGA	Compressed Gas Association 1725 Jefferson Davis Highway Arlington, VA 22202	703/412-0900
CIE	Carrier Information Exchange 1625 E Washington Street West Bend, WI 53095	262/338-0817
CIMA	Cellulose Insulation Manufacturers Association 136 S Keowee Street Dayton, OH 45402	937/222-2462
CISCA	Ceiling & Interior Systems Construction Association 1500 Lincoln Highway St. Charles, IL 60174	630/584-1919
CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Road, Suite 419 Chattanooga, TN 37421	423/892-0137
CPIA	Chlorinated Paraffin Industries Association 1250 Connecticut Avenue NW Washington, DC 20036	202/637-9040

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

CRI	Carpet & Rug Institute 310 Holiday Avenue Dalton, GA 30720	706/278-3176
CRSI	Concrete Reinforcing Steel Institute 933 North Plum Grove Road Schaumburg, IL 60195	847/517-1200
CTIA	Ceramic Tile Institute of America 12061 Jefferson Blvd. Culvert City, CA 90230	310/574-7800
C.T.I.	Cooling Tower Institute 2611 FM 1960 Road West Houston, TX 77068	281/583-4087
DHI	Door and Hardware Institute 14150 Newbrook Drive, Suite 200 Chantilly, VA 20151	703/222-2010
DIPRA	Ductile Iron Pipe Research Association 245 Riverchase Trail Hoover, AL 35244	205/402-8700
ECSA	Exchange Carriers Standards Association 100 South Jefferson Road, Suite 1 Whippany, NJ 07981	973/884-4596
EIA	Electronic Industries Association 2500 Wilson Blvd. Arlington, VA 22201	703/907-7500
EJCDC	Engineers' Joint Contract Documents Committee American Consulting Engineers Council 1015 15 th Street NW Washington, DC 20005	
EJMA	Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591	914/332-0040
FCC	Federal Communications Commission 445 12 th Street SW Washington, DC 20024	202/418/0101
FCI	Fluid Controls Institute 1300 Summer Avenue Cleveland, OH 44115	216/241-7333
FHWA	Federal Highway Administration 400 7 th Street SW Washington, DC 20590-0411	

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

FMEA	Factory Mutual Engineering Association Charlotte, NC 28277	704/752-1021
FTL	Federal Testing Laboratories 4900 9 th Avenue NW Seattle, WA 98107	206-706-9904
GA	Gypsum Association 810 1 st St. NE, Suite 510 Washington, DC 20002	202/289-5440
HEI	Heat Exchange Institute 1300 Sumner Avenue Cleveland, OH 44115	216/241-7333
HI	Hydraulic Institute 9 Sylvan Way, Suite 180 Parsippany, NJ 07054-3802	973/267-9700
HLMA	Hardwood Lumber Manufacturers Association 545 W Chocolate Avenue Hershey, PA 17033	717/312-1244
HMA	Hardwood Manufacturers Association 400 Pen Center Blvd., Suite 53 Pittsburgh, PA 15235	412/829-0770
IAPMO	International Association of Plumbing and Mechanical Officials 20001 Walnut Drive South Walnut, CA 91789-2825	909/595-8449
ICBO	International Conference of Building Officials 2122 112 th Avenue NE, Suite 8300 Bellevue, WA 98004	425/451-9541
ICEAI	Insulated Cable Engineers Association, Inc. 5 Deerfield Road Carrollton, GA 30116	770/830-0369
ICAA	Insulation Contractors Association of America 1321 Duke Street Alexandria, VA 22314	703/739-0356
ICAC	Institute of Clean Air Companies 1660 L Street NW Washington, DC 20036	202/457-0911
IEEE	Institute of Electrical and Electronic Engineers 445 Hoes Lane Piscataway, NJ 08854	732/981-0060

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

IESNA	Illuminating Engineering Society of North America 120 South Street New York, NY 10038	212/248-5000
IFI	Industrial Fasteners Institute 1717 East 9 th Street, Suite 1105 Cleveland, OH 44115	216/241-1482
IAR	International Institute of Ammonia Refrigeration 1110 N. Glebe Road Arlington, VA 22201	703/312-4200
ILIAI	Indiana Limestone Institute of America, Inc. Stone City Bank Building, Suite 400 Bedford, IN 47421	812/275-4426
IMI	International Masonry Institute 3421 Ivy Hills Blvd. Cincinnati, OH 45244	513/272-2449
IMSA	International Municipal Signal Association 200 Metro Center Blvd. Warwick, RI 02886	401/738-2220
IOS	International Organization for Standardization American National Standards Institute 25 W 43 rd Street New York, NY 10036	212/642-4900
IRI	Industrial Risk Insurers 85 Woodland Street Hartford, CT 06114	860/953-2211
ISA	Instrument Society of America Cincinnati Commerce Center Cincinnati, OH 45202	513/956-7016
ISS	Iron and Steel Society 186 Thorn Hill Road Warrendale, PA 15086	724/776-1535
ISSA	International Slurry Surfacing Association Annapolis, MD 21403	410/267-0023
ITEA	International Test and Evaluation Association 4400 Fair Lakes Court Fairfax, VA 22033	703/631-6220
KCMA	Kitchen Cabinet Manufacturers Association 1899 Preston White Drive Reston, VA 22091-4326	703/264-1690

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

LIA	Lead Industries Association, Inc. 13 Main Street Sparta, NJ 07871	973/726-5323
LPI	Lightning Protection Institute 3335 N.Arlington Heights Road Arlington Heights, IL 60004	847/255-3003
MBMA	Metal Building Manufacturers Association 1300 Sumner Avenue Cleveland, OH 44115	216/241-7333
MCAA	Mechanical Contractors Associations of America 1385 Piccard Drive Rockville, MD 20850	301/869-5800
MFMA	Maple Flooring Manufacturers Association 60 Revere Drive, Suite 500 Northbrook, IL 60062	847/480-9080
MIA	Marble Institute of America 28901 Clemens Road Westlake, OH 44145	440/250-9222
MSSVFI	Manufacturers Standardization Society of the Valve and Fittings Industry 127 Park Street NE Vienna, VA 22180	703/281-6613
NACE	National Association of Corrosion Barker, TX 77413	281/492-0535
NAPA	National Asphalt Pavement Association 5100 Forbes Blvd. Lanham, MD 20706	301/731-4748
NBBPVI	National Board of Boiler and Pressure Vessel Inspectors 7437 Pinque Drive Columbus, OH 43085	614/888-8320
NBHA	National Builders Hardware Association 1019 S.E. 10 th Avenue Portland, OR 97214	503/233-5381
NCMA	National Concrete Masonry Association 13750 Sunrise Valley Drive Herndon, VA 20171	703/713-1900
NCRPM	National Council on Radiation Protection and Measurement 7910 Woodmont Avenue, Suite 1016 Bethesda, MD 20814	301/657-2652

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

NCTA	National Cable Television Association 1724 Massachusetts Avenue NW Lbby Washington, DC 20036-1969	202/775-3550
NDPA	National Decorating Products Association 403 Axminister Drive Fenton, MO 63026	636/326-2636
NEBB	National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877	301/977-3698
NECA	National Electrical Contractors Association Southern Regional Office 5001 Highway 190, Suite D6 Covington, LA 70433	985/893-2920
N.E.C.A.	National Exchange Carrier Association 100 S. Jefferson Road, Suite 1 Whippany, NJ 07981	973/884-4596
NEII	National Elevator Industry, Inc. 20 W. 44 th Street New York, NY 10036	212/730-2124
NEMA	National Electrical Manufacturers Association 1300 17 th Street N Arlington, VA 22209	703/841-3200
NFLPA	National Fluid Power Association 3333 North Mayfair Road, Suite 101 Milwaukee, WI 53222	414/778-3344
NFPA	National Fire Protection Association Battery March Park Quincy, MA 02169	617/770-4543 or 617/745-2200
N.F.P.A.	National Forest Products Association 1111 19 th Street NW Washington, DC 20036	202/463-2700
NHLAIS	National Hardwood Lumber Association Inspection School P.O. Box 34518 Memphis, TN 38184	901/377-1818
NIOSH	National Institute for Occupational Safety & Health 200 Independence Avenue SW, #7 Washington, DC 20201	202/401-0721
NKBA	National Kitchen & Bath Association 687 Willow Grove Street Hackettstown, NJ 07840	908/852-0033

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

NLA	National Lime Association 200 North Glebe Drive Arlington, VA 22203	703/243-5463
NRCA	National Roofing Contractors Association 10255 West Higgins Road Des Plaines, IL 60018	847/299-9070
NPCC	National Painting and Coatings Corporation P.O. Box 170 Orange, NJ 07051	973/324-5800
NSPE	National Society of Professional Engineers 1420 King Street Alexandria, VA 22314	703/684-2800
NSWMA	National Solid Wastes Management Association 4301 Connecticut Avenue NW Washington, SC 20008	202/244-4700
NTCA	National Tile Contractors Association 626 Lakeland East Drive Jackson, MS 39232	601/939-2071
NUCA	National Utility Contractors Association 4301 North Fairfax Drive, Suite 360 Arlington, VA 22203	703/358-9300
NWMA	National Woodwork Manufacturers Association 950 Jennings Street Bethlehem, PA 18017	610/317-6300
NWWDA	National Wood Window & Door Association 1111 19 th Street NW Washington, DC 20036	202/463-2799
PDI	Plumbing and Drainage Institute 45 Bristol Drive South Easton, MA 02375	508/230-3516
PEI	Porcelain Enamel Institute 5696 Peachtree Parkway Norcross, GA 30092	770/242-2632
PHCCNA	Plumbing-Heating-Cooling Contractors-National Association 180 S. Washington Street Falls Church, VA 22040	703/237-8100
PPI	Plastics Pipe Institute 1825 Connecticut Avenue NW Washington, DC 20009	202/462-9607

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

PPIC	Plumbing Piping Industry Council 9450 SW Commerce Center, Suite 310 Wilsonville, OR 97070	503/682-7919
RFCI	Resilient Floor Covering Institute 401 East Jefferson Street Rockville, MD 20805	301/340-8580
RIS	Redwood Inspection Service 405 Enfrente Road Novato, CA 94949	415/382-0662
RMA	Rubber Manufacturers Association 1400 K Street NW, Suite 900 Washington, DC 20005	202/682-4800
SBCCI	Southern Building Code Congress International 9420 Research Blvd. Austin, TX 78759	512/346-4150
SEMI	Semiconductor Equipment and Material International 1041 K Street NW Washington, SC 20005	202/289-0440
SIGMA	Sealed Insulating Glass Manufacturers Association 401 N Michigan Avenue Chicago, IL 60611	312/644-6610
SJI	Steel Joist Institute 3127 10 th Avenue, Ext. N Myrtle Beach, SC 29577	843/626-1995
SMA	Screen Manufacturers Association 3950 North Lake Drive Chicago, IL 60613	773/525-2644
SMACNA	Sheet Metal / Air Conditioning Contractors National Association 4201 Lafayette Center Drive Chantilly, VA 20151-1209	703/803-2980
SPI	Society of Plastics Industry 1801 K Street NW Washington, DC 20006	202/974-5200
SPIB	Southern Pine Inspection Bureau 4709 Scenic Highway Pensacola, FL 32504	850/434-2611
STI	Steel Tank Institute 570 Oakwood Road, Suite 101 Lake Zurich, IL 60047	847/438-8265

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

SWI	Steel Window Institute 1300 Sumner Avenue Cleveland, OH 44115	216/241-7333
SWPA	Submersible Wastewater Pump Association 1866 Sheridan Road, Suite 201 Highland Park, IL 60035	847/681-1868
SWRI	Sealant Waterproofing & Restoration Institute 2841 Main Street Kansas City, MO 54108	816/472-7974
TAS	Technical Aid Series Construction Specifications Institute 601 North Madison Street Alexandria, VA 22314	703/684-0300
TCA	Tile Council of America 100 Clemson Research Blvd. Anderson, SC 29625	864/646-8453
TEMA	Tubular Exchanger Manufacturers Association 1001 North Fulton Avenue Tulsa, OK 74115	918/835-1042
TMANC	Terrazzo Mosaic Association of Northern California 700 Ygnacio Valley Road Walnut Creek, CA 94596	925/944-4911
TPI	Truss Plate Institute 583 Donoforio Drive, Suite 200 Madison, WI 53719	608/833-5900
UL	Underwriters Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062-2096	847/272-8800
UNI-BELL	Uni-Bell PVC Pipe Association 2655 Villa Creek Drive, Suite 155 Dallas, TX 75234	972/243-3902
WCLIB	West Coast Lumber Inspection Bureau 6980 SW Varns Street Portland, OR 97223	503/639-0651
WIC	Woodwork Institute of California 552 Sunset Palmdale, CA 93551	661/272-1438
WPCF	Water Pollution Control Federation 601 Wythe Street Alexandria, VA 22314-1994	703/684-2400

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

WQA	Water Quality Association 4151 Naperville Road, Suite 100 Lisle, IL 60532	630/505-0160
WWPA	Western Wood Products Association 1500 Yeon Building Portland, OR 97204	503/224-3930

B. Names and titles of federal government standard or specification producing agencies are frequently abbreviated. The following acronyms or abbreviations as referenced in the contract documents indicate names of standard or specification producing agencies of the federal government.

CFR	Code of Federal Regulations Available from the Government Printing Office North Capitol Street between G and H Streets NW Washington, DC 20402 (Material is usually first published in the Federal Register)	202/783-3238
COE	Corps of Engineers (US Department of the Army) Chief of Engineers-Referral Washington, DC 20314	202/693-6456
CPSC	U.S. Consumer Product Safety Commission 4330 E. West Highway Bethesda, MD 20814	301/504-0515
CD	Commercial Development 601 13 th Street NW Washington, DC 20005	202/777-2000
DOC	Department of Commerce 1110 Vermont Avenue NW Washington, DC 20005	202/728-6829
DOTn	U.S. Department of Transportation 2100 2 nd Street SW Washington, DC 20593	202/646-5095
DOTy	U.S. Department of Treasury Bureau of Alcohol, Tobacco and Firearms c/o Superintendent of Documents U.S. Government Printing Office Washington, DC 20402-9325	202/606-8754
EPA	Environmental Protection Agency 901 5 th Street NW Washington, DC 20001	202/260-2080

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

FAA	Federal Aviation Administration 1575 I Street NW Washington, DC 20005	202/789-1707
FCC	Federal Communications Commission 445 12 th Street SW Washington, DC 20024	202/418-0101
FHA	Federal Housing Administration (U.S. Department of Housing and Urban Development) 451 Seventh Street SW Washington, DC 20410	202/708-1112 or 208-8216
FS	Federal Specification (General Services Administration) Specifications Unit (WFSIS) 7th and D Streets SW Washington, DC 20406	202/472-2205 or 472-2140
GSA	General Services Administration Rockville, MD 20847	301/443-0100
HUD	Department of Housing and Urban Development 451 7 th Street SW Washington, DC 20410	202/708-1112
LADOTD	Louisiana Department of Transportation & Development 1201 Capital Access Road Baton Rouge, LA 70804	225/274-4326
MSD	Military Standardization Documents (U.S. Department of Defense) Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120-5099	215/697-2667
NBS	National Bureau of Standards (U.S. Department of Commerce) Gaithersburg, MD 20234	301/921-1000
OSCI	Office of Standards Code and Information National Bureau of Standards Gaithersberg, MD 20899	301/975-4029
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor) c/o U.S. Government Printing Office Washington, DC 20402-9325	202/783-3238

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01092 - ABBREVIATIONS

PS	Product Standard of NBS (U.S. Department of Commerce) Government Printing Office Washington, DC 20402	202/783-3238
REA	Rural Electrification Administration (U.S. Department of Agriculture) 14th Street and Independence Avenue SW Washington, DC 20250	202/720-2791
USDA	U.S. Department of Agriculture 1400 Independence Avenue Washington, DC 20250	202/264-8600
USPS	U.S. Postal Service 458 Lenfant Plaza SW Washington, DC 20024	202/523-2013

C. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up-to-date as of the date of the Contract Documents.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

This Section describes special procedures for alterations, preservation, security, hazardous material, and other types of projects demanding unique procedures.

1.02 SEPARATION BETWEEN SEWER LINES AND WATER LINES

See specifications and applicable piping systems specifications. Where the separation between sanitary sewer and water lines is not clearly defined by dimensions on the drawings, a sewer shall not be closer horizontally than ten feet to a water supply main or service line, except that where the bottom of the water pipe will be at least eighteen inches above the top of the sewer pipe, the horizontal spacing may be a minimum of ten feet. Where gravity flow sewers cross above the water lines, the sewer pipe for a distance of ten feet each side of the crossing shall be ductile iron or PVC pipe, without any joint closer horizontally than ten feet to the crossing, or shall be fully encased in concrete. The thickness of the concrete including at the pipe joints shall be no less than four inches. These provisions are regulations of the State Sanitary Code and Ten States Standards. Unless otherwise approved by the Engineer, the locations, lines and grades shown on the drawings shall not be changed.

1.03 OPEN WASTEWATER BYPASSING

Temporary open wastewater bypass discharges shall generally be prohibited. The applicable State Pollution Control Agency and U.S.E.P.A. must approve open wastewater bypassing if the terms of the N.P.D.E.S. permit allow bypassing. Bypassing will be allowed only when absolutely necessary and the approval of the Engineer, the State and U.S.E.P.A. is mandatory.

1.04 INSTALLATION OF EQUIPMENT

A. Special care shall be taken to ensure proper alignment of all equipment with particular reference to mechanical equipment such as pumps and electric drives. The units shall be carefully aligned on their foundations by qualified millwrights and their base plates shimmed to correct elevation and alignment at the anchor bolts. The anchor bolts shall be set in place and the nuts tightened against the shims. The alignment of equipment shall be further checked after securing to the foundations, and, after confirmation of all alignments, the base plates shall be finally grouted in

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

place. The Contractor shall be responsible for the exact alignment of equipment with associated piping, and under no circumstances will "pipe springing" be allowed.

B. All wedges, shims, filling pieces, keys, packing, grout, and other materials necessary to properly align, level, and secure equipment in place shall be furnished by the Contractor at no additional cost to the Owner. All parts intended to be plumb or level must be proven so.

1.05 SLEEVES, OPENINGS, AND ANCHORS

A. The Contractor shall provide all openings, channels, chases, etc., and install anchor bolts and other items to be embedded in concrete as required to complete the work under this Contract, together with those required by subcontractors, and shall do all cutting and patching, except cutting and patching of materials of a specified trade and as stated otherwise in the following paragraph.

B. The Contractor shall coordinate with equipment suppliers and subcontractors to provide all sleeves, inserts, hangers, anchor bolts, etc. of the proper size and material for the execution of the work. The Contractor shall be responsible for any corrective cutting and refinishing required to make necessary openings, chases, etc. In no case shall beams, lintels or other structural members be cut without the written approval of the Engineer.

1.06 PROVISIONS FOR CONTROL OF EROSION AND POLLUTANTS

Sufficient precautions shall be taken during construction to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other materials harmful to humans, fish, or other life, into the ground and surface waters of the state. Control measures must be adequate to assure that turbidity in the receiving waters will not be increased more than 10 nephelometric turbidity units (NTU), or as otherwise required by the state or other controlling agency, in water used for public water supply or fishing unless limits have been established for the particular water. In surface water used for other purposes, the turbidity must not exceed 25 NTU unless otherwise required by the state or other controlling agency. Special precautions shall be taken in the use of construction equipment to prevent operations that promote erosion.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

1.07 ROADSIDE CULVERTS AND STRUCTURES

Should the scope or location of the Work require the removal of roadside culverts and/or structures (i.e., bridges, pipes), their removal and relaying or replacement shall be included in the cost of the various other pay items at no extra payment. Relaying roadside pipe culverts, replacing broken pipe, setting driveway bridges, or replacing bridges shall be equal to or better than that which existed before the work. Replacements of broken pipe or bridges may be with used materials.

1.08 RELOCATION OF MAILBOXES, STREET AND TRAFFIC SIGNS

When mailboxes are located within the limits of construction, the Contractor shall give the mailbox owner sufficient written notice to remove his mailbox from the construction site. If the mailbox is not removed the Contractor shall remove the mailbox and replace the mailbox to the same condition that existed prior to construction.

Street name markers and traffic signs which are within the construction limits shall be removed, stored, protected and reinstated in approximately the original location by the Contractor. Any markers or signs that become lost or damaged shall be replaced by the Contractor equal to or better than the original.

1.09 PROTECTION OF WORK

Until the acceptance of the work by the Engineer as evidenced in writing, said work shall be under the charge and care of the Contractor. The Contractor shall take every necessary precaution against damages to any part thereof by the elements or from any other cause. The Contractor shall rebuild, restore, repair, and make good, at his own expense, all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance.

1.10 INCLEMENT WEATHER

A. Within thirty (30) days of the date of Notice to Proceed, the Contractor shall submit to the Engineer an Inclement Weather Preparedness Plan. The plan shall outline the necessary measures, which the Contractor will perform in case of the occurrence of storm conditions and/or hurricanes.

B. In the event of inclement weather, or whenever Engineer shall direct, Contractor and Subcontractors will protect carefully the Work and materials against damage or

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

injury from the weather, including sudden rises in sewer flows due to storms outside the immediate construction zones. Damaged Work and materials shall be removed and replaced. If, in the opinion of the Engineer, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or Subcontractors to so protect the Work, no additional time for removal and replacement will be given by the Owner.

1.11 WATER TIGHTNESS

A. Special precautions shall be taken in the curing of concrete to reduce concrete cracking as called for in Section 03010. Each water-retaining structure (those which are intended to hold a liquid) shall be filled and tested for leaks by the Contractor with clean water prior to surface coating or painting. Leaks shall be repaired by the Contractor. The procedure and manner in which leaks are repaired shall meet the approval of the Engineer. All costs associated with the testing and repair of leaks shall be at the expense of the Contractor. Prior to the beginning of the leakage test, the structure shall be filled to the highest working water level (to grade level in pump stations) and allowed to stand for a period of 24 hours to allow for absorption.

Leakage limitations shall be as follows:

1. All water visibly flowing through a concrete wall shall constitute a leak and shall be repaired by pumping and sealing the crack with a two-part water intensive epoxy.
2. Damp areas not exceeding one percent of the total wall wetted area and not having visible seepage shall be conditionally acceptable subject to all said dampness being eliminated by application of the water side surface treatment as may be specified. In the absence of a specified water side surface treatment or where said treatment does not eliminate wall dampness, the water side of the wall shall be prepared in accordance with the manufacturer's instructions and an approved epoxy concrete surface coating applied.
3. All leakage testing shall be performed prior to tank backfill.
4. To check for leakage through the tank bottoms, the fall in surface water level during tank testing shall be measured and shall not exceed 0.5 inch in a 24-hour period, providing allowance for evaporation at a rate approved by the Engineer. Visual leaks, either flowing or damp areas, observed during the filling, absorption, or test periods shall be marked and locations recorded and repaired.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

1.12 SALVAGE

The Owner may desire to salvage certain items of existing equipment that are to be dismantled and removed during the course of construction. Prior to removal of any existing equipment from the site of the work, the Contractor shall ascertain from the Engineer whether or not the particular item or items are to be salvaged. Items to be salvaged shall be stockpiled on site in a location as directed by the Engineer. All other items of equipment shall be disposed of off-site by the Contractor at his own expense.

1.13 PUBLIC NUISANCE

A. The Contractor shall not create a public nuisance, including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.

B. Sound levels from Contractor operations shall not exceed 45 dBA 7 P.M. to 7 A.M. or 55 dBA 7 A.M. to 7 P.M. This sound level is to be measured at the exterior of the nearest exterior wall of the nearest residence. Levels at operating equipment shall not exceed 85 dBA at the equipment at any time. Sound levels in excess of these values are sufficient cause to have the work halted until equipment can be quieted to these levels. If requirements of the local noise ordinance are more restrictive than the above limits, then the Ordinance shall have precedence over the above requirements. Work stoppage by the Engineer for excessive noise shall not relieve the Contractor of any obligations under the Contract, including, but not limited to, performance of the work at the contract time and contract price.

C. No extra payment will be made for time lost due to work stoppage resulting from the creation of a public nuisance.

1.14 UNFAVORABLE CONSTRUCTION CONDITIONS

A. The Contractor shall confine his operations to Work, which will not be affected adversely by unfavorable weather, wet ground, or other unsuitable construction conditions. No portion of the Work shall proceed under conditions that would affect adversely the quality or efficiency of the Work, unless suitable special precautions or countermeasures are taken by the Contractor.

B. During suspension of the Work from any cause, the work shall be suitably covered and protected so as to preserve it from injury by the weather.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

C. If the Contractors work may be damaged or rendered inferior by unfavorable weather conditions, the Engineer may issue an order to suspend work. Compensation for additional Contract Time under other sections of this Specification will be awarded for suspended work as a result of unfavorable weather conditions. The authority of the Engineer to issue such an order shall not be interpreted as a requirement to do so.

D. Any work constructed during unfavorable weather conditions and found to be damaged or of inferior quality shall be removed and replaced at no additional costs to the Owner or Engineer.

1.15 RELOCATIONS

The Contractor shall be responsible for the relocation of structures, including but not limited to, light poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. The cost of all such relocations shall be included in the costs of Work.

1.16 SUBSURFACE AND SURFACE OBSTRUCTIONS

In the event unforeseen subsurface or surface obstructions occur in the progression of work, the Contractor shall confer with the Engineer and obtain his written consent before undertaking any deviations from the plans. At the direction of the Engineer, the Contractor may be permitted to delete construction in the obstruction area temporarily; however, the Contractor shall make no claim for damage by this delay.

1.17 EXAMINATION OF SITE

Before submitting a bid for this project, the Contractor shall visit the site and become familiar with existing conditions under which the project is to be executed. No additional allowances will be made to the Contractor for any error or negligence on his part.

1.18 TOLERANCES

Contractor shall verify in the field before any material or equipment is fabricated the dimension when those dimensions of existing structures or equipment are dependent as correctness of such information. Should dimensions as shown on the drawing vary from the field, then, the Contractor shall notify the Engineer and jointly resolve the figure in favor of the correct dimensions.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

All work and materials shall be within reasonably accepted manufacturing and construction tolerances as defined by the drawings, specifications, and the manufacturer of material and equipment. If those tolerances exceed limits, the Engineer may accept the work provided the work would not be materially affected by the change and the interests of the Owner are protected.

1.19 PUMPING

- A.** The Contractor with his own equipment shall do all pumping necessary to prevent flotation of any part of the structures during construction operations.
- B.** The Contractor shall, for the duration of the Contract and with his own equipment, pump out water and wastewater which may seep or leak into the excavations or structures at the work sites which shall be kept dry at all times.

1.20 HAZARDOUS LOCATIONS

- A.** The existing wet wells, manholes, sewers, force mains, pipes, and other related areas are hazardous locations in that explosive concentrations of sewage gas may be present. The Contractor is cautioned that the above areas, especially the wet well, may be deficient in oxygen. Checks shall be made by the Contractor whenever personnel are working in these areas to insure that adequate ventilation has been provided.
- B.** In his operations in hazardous locations, the Contractor shall use spark-proof tools and explosion-proof temporary lighting and shall not use electric power tools, open flame devices, electric welding or any device or methods which might conceivably cause ignition or explosion.
- C.** If a working area atmosphere is unsafe, the Contractor shall furnish, install, operate, and later remove such temporary auxiliary ventilating facilities as are necessary to provide a safe atmosphere.
- D.** The Contractor shall also instruct and caution his employees and the employees of his subcontractors to avoid smoking while in the hazardous areas. Suitable prominent "No Smoking" signs shall be placed at locations where sewage gas could be present.

1.21 OPERATING REQUIREMENTS FOR EXISTING PUMPING AND COLLECTION SYSTEMS

- A.** During construction of the new facilities and rehabilitation of existing facilities the Owner's operators will be responsible for operating and maintaining the existing

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01100 - SPECIAL PROJECT PROCEDURES

pumping and collection system located outside of the limits of the Contract site, and the Contractor shall be responsible for operating and maintaining the entire pumping and collection system within the Contract site. The Contractor shall provide adequate trained staff to perform proper system operation and maintenance. The Owner's operating staff will be responsible for the operation and maintenance of all existing facilities until they are formally taken over by the Contractor.

B. When the Contractor is ready to begin work at a site, including the delivery of material, he shall notify the Engineer, and a date of site take-over by the Contractor will be agreed. On the site take-over date, a walk-through joint inspection will be made by the Contractor, Owner, and Engineer at which notes will be made and photographs taken documenting the conditions of the facilities and a Contractor take-over document prepared and executed by the Owner and Contractor.

Thereafter, the Contractor shall operate and maintain the facilities to the satisfaction of the Engineer and Owner until the Contract work at the site and facilities is finished and the Certificate of Substantial Completion is issued by the Engineer. The cost of operating and maintaining the site and facilities during this construction period shall be included in the bid price except for the following, which will be furnished by the Owner:

1. Electricity for operating the facilities.
2. Water for operating the facilities (not for construction).
3. Spare parts for replacements necessary but not caused by the Contractor's deficient operation and maintenance.

1.22 NOTIFICATION OF WORK ON EXISTING FACILITIES

Before commencing work on any of the existing structures or equipment, the Contractor shall notify the Engineer in writing at least ten (10) calendar days in advance of the date he proposes to commence such work.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. The Engineer shall schedule and administer a pre-construction meeting at the office of the Program Manager, construction progress meetings, and specially called meetings throughout the progress of the Work. The Engineer will:

1. Prepare agenda for meetings.
2. Make arrangements for meetings.
3. Preside at meetings.
4. Record the minutes; include significant proceedings and decisions.
5. Reproduce and distribute copies of minutes.

B. The Contractor and representatives of, where appropriate, subcontractors and suppliers shall attend meetings. The representative shall be qualified and authorized to act on behalf of the entity each represents.

C. The Contractor shall attend and identify at the meetings the actual status of the Contract Work and, when the Work is not being performed consistently with the Contract Documents and construction schedules shall identify at the meetings the steps he is taking to resolve the inconsistency.

1.02 PRE-CONSTRUCTION MEETING

A. The Contractor shall participate in a pre-construction meeting to be held after the effective date of the Agreement and/or on the date of Notice to Proceed.

B. The following are expected to be in attendance:

1. Owner's Representative and other staff as appropriate.
2. Engineer and his professional consultants as appropriate.
3. Engineer's Resident Project Representative.
4. Contractor's Representative and Construction Superintendent.
5. Subcontractors as appropriate.
6. Utility representative as appropriate.
7. Others as appropriate.

C. The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

1. Description of all parties including contract representatives, phone numbers, and addresses.
2. Responsibilities of Owner.
3. Responsibilities of authorities of the Engineer.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01200 - PROJECT MEETINGS

4. Responsibilities of the Contractor.
5. Responsibilities and Authorities of Resident Project Representative.
6. Responsibilities and Authorities of Testing Laboratory.
7. General Project Status and Information.
8. Location of Items.
9. Regulatory Requirements.
10. Site Conditions.
11. Labor Requirements.
12. Submittals required by Contractor.
13. Payment to Contractor.
14. Project Closeout.

1.03 CONSTRUCTION PROGRESS MEETING

- A. Construction progress meetings will be held monthly with the first meeting thirty (30) days after the date of Notice to Proceed.
- B. Special construction progress meetings will be held as required by progress of the Work.
- C. The following are expected to be in attendance:
 1. Owner Representative and other staff as appropriate.
 2. The Engineer and his professional consultants as appropriate.
 3. Contractor's Representative and/or Construction Superintendent.
 4. Subcontractors as appropriate.
 5. Suppliers as appropriate.
 6. Others as appropriate.
- D. The following matters are expected to be addressed:
 1. Review and approve minutes of previous meeting.
 2. Review of work progress.
 3. Field observations, problems, and conflicts.
 4. Problems, which impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain Construction Schedule.
 7. Revisions to Construction Schedule.
 8. Progress and schedule during succeeding work period.
 9. Payment applications and processing.
 10. Submittals.
 11. Maintenance of quality standards.
 12. Changes, substitutions, and change orders.
 13. Review proposed changes for:
 - a. Effect on Construction Schedule and completion date.
 - b. Effect on other contracts of the Project.
 14. Other matters as appropriate.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01200 - PROJECT MEETINGS

15. Record drawings.

E. The Contractor shall be prepared to discuss the above topics and to make commitments for resolving deficiencies.

F. The Contractor shall provide a current submittal log at each progress meeting in accordance with Section 01340.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION

This Section refers to the general procedures and requirements for submittals. Specific requirements for submittals are included in other sections of these Specifications.

1.02 DEFINITION

The term "submittal" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, operation instructions, catalog sheets, data sheets, product data, samples, and similar items.

1.03 LIST OF SUBMITTALS

A. The following is a list of submittals and the times required for submitting all in accordance with the Contract Documents.

<u>ITEM</u>	<u>TIME</u>
1. Schedule of Progress	Pre-Construction Conference*
2. Schedule of Payments	Pre-Construction Conference*
3. Schedule of Values	Pre-Construction Conference*
4. List of Manufacturers and Associated Products	Prior to Start of Work
5. Substitute Material or Equipment	Prior to Start of Work
6. Manufacturers Certificate of Compliances	Prior to Start of Work
7. Change Orders	Within 15 days of occurrence
8. Layout and Shop Drawings of Fabricated Items	Prior to Installation
9. Shop Drawings or Prior to Installation	Preferred Prior to Start of Work
10. Operation & Maintenance Manuals & Spare Parts	Completion of Project
11. Tabulation of Equipment w/Data	Completion of Project
12. Certificate of Gradation	

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01300 - SUBMITTALS

- | | |
|--------------------------------|-----------------------|
| of Aggregate | Prior to Installation |
| 13. Concrete Mix Design | Prior to Installation |

** If no Pre-Construction Conference is held, Prior to First Payment.*

B. The Engineer may require submittals not listed above to expedite the work.
Contractor shall comply with all submittal requests made by Engineer.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01310 - PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall comply with the General Conditions.
- B. Submit revised progress schedules periodically.

1.02 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
 - 1. Provide separate horizontal bar for each trade or operation.
 - 2. Horizontal time scale: Identify the first workday of each week.
 - 3. Scale and Spacing: To allow for notations and future revisions.
 - 4. Minimum sheet size: 8 1/2" x 11"
- B. Formal of Listings: The table of contents of the Contract Documents.
- C. Identification of Listings: By bid items.

1.03 CONTENT OF SCHEDULES

- A. Construction Progress Schedule:
 - 1. Show the complete sequence of construction by activity.
 - 2. Show the dates for the beginning, and completion of, each major element of construction.
 - 3. Show projected percentage of completion for each item, as of the first day of each month.
 - 4. Show an anticipated monthly payment schedule.
- B. Submittals Schedule for Shop Drawings, Product Data and Samples. Show the following:
 - 1. The dates for Contractor's submittals.
 - 2. The dates approved submittals will be required from the Engineer.

1.04 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effects.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01310 - PROGRESS SCHEDULES

1.05 SUBMISSIONS

- A. Submit initial schedules in accordance with the General Conditions.
 - 1. Engineer will review schedules and return review copy within ten (10) days after receipt.
 - 2. If required, Contractor shall resubmit within seven (7) days after return of review copy.
- B. Submit revised progress schedules with each Application for Payment.
- C. Submit the number of opaque reproductions, which the Contractor requires, plus five copies, which will be retained by the Engineer.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. The Contractor shall submit to the Engineer for review and exception, if any, such working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of Work, including but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.

B. Within fifteen (15) calendar days after the Effective Date of the Agreement, the Contractor shall submit to the Engineer a complete list of preliminary data on items for which shop drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way relieve the Contractor from submitting complete shop drawings, data, and samples in accordance with the Specifications. This procedure is required in order to expedite final review of shop drawings.

C. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting. This log should include the following items:

1. Submittal Description and Number assigned.
2. Date to Engineer.
3. Date returned to Contractor (from Engineer).
4. Status of Submittal (Approved, Approved as Noted, Revise and Resubmit, Not Approved).
5. Date of Re-submittal and Return (as applicable).
6. Date material released (for fabrication).
7. Projected date of fabrication.
8. Projected date of delivery to site.
9. Status of O&M Manuals submitted.

1.02 CONTRACTOR'S RESPONSIBILITY

A. It is the duty of the Contractor to check all Drawings, data and samples prepared by or for him before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp or evidence that the Contractor has not performed the required review would be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

any deviations in the submittal from requirements of the Contract Documents.

B. Determine and verify:

1. Field measurements.
2. Field construction criteria.
3. Catalog numbers and similar data.
4. Conformance with Specifications and indicate all variances from the Specifications.

C. All shop drawings or other submittals shall be accompanied by the Engineer's standard submittal transmittal form. This form may be obtained in quantity from the Engineer at reproduction cost. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal. A separate transmittal form shall accompany each shop drawing, product data, or sample.

D. The Contractor shall be solely responsible for the accuracy and completeness of the shop drawing. In no case shall a subcontractor or supplier submit shop drawings directly to the Engineer. All communications concerning shop drawings or the project in general shall be directed through the Contractor. Contractor shall coordinate between subcontractor, suppliers, and manufacturers all shop drawings to ensure that the total work including all interconnections, timers, control, etc., or the system confers to the design criteria specified.

E. No products, equipment, or material shall be delivered or fabricated until the shop drawings, product data, or sample have been submitted and checked by the Engineer for its conformance to the drawings and specifications and given final approval for fabrication or erection by the Engineer. Until final approval of shop drawing or sample is given in writing, Contractor shall not proceed with any work directly or indirectly associated with that item.

F. The Contractor shall furnish the Engineer a schedule of shop drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

G. The Contractor shall submit to the Engineer all Drawings and schedules sufficiently in advance of construction requirements to provide no less than twenty-one (21) calendar days for checking and appropriate action from the time the Engineer receives

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

them.

H. All shop drawings shall be clearly marked and labeled as to their intended use. Any submittal which causes the Engineer to ponder or guess at the intended use shall be rejected.

I. The Contractor shall submit seven (7) copies of shop drawings and descriptive or product data submittals to complement shop drawings to the Engineer which will be retained for his use. The Contractor shall submit extra sets as required for his subcontractors, his suppliers, and his own use.

J. The Contractor shall be responsible for and bear all cost of damages, which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by Engineer of the necessary shop drawings.

K. The Contractor shall utilize a Sequential Numbering System for submittals (1-999). Re-submittals or confirming material shall be assigned a letter next to the submittal number, i.e., A=second submittal, B=third submittal, etc.

L. Submittals shall include a certified statement of compliance to the requirements detailed in the specifications in addition to other submittal requirements. This certification shall be prepared by the manufacturer and not the local supplier. Validity of the authority and position of the person signing the certification shall be verified by a Notary Public. The statement of compliance shall address each point of conformance contained in the governing specifications with definitive comments of either compliance or non-compliance. Statements of non-compliance with points of conformance shall be accompanied by a statement of justification as to the reason for non-compliance and why the non-complying feature is considered to be either equal to or better than the specified feature. The Engineer will use the certified statement of compliance in his evaluation of the submittal rendering a judgment as to equality to the specified product and issuing a statement as to whether the product is acceptable for or rejected from incorporation into the work.

M. When a manufacturer named in the controlling specification is chosen to supply a product, and the details of manufacture, size, and installation are shown on his standard catalog cut sheets, the manufacturer may submit the certified statement of compliance as detailed above along with installation details specific to the Work such as laying

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

schedules, etc. as required, deleting the standardized catalog data.

N. Should the Contractor provide a submittal that would require modification to a structure, hydraulic piping, electrical components, layout, controls, or other previously designed aspects of the project, he shall submit with his transmittal, additional design calculations and details of the modification. Any cost incurred by the Engineer for review of these modifications and the direct affect on other designed portions of the project and the implementation of alternate designs shall be borne by the Contractor. The Owner or Engineer will incur no additional costs for modifications or deviations from the original drawings and specifications as submitted by shop drawings, product data, or samples.

O. Shop drawings shall be prepared by a qualified detailer indicating all dimensions, weights, tolerances, clearances, space required, and structures. The manufacturer or supplier of equipment or materials shall certify as to the correctness of the dimensions. Contractor shall verify all drawings submitted as to their completeness with respect to field measurements, field construction criteria, catalog numbers, and similar data. Any drawing submitted through the Contractor not bearing the Contractors approval, data, and checker's name will be returned to the Contractor.

1.03 ENGINEER'S REVIEW OF SHOP DRAWINGS

A. The Engineer's review of Drawings, data and samples submitted by the Contractor will cover only general conformity to the Specifications, external connections, and dimensions that affect the installation.

B. The review of Drawings and schedules will be general, and shall not be construed:

1. as permitting any departure from the Contract requirements;
2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.

C. When reviewed by the Engineer, each of the shop drawings will be identified as having received such review being so stamped and dated.

1. If the copies received are marked "Approved", those documents are used as guidelines for installation.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

2. If the copies received are marked "Approved As Noted", the Contractor shall make the appropriate corrections to the material and/or product and incorporate the revised material and/or product into the project.

3. If the copies received are marked "Revise and Resubmit", the material or product may be acceptable; however, substantial corrections require the Engineer to review the material or product after the revisions have been made. A formal re-submittal of the revised material and/or product is required using a separate transmittal form. Seven (7) copies of the revised re-submittal are required.

4. If the copies received are marked "Not Approved", the material and/or product cannot be incorporated into the project. Another product approved by the Contract Documents shall be submitted with a new transmittal form accompanied by seven (7) copies of shop drawings, product data, or samples.

D. Upon review of the shop drawing, product data, or sample by the Engineer, the Engineer will distribute the submittals as follows:

<u>No. Required</u>	<u>To Whom</u>	<u>For Use</u>
1	Engineer	Office
2	Owner	O&M Manuals
1	Resident Project Representative	Field
3	Contractor	Field
	Office	
	Vendor	

E. If the drawings or schedules as submitted describe variations per subparagraph 1.04.D, and show a departure from the Contract requirements which Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or Time, the Engineer may return the reviewed Drawings without noting any exception.

F. Re-submittals will be handled in the same manner as first submittals. The Contractor shall direct specific attention to revisions other than the corrections requested by the Engineer on previous submissions by written details or markings on the resubmitted Shop Drawings. The Contractor shall make any corrections required by the Engineer.

G. If the Contractor considers any correction indicated on the Drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.

H. The Engineer will review a submittal/re-submittal a maximum of three (3) times after which cost of review will be borne by the Contractor. The cost of engineering

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

shall be equal to the Engineer's charges to the Owner under the terms of the Engineer's agreement with the Owner.

I. When the shop drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions or approval from the Engineer.

1.04 SHOP DRAWINGS

A. Shop Drawings shall be complete and detailed.

B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.

C. Each shop drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:

1. Number and title of the drawing.
2. Date of drawing or revision.
3. Name of project building or facility.
4. Name of Contractor and Subcontractor submitting drawings.
5. Clear identification of contents and location of the work.
6. Specification number and title.

D. If Drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustments in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the work in accordance with the Contract, even though such Drawings have been reviewed.

E. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material as required. Materials and equipment lists shall give for each item thereon the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

F. The Contractor shall provide a list including the equipment name, address, and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained for all mechanical and electrical equipment furnished.

G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the Engineer along with the required Shop Drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

H. Only the Engineer will utilize the color "red" in marking Shop Drawing submittals.

1.05 WORKING DRAWINGS

A. Working drawings shall be considered to mean the Contractor's plans for temporary structures.

B. Copies of working drawings as noted in subparagraph 1.02, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for Work.

C. The Engineer will not review working drawings but shall use them as information to monitor the work performed by the Contractor.

1.06 SAMPLES

A. The Contractor shall furnish for the review of the Engineer samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed and the Contractor shall prepay all shipping charges. Materials or equipment for which samples are required shall not be used in work until reviewed by the Engineer.

B. Samples shall be of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of the product, with integrally related parts and attachment devices.
2. Full range of color, texture, and pattern.

C. Each sample shall have a label indicating:

1. Name of Project.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01340 - SHOP DRAWINGS, PROJECT DATA, AND SAMPLES

2. Name of Contractor and Subcontractor.
3. Material or Equipment represented.
4. Place of origin.
5. Name of Producer and Brand (if any).
6. Location in Project.

Samples of finished materials shall have additional marking that will identify them under the finished schedules.

D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in subparagraph 1.06.B above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the Engineer and the remaining copy shall be for the Contractor's records. Review of a sample shall be only for the characteristics or use named and shall not be construed to change or modify any Contract requirements.

E. Reviewed samples not destroyed in testing shall be sent to the Engineer or stored at the site of the Work. Reviewed samples of the hardware in good condition will be marked for identification and may be used in the Work. Materials and equipment incorporated in work shall match the reviewed samples. Samples, which failed testing or were rejected, will be returned to the Contractor at his expense, if so requested at time of submission.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TRANSMITTAL FOR SHOP DRAWINGS, PRODUCT DATA, OR SAMPLES

TO: _____
 FROM: _____

DATE: _____
 PROJECT NO.: _____
 PROJECT: _____
 ENGINEER SUBMITTAL NO.: _____

CONTRACTOR HAS REVIEWED AND APPROVED SUBMITTAL:

BY: _____ DATE: _____ CONTRACTOR SUBMITTAL NO.: _____
 SHOP DRAWING PRODUCT DATA SAMPLE

GENTLEMEN: WE ARE SUBMITTING THE FOLLOWING SHOP DRAWINGS, PRODUCT DATA OR SAMPLES:

QTY	SPECIFICATION DIVISION AND SECTION	DRAWING	MANUFACTURER	DESCRIPTION

THERE ARE NO DEVIATIONS WHATSOEVER FROM DRAWINGS AND SPECIFICATIONS
 DEVIATIONS FROM DRAWING AND SPECIFICATIONS, EXPLANATION ON BACK OF SHEET

ENGINEER'S REVIEW STATEMENT:

APPROVED	AS NOTED*	REVISE AND RESUBMIT	NOT APPROVED	CHECKED BY
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
STRUCTURAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
MECHANICAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
CIVIL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
ELECTRICAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

*SUBMIT 8 CORRECTED RECORD COPIES

ENGINEER'S FINAL STATEMENT:

APPROVED
 APPROVED AS NOTED*
 REVISE AND RESUBMIT
 NOT APPROVED

ENGINEER'S REVIEW AND APPROVAL OF THIS SUBMITTAL ARE EXPRESSLY LIMITED AS PROVIDED IN THE CONTRACT DOCUMENT AND ARE ONLY TO DETERMINE COMPLIANCE WITH INFORMATION GIVEN IN CONTRACT DOCUMENTS AND CONFORMANCE WITH DESIGN CONCEPT OF COMPLETED PROJECT AS A FUNCTIONING WHOLE. CONTRACTOR IS, AND ENGINEER IS NOT, RESPONSIBLE FOR ALL MATTERS RELATING TO FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY INSTALLATION AND CONSTRUCTION FOR ALL SAFETY ASPECTS OF PERFORMING THE WORK AND FOR COORDINATING THE WORK.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01370 - SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Submit to the Engineer a Preliminary Schedule of Values in accordance with Article 2.6 of the General Conditions.
- B. Upon request of the Engineer, support the values with data, which will substantiate their correctness.
- C. Refine the Schedule of Values to reflect the requirements of Article 2.9 of the General Conditions. The final Schedule of Values shall be used only as the basis for the Contractor's Applications for Payments.

1.02 FORM AND CONTENT OF SCHEDULES OF VALUES

- A. Type schedule on 8-1/2" x 11" or 8-1/2" x 14" white paper. Contractor's standard forms and automated printout will be considered for approval by the Engineer upon Contractor's request. Identify schedule with:
 - 1. Title of Contract and location.
 - 2. Engineer and Contract numbers.
 - 3. Name and Address of Contractor.
 - 4. Contract designation.
 - 5. Date of submission.
- B. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- C. Identify each line item with the number and title of the respective major section of the Specifications.
- D. For each major line item, list sub-values of major products or operations under the item.
- E. For the various portions of the Work:
 - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
 - 2. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid. Paid invoices are required for materials upon request by the Engineer.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01370 - SCHEDULE OF VALUES

- b. The total installed value.
- F. Follow the Bid Form Schedule of Prices as the format for listing component items for unit price project.
- G. The sum of all values listed in the schedule shall equal the total Contract Sum of all lump sum and extended unit price items in the Bid Form.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Contractor shall take construction record photographs monthly during course of the Work.

1.02 PHOTOGRAPHY REQUIRED

- A. Video Survey as specified herein (pre-construction).
- B. Provide two (2) photographs each month of each major portion of the work.
- C. Provide two (2) prints of each photograph.
- D. Negatives:
1. Remain property of photographer.
 2. Maintain negatives for a period of two (2) years from date of Substantial Completion of entire Project.
 3. At the request of the Engineer, furnish additional prints at commercial rates applicable at time of purchase.
- E. As an alternative to hand held photos, color aerial photographs showing construction will be acceptable. Two (2) copies of each view will be submitted.
- F. When piping is required within a plant site, additional photos will be required showing location of all piping, valves, and fittings with relationship to other objects or structures. Contractor shall include in photograph a colored yardstick so as to allow viewer of photo to make measurement on photograph.

1.03 COSTS OF PHOTOGRAPHY

Contractor shall pay costs for specified videotaping, photography, and prints. Additional photography or prints requested will be paid by the requesting agency.

PART 2 - PRODUCT

2.01 PRINTS

- A. Color:
1. Paper: Single weight, white base.
 2. Finish: Smooth surface, glossy.
 3. Size: 4 in. x 6 in.
- B. Identify each print on back, listing:
1. Name of Project.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

2. Facility Location.
3. Orientation of view.
4. Date and time of exposure.
5. Identification of exposure.

2.02 VIDEO TAPE

A. Specifications for Audio-Video Survey - Prior to the start of construction on the contract, the Contractor shall furnish to the Engineer, the videotapes of the construction areas. The Engineer shall review the tapes and either approved or additional coverage will be required to fully show the physical conditions of the work areas. The Contractor shall have the additional coverage taped and shall not begin work, including moving equipment and/or material on the project site, until the audio-video survey has been approved by the Engineer. After approval, the Contractor shall supply two (2) copies of the audio-video survey to the Engineer. One copy of the tapes will remain available for viewing by the Contractor and may be reviewed by him for any assistance that the tapes may provide in resolving disputes, which arise with the property owners claiming improper restoration of their properties. That copy of the tapes will also be used as a guide by the Engineer, prior to issuance of final payments, in determining the adequacy of restoration and the extent of damages attributable to the Contractor's work. The remaining copy of the tapes will be delivered to the Owner's representative.

B. Technical Requirements - The total audio-video recording system and the procedures employed in its use shall be such as to produce a finished product that will fulfill the technical requirements of the project, as well as those more subjective requirements of high-quality audio and video production. The video portion of the recording shall reproduce bright, sharp, clear pictures with accurate colors and shall be free from distortion, tearing, rolls or any other form of picture imperfection. The audio portion of the recording shall reproduce precise and concise explanatory notes by the camera operator with proper volume, clarity and freedom from distortion.

C. Recorder - The recorder shall be an industrial grade device and shall record the color signal with a minimum horizontal resolution of 240 lines. The recorder shall be of the 1/2-inch VHS format. Commercial grade recorders shall not be acceptable.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

D. Camera - When taping areas accessible to conventional wheeled vehicles, the color video camera shall have a horizontal resolution of 550 lines at center (e.g., Panasonic WV-V3 or equal). When taping areas not accessible to conventional vehicles, the color video camera shall have a horizontal resolution of at least 550 lines at center.

E. Character Printout - All video recordings must, by electronic means, display continuously and simultaneously, generated digital information to include (1) the date of the recording, (2) the engineering stationing corresponding to the stationing on the plans, or as directed by the Engineer, (3) the name of the street, easement or building being documented, and (4) the direction of travel and the viewing side. The date shall appear linearly in the bottom left hand corner (e.g. 02-21-92). Plan stationing shall be expressed in engineering symbols and shall appear directly beneath the date information (e.g., 87+03). The remainder of the printed information shall appear at the bottom of the viewing screen (e.g., N on First St. V/E). To maximize viewing area no more than twenty-four (24) rasters shall be used to express the digital information.

PART 3 - EXECUTION

3.01 TECHNIQUE FOR STILL PHOTOGRAPHS

- A.** Factual presentation.
- B.** Correct exposure and focus.
 - 1.** High resolution and sharpness.
 - 2.** Maximum depth-of-field.
 - 3.** Minimum distortion.

3.02 VIEWS REQUIRED FOR STILL PHOTOGRAPHS

A. Contractor shall photograph from locations to adequately illustrate condition of construction and state of progress. Consult with Engineer at each period of photography for instructions concerning views required.

B. In addition, the Contractor shall photograph the sites of each major portion of the work prior to the beginning of work at each site. Views shall be as required by the Engineer. In addition, the same sites shall be photographed utilizing the same views at the completion of construction.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

C. The Contractor shall also inspect and photograph any structure within 100 feet of each construction site prior to beginning of work. Photographs of any existing damaged areas shall be taken.

3.03 TECHNIQUE AND VIEWS REQUIRED FOR VIDEO TAPING

A. At the start of production, and at the beginning of a new street or easement, an identification summary shall be read into the record while, at the same time, a wide-angle view with numeric displays shall be provided for a visual record. This summary will include (1) tape number, (2) job title, (3) job location, (4) positional location at job start, (5) date and time, (6) weather and (7) any other notable conditions.

B. Coverage - The recording shall include coverage of all surface features located within the construction zone-of-influence. This zone shall be defined as (1) the area within the permanent and temporary easements and areas adjacent to these easements, which may be affected by routine construction operations, (2) road right-of-way, (3) areas directed by the Owner. The surface features within the construction zone shall include, but not be limited to, all roadways, pavements, curbs, driveways, sidewalks, culverts, headwalls, retaining walls, buildings, landscaping, shrubbery and fences. Of particular concern shall be the existence, or non-existence, of any faults, fractures or defects. The coverage shall be continuous (i.e., the camera shall not be turned off once photography has begun) to the greatest extent practicably possible. If the camera must be turned off, then a verbal message shall be inserted stating that the camera will be turned off and the reason for discontinuing coverage.

C. Visibility - No recording shall be done during periods of significant precipitation, mist or fog. The recording shall only be done when sufficient sunlight is present to properly illuminate the subjects of recording.

D. Rate of Travel - The vehicle's rate of travel shall be indirectly proportional to the number, size and value of the surface features within that construction area's zone-of-influence. The average rate of travel shall not exceed forty-eight feet per minute. Forward motion shall be halted when viewing objects or structures outside the limits of the street or easement being documented. Conversely, only the street or easement being documented shall be viewed while the camera is being moved forward.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

E. Camera Elevation - To ensure property perspective and to capture optimal detail, the distance from the camera lens to the ground shall not be less than twelve feet when conventional wheeled vehicles are employed.

F. Experience - The operator in charge must have had previous experience video documenting a minimum of fifty miles of pre-construction work. Any apprentice operators must be continuously supervised by an above-described experienced operator.

3.04 DELIVERY OF PRINTS

A. After approval of videos, deliver two (2) record copies to Engineer.

B. Pre-construction photographs shall be delivered to the Engineer prior to the beginning of construction on each pump station site.

C. Deliver progress prints to Engineer to accompany each Application for Payment.

3.05 DELIVERY OF VIDEO TAPES

A. Recording Schedule - The recording shall be performed prior to the placement of any construction materials or equipment on the proposed construction site, but not more than seven weeks prior to the placement of materials or equipment.

B. Tape Indexing - All video tapes and their storage cases shall be properly identified by video tape index number, project title and general project location. Displayed on the storage case of each videotape shall be a log of that tape's contents. That log shall describe 1) the various segments contained on that tape in terms of the names and the sides of the streets or easements, 2) coverage start, direction and endpoints, with corresponding video tape player counter numbers. A cumulative index correlating the various segments of coverage to their corresponding tapes shall be typed and supplied to the Owner.

C. Unacceptable Documentation - The Owner shall have the authority to reject all or any portion of the videotape documentation not conforming to the specifications. Those rejected portions shall be retaped at no additional cost to the Owner.

D. Specification Deviations - Any deviation from these specifications must have the written approval of the Owner/Engineer.

E. Payment - Payment for video documentation shall be included in the costs of Work.

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

This Section includes general quality control procedures and requirements that are applicable to other sections.

1.02 TESTING LABORATORY

A. If desired by the Owner, a qualified testing laboratory will make field visits to sample such items as Portland cement concrete, hot or cold-mix asphalt, earthwork fill and compaction, aggregate, welding, etc. The frequency of testing will be at the discretion of the Owner and the recommendations of the Engineer to the Owner.

B. Refer to Section 01410 for detail description of testing laboratory services.

1.03 INSPECTION SERVICES

A. The Owner may employ the services of a Resident Project Representative (RPR) to review field operations, provide daily reports, and act as a liaison between the Engineer and Contractor.

B. Refer to Section 01420 for detail descriptions of the Resident Project Representative.

1.04 CONFORMANCE STANDARDS

A. The manufacturer of equipment shall issue a manufacturer's conformance certificate indicating the product was assembled or constructed in accordance with specific standards and that the product performs under specific parameters.

B. Submit conformance certificates in accordance with Section 01300 - Submittals.

1.05 CERTIFIED TEST REPORTS

A. Test reports performed in the field or in the shop shall be certified by the manufacturer of the product.

B. Submit certified test reports in accordance with Section 01300 - Submittals.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01410 - TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Owner will employ and pay for the services of an Independent Testing Laboratory to perform testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents.

A. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.

B. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.

1.02 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

A. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on requirements of Contract Documents.
2. Approve or accept any portion of the Work.
3. Perform any duties of the Contractor.

1.03 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel; provide access to Work and to Manufacturer's operations.

B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes, which require control by the testing laboratory.

D. Materials and equipment used in the performance of Work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Engineer may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents.

All costs of this testing and providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01410 - TESTING LABORATORY SERVICES

allowed on account of such testing and certification.

E. Furnish incidental labor and facilities:

1. To provide access to Work to be tested.
2. To obtain and handle samples at the Project site or at the source of the product to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

F. Notify laboratory at least 24 hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to Contractor's negligence.

G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience and as approved by the Engineer.

H. If the test results indicate the material or equipment complies with the Contract Documents, the Owner shall pay for the cost of the testing laboratory. If the tests and any subsequent retests indicate the materials and equipment fail to meet the requirements of the Contract Documents, the Contractor may pay for the laboratory costs directly to the testing firm or the total of such costs shall be deducted from any payments due the Contractor.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION

3.01 REPORTS

Testing Laboratories are required to provide a minimum of four (4) copies of each testing report. Copies shall be distributed by the testing laboratory to 1) Owner, 2) Engineer, 3) Contractor, and 4) Resident Project Representative.

END OF SECTION

SECTION 01420

DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF RESIDENT PROJECT REPRESENTATIVE

A. GENERAL

Resident Project Representative is Engineer's Agent, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding his actions. Resident Project Representative's dealings in matters pertaining to the on-site Work shall in general be only with Engineer and Contractor, and dealings with Subcontractors shall only be through or with the full knowledge of Contractor. Written communication with Owner will be only through or as directed by Engineer.

B. DUTIES AND RESPONSIBILITIES

1. Liaison:
 - a. Serve as Engineer's liaison with Contractor, working principally through contractor's superintendent and assisting him in understanding the intent of the Contract Documents. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
 - b. As requested by Engineer, assist in obtaining from Owner additional details or information, when required at the job site for proper execution of the Work.
2. Review of the Work, Rejection of Defective Work, Inspections and Tests:
 - a. Conduct on-site observations of the Work in progress to assist Engineer in determining if the Work is proceeding in accordance with the Contract Documents and that completed Work will conform to the Contract Documents.
 - b. Report to Engineer whenever he believes that any Work is unsatisfactory, faulty or defective, does not conform to the Contract Documents, does not meet the requirements of any inspections, tests or approval required to be made, or has been damaged prior to final payment; and advise Engineer when he believes Work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection, or approval.
 - c. Verify that tests, equipment and systems startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel and that Contractor maintains adequate records thereof; observe, record and report to Engineer appropriate details relative to the test procedures and startups.

- d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections, and report to Engineer.
3. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report them with recommendations to Engineer.
4. Records:
 - a. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as the case of observing test procedures. Send copies to Engineer.
5. Reports:
 - a. Consult with Engineer in advance of scheduled major tests, inspections or start of important phases of the Work.
 - b. Report immediately to Engineer upon the occurrence of any accident.
6. Payment Requisitions: Review applications for payment with contractor for compliance with the established procedure for their submission and forward them with recommendations to Engineer, noting particularly their relation to the schedule of values, Work completed, and materials and equipment delivered at the site but not incorporated in the Work.
7. Certificates, Maintenance and Operation Manuals:

During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed; and deliver this material to Engineer for his review and forwarding to Owner prior to final acceptance of the Work.
8. Completion:
 - a. Before Engineer issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.
 - b. Conduct final inspection in the company of Engineer, Owner and Contractor and prepare a final list of items to be completed or corrected.
 - c. Verify that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

C. LIMITATIONS OF AUTHORITY

Except upon written instructions of Engineer, Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
2. Shall not exceed limitations on Engineer's authority as set forth in the Contract Documents.
3. Shall not undertake any of the responsibilities of Contractor, Subcontractors, or Contractor's superintendent or expedite the Work.
4. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
5. Shall not advise on or issue directions as to safety precautions and programs in connection with the Work.
6. Shall not authorize Owner to occupy the Project in whole or in part.
7. Shall not participate in specialized field or laboratory tests.

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01435 - GEOTECHNICAL INVESTIGATION REPORT

PART 1 - GENERAL

1.01 SCOPE

This Section includes the results of a geotechnical investigation of the project site performed by a geotechnical testing laboratory.

1.02 APPLICABLE PUBLICATIONS

A geotechnical investigation was conducted by Geotechnical Testing Laboratory, Inc. for this project. The investigation consisted of ten (10) soil borings drilled in December 2003 and September 2004. The cover letter dated September 8, 2004 and associated report are included herein.

1.03 LIMITS OF LIABILITY

The Contractor may rely upon the general accuracy of the “technical data” contained in the Geotechnical Investigations Report. Except for such reliance on such “technical data”, Contractor may not rely upon or make any claim against Owner, Engineer, or any of Engineer’s Consultants with respect to the completeness of such reports 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, or other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings, or any Contractor interpretation of or conclusion drawing from any “technical data” or any such data, interpretations, opinions or information.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01505 - MOBILIZATION

PART 1 - GENERAL

1.01 DEFINITION

A. Mobilization shall include the obtaining of all permits, insurance, and bonds; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary building, and other construction facilities; all as required for the proper performance and completion of the work. Mobilization shall include but not be limited to the following principal items:

1. Moving on to the site of all Contractor's plants and equipment required for first month operation.
2. Installing temporary construction power and wiring.
3. Establishing fire protection system.
4. Developing construction water supply.
5. Providing field office trailers for the Contractor and the Engineer, complete with all specified furnishings and utility services including telephones.
6. Providing on-site sanitary facilities and potable water facilities as specified.
7. Arranging for and erection of Contractor's work and storage yard.
8. Submittal of all required subcontractor insurance certificates and bonds.
9. Obtaining all required permits.
10. Posting all OSHA required notices and establishment of safety programs.
11. Have the Contractor's superintendent at the jobsite full time.
12. Have provided a detailed schedule acceptable to the Owner for project use as specified.
13. Audio-Video Survey.

1.02 PAYMENT FOR MOBILIZATION

A. The Contractor's attention is directed to the condition that no payment for mobilization or any part thereof will be approved for payment under the contract until all mobilization items listed above have been completed as specified.

B. If the project is a unit price contract and a line item is designated "mobilization", all costs incurred for the above work shall be placed under that item. If no item is listed for "mobilization", the costs for the above-described work shall be placed in other items. In this case, no direct payment will be made for mobilization.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01505 - MOBILIZATION

C. For lump sum projects, the costs for this work shall be included in the overall costs of the project and shown as a separate item in the Schedule of Values.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01510 - TEMPORARY UTILITIES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Furnish, install and maintain temporary utilities required for field offices and construction and remove on completion of the Work.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code.
- B. Comply with Federal, State and local codes and regulations and with utility company requirements.

PART 2 - PRODUCT

2.01 MATERIALS, GENERAL

Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.02 TEMPORARY ELECTRICITY AND LIGHTING

- A. Arrange with utility company and Owner to provide service required for power and lighting, and pay all costs for service and for power used in the construction, testing and trial operation prior to final acceptance of the work by the Owner as stipulated by the Engineer.
- B. Provide adequate artificial lighting for all areas of work when natural light is not adequate for work, and for areas accessible to the public.

2.03 TEMPORARY HEAT AND VENTILATION

- A. Provide temporary heat and ventilation as required maintaining adequate environmental conditions to facilitate progress of the Work.
- B. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.
- C. Portable heaters shall be standard approved units complete with controls.
- D. Pay all costs of installation, maintenance, operation and removal, and fuel consumed.
- E. Provide connections to existing facilities or extend and supplement the existing

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01510 - TEMPORARY UTILITIES

facilities with temporary units as required to comply with requirements. Pay all costs of installation, maintenance, operation and removal.

2.04 TEMPORARY TELEPHONE SERVICE

Arrange with local telephone service company, provide direct line telephone service, as stipulated in Section 01590, including an external bell at the construction site for the use of personnel and employees. Service required.

- A. One direct line instrument in Field Office of Engineer for the Owner.
- B. Other instruments at the option of the Contractor, or as required by regulations.

2.05 TEMPORARY WATER

- A. Provide and pay for all water required for construction and consumptive purposes.
- B. Install at each and every connection to the potable water supply a backflow preventer meeting the requirements of ASA A40.6, latest revision. Contractor shall be required to meter all water used.
- C. If potable water system is owned by the Owner, any water used for construction purposes will be provided by the Owner. Limited, reasonable, and unwhasteful amounts of water will be provided for clearing, flushing, disinfecting, testing, and other minor construction purposes. Unreasonable or wasteful use amounts as determined by the Owner will be charged at prevailing rates. The hours and duration of water usage shall be determined by the Owner.

2.06 TEMPORARY SANITARY FACILITIES

- A. Provide sanitary facilities in compliance with laws and regulations.
- B. Service, clean and maintain facilities and enclosures.

PART 3 - EXECUTION

3.01 GENERAL

- A. Comply with applicable requirements specified in Division 2 - Site Work, Division 15 - Mechanical, and Division 16 - Electrical.
- B. Maintain and operate systems to assure continuous service.
- C. Modify and extend systems as work progress requires.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01510 - TEMPORARY UTILITIES

3.02 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required as determined by the Engineer.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Material and equipment incorporated into the Work shall:

1. Conform to applicable specifications and standards.
2. Comply with size, make, type, and quality specified to the greatest extent possible, detailing all aspects and providing explicit reasons for parameters not in compliance and specifically approved in writing by the Engineer.
3. Manufactured and Fabricated Products:
 - a. Design, fabricate, and assemble in accord with the best engineering and standard shop practice.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Two or more items of the same kind shall be produced, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

B. The term "Product" shall refer to material and/or equipment when used in these Specifications or visa versa.

C. When material or equipment requires pre-qualification as described by Section 01030 - Alternates/Alternatives, only those materials and equipment approved prior to the bid or by addendum will be incorporated into the Project.

1.02 SUBSTITUTE MATERIAL AND EQUIPMENT

A. When a particular product is specified or called for, it is intended and shall be understood that the Contractor includes those products in his bid. Should the Contractor desire to substitute products which he purports to be equal to those specified and not listed as an alternate/alternative pre-qualified product, the Contractor shall furnish the information as described in the General Conditions and described in this Section.

The substitute product(s) submitted by the Contractor shall meet the requirements of the specifications and shall, in all respects, be equal to the products specified by name herein.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

B. Manufacturers of substitute equipment must submit through the Contractors evidence of manufacturer, installation, and successful operation of their equipment for ten (10) installations. The manufacturer shall submit the names, addresses, and telephone numbers of Owners, Engineers and Contractors. These installations shall be over a period of the past three (3) years. Installation shall be equal in application and operating conditions. If a manufacturer cannot meet these requirements as a result of new technology, experimental data can be submitted to meet the experience requirement.

C. Substitute equipment by manufacturers, which cannot provide acceptable references of comparable installations in successful operation will not be allowed to provide equipment on this Project.

D. The Owner and Engineer will solely make the determination as to whether or not a proposed substitute is "equal". This determination will be made in accordance with these Contract Documents and based upon submittal data supplied by the manufacturer. Submittal data which causes the Engineer and Owner to ponder, or does not address key items of the proposed equipment will be rejected. Submittal data shall be precise concerning the equipment parts and its operation.

E. To determine if a substitute product is equal, the following parameters shall be used:

1. Function of equipment
2. Capacity, size, rating
3. Reliability and past performance on similar projects
4. Quality control and workmanship
5. Design data
6. Installation and cost
7. Operational costs (i.e., fuel, electrical, manpower)
8. Maintenance schedules
9. Guarantees
10. Availability of parts and service from area reps
11. Replacement costs
12. Any required license fees or royalties
13. Other available data

F. Proposals for substitute material or equipment shall be made in writing to the Engineer with associated brochures and descriptive data. No substitute product may be submitted as a shop drawing, product data, or sample, unless it has been previously approved by the Engineer in writing. In the case where a substitute product is

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

approved, any modifications to the project such as design changes, construction changes, etc., shall be made at the Contractors expense. Any design modification shall be submitted to and approved by the Engineer prior to ordering or installing the substitute product.

G. All apparatus, mechanism, equipment, machinery, and manufactured articles for incorporation into the Work shall be new and unused and the standard products of recognized reputable manufacturers.

H. Contractor's Representation - A request for a substitution constitutes a representation that Contractor:

1. Has investigated the proposed Product and determined that it is equal to or superior in all respects to that specified;
2. Will provide the same warranties or bonds for the substitution as for the product specified;
3. Will coordinate the installation of an accepted substitution into the Work, and make such other changes as may be required to make the work complete in all respects; and,
4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.

1.03 APPROVAL OF MATERIALS

A. Only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor shall be subject to the inspection and approval of the Engineer. No material shall be delivered to the Work without prior approval of the Engineer.

B. The Contractor shall submit to the Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable the Engineer to identify the particular product along with reference to the applicable section(s) of the Specifications to form an opinion as to its conformity to the Specifications. The data shall comply with Section 01340 - Shop Drawings, Product Data, and Samples and other paragraphs of this Section.

C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by the Contractor. If the Engineer requires, the Contractor shall submit samples of materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

shipped as directed at the Contractor's expense. Except as otherwise noted, the Contractor will make arrangements for and pay for the tests. Where such tests confirm compliance with the specifications, the Owner will reimburse the actual charges of the testing firm paid by the Contractor.

D. Contractor shall submit data and samples sufficiently early to permit consideration, approval, manufacture, and delivery of materials before they are necessary for incorporation in the work. Any delay of approval resulting from the Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against the Owner or the Engineer.

E. The materials and equipment used in the Work shall correspond to the approved samples or other data.

1.04 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

A. When Contract Documents require that installation of the Work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including copies to the Engineer. One complete set of the installation instructions shall be available for use on the job site during and through completion of the Work.

Installation instructions shall be submitted in accordance with Section 01340 - Shop Drawings, Product Data and Samples.

B. Handle, install, connect, clean, condition and adjust products as required by the manufacturer's instructions and in conformity with specified requirements.

1. Should the specified requirements conflict with the manufacturer's instructions, the manufacturer's instructions shall have priority unless changes are authorized in writing by the manufacturer.

2. Should job conditions conflict with the manufacturer's instructions, consult with the manufacturer for clarification.

3. Clarifications of installation instructions shall be issued only by the manufacturer, shall be in writing, and shall be distributed to all parties involved in the installation as stated above and prior to alteration of the installation procedures.

4. Do not proceed with the Work without clear instructions concerning the specific installation procedures.

C. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the manufacturer.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

1.05 SERVICES OF MANUFACTURER'S REPRESENTATIVE

A. From each company manufacturing or supplying equipment, the Contractor shall provide as outlined below the services of a qualified factory service representative. Equipment furnished under Divisions 11, 13, 15, and 16 shall include the costs of these services. A service representative shall be a full-time factory-trained service employee with a minimum of two (2) years field service experience. Manufacturer's sales representatives or sales agents, subcontractors to manufacturers, or similar personnel will not qualify. The service rendered by these representatives shall be at the work site for an eight (8) hour workday for each piece of equipment. The number of trips and days required for each piece of equipment stated below is as follows:

Phase I - Installation

The factory service representative shall direct the contractor in the proper unloading, setting, installation, erection, storage and connection to adjacent units for their respective equipment. These services shall be for a period of not less than one (1) day. Some equipment may require additional time for the installation of major units of equipment. In this case a longer period may be mutually agreed to by the Contractor and Manufacturer. These services during the installation phase may be omitted if the installation of the equipment is not complicated. Permission for deletion of these services shall be made in writing to the Engineer prior to the delivery of the equipment with the appropriate reasons why these services are not needed for this equipment. Only after written approval has been granted by the Engineer will these services be voided. In any case, the manufacturer is responsible for the correct installation of the equipment in accordance with the manufacturer's recommended practices.

Phase II - Testing

After the equipment has been properly installed by the Contractor and readied for operation, each unit of equipment together with piping, power, and controls shall be tested by a factory service representative for its intended use as outlined in the technical specifications and drawings. These services shall be a separate one (1) day minimum visit to inspect and test the unit to verify that the installation is in accordance with the recommended practice of the manufacturer.

Any calibrations, adjustments, or coordination of controls with other equipment shall be made at this time. The services of a factory service representative will be required on a consecutive day basis until the equipment has been properly tested to perform in accordance with the Contract Documents. If the equipment is not tested as required, the cost for additional visits will be paid for by the Contractor or the manufacturer.

In the presence of the Owner's representative, the Resident Project Representative and/or Engineer, the operation, testing, and adjustments shall be

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

performed to demonstrate the equipment operates as intended. After the site visit during this phase, the manufacturer or the supplier shall certify in writing a report (in triplicate) to the Engineer of the results of the inspection, operation and condition of the equipment. This report shall include a detailed description of tests performed and the actual performance of the equipment. Any results which would require precautions to be taken to ensure proper maintenance of the equipment should be included in the report. Finally, the report should include a certification that the equipment conforms to the requirements of the Contract Documents and is ready for permanent operation. Furthermore, the certification shall include a statement stating nothing in the installation or testing operations will void the manufacturer's warranty. All manufacturers are required to provide the services outlined in this phase without exception.

Phase III - Start-Up, Operation and Training

Once all equipment has been satisfactorily tested and the facility is substantially complete, the Contractor shall coordinate the concurrent start-up of all units of equipment. This coordination shall include the simultaneous attendance of the Owner's representative, the Engineer, and the factory service representative of each unit of equipment.

The factory service representative will provide for a minimum of one (1) day instruction and training for the Owner's representative in the proper operation, adjustment and maintenance of the equipment. At this item the service representative shall provide operation and maintenance manuals to the Engineer unless provided for otherwise.

B. For equipment or products furnished under other divisions, the Contractor, unless otherwise specified, shall furnish the services of authorized representatives of the manufacturers only when some evident installation or operation problem makes such services necessary in the opinion of the Engineer.

C. Manufacturer's Operating and Maintenance Manuals shall be delivered to the Engineer in accordance with the requirements of Section 01730.

1.06 TRANSPORTATION AND HANDLING

A. Arrange deliveries of Products as required by the currently approved construction schedule coordinating each delivery to avoid conflict with other work and conditions at the site.

- 1.** Deliver products in an undamaged condition, in the manufacturer's original containers or packaging and with identifying labels intact and legible.
- 2.** Prior to accepting delivery, inspect shipments to assure compliance with approved submittals, and that the products have been properly protected and are undamaged.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

B. Provide equipment and personnel to handle products preventing soiling or damage to the products or their protective packaging.

1.07 STORAGE AND PROTECTION

A. Store Products in accordance with manufacturer's instructions, with seals and labels intact and legible.

1. Store products subject to damage by the elements in weather-tight enclosures.
2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
3. Store fabricated products above the ground, on blocking or skids, prevent soiling, staining or corrosion. Cover products, which are subject to deterioration with impervious sheet coverings and provide adequate ventilation to avoid condensation.
4. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

B. All materials and equipment to be incorporated in the Work shall be handled and stored in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and other injury, theft or damage.

C. Cement and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All miscellaneous steel, structural steel and reinforcing steel shall be stored off the ground, kept free of accumulations of dirt and grease, and in areas free of standing water and minimize rusting. Pre-cast concrete sections shall be handled and stored in a manner to prevent staining, chipping or cracking. Brick, block and similar masonry products shall be handled and stored in a manner to reduce staining, breaking, chipping, cracking, and spilling.

D. All materials, which in the opinion of the Engineer, have become so damaged as to be unfit for the use intended, including aesthetics, shall be promptly removed from the site of the Work.

E. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections and exercise or rotate moving parts of stored products as required by the manufacturer to assure that products are maintained under specified conditions and free from damage or deterioration.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

F. Provide substantial coverings as necessary to protect installed products from damage caused by traffic and subsequent construction operations. Remove the protective covering when no longer needed.

G. The Contractor shall be responsible for all material, equipment, and supplies sold and delivered to the Owner under this Contract until final inspection of the Work and acceptance thereof by the Owner. In the event any such material, equipment, and supplies are lost, stolen, damaged, or destroyed prior to final inspection and acceptance they shall be replaced by the Contractor.

H. Should the Contractor fail to take proper action to properly store and handle equipment supplied under this Contract, the Owner retains the right to notify the Contractor in writing of the deficiencies, to correct all deficiencies and deduct the cost associated with these corrections from the Contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administration, clerical, engineering and any other costs associated with making the necessary corrections.

1.08 OFF-SITE STORAGE AND PROTECTION

A. Off-site storage arrangements shall be acceptable to the Owner and approved in writing by the Engineer for all material and equipment not incorporated into the Work but included in the application for payment. Off-site storage shall be permitted and payment made therefore if the following conditions are met:

1. **Protection**: The material and equipment is stored in a security-protected environment to avoid damage or theft by vandals.
2. **Insurance**: Adequate insurance in accordance with Article 5 of the General Conditions shall be maintained by the Contractor and property owner of the site in which the material and equipment is stored. A minimum level of insurance shall be maintained to replace the item should it become damaged or stolen.
3. **Title**: A title indicating the Owner has purchased the material and equipment is provided by the Contractor to the Owner after payment is made; and
4. **Access for Inspection**: The Owner, the Engineer or their representatives has access to the site for inspection purposes. Site inspection will be conducted with the site owners.

1.09 PRODUCT TESTING

A. All work installed in accordance with the plans and specifications shall have post installation tests performed to check the system conformance to the specified operation.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

The Contractor shall file with the Engineer a standard form written report detailing the field operation of the product. The standard form reports will be furnished by the Engineer and completed by the Contractor and the Resident Project Representative.

B. Report forms shall be listed and shown in the Appendix.

1.10 SPECIAL TOOLS

Manufacturers of equipment and machinery shall furnish any special tools (including grease guns or other lubricating devices) required for normal adjustment, operations and maintenance, together with instructions for their use. The Contractor shall preserve and deliver to the Owner these tools and instructions in good order no later than upon completion of the Contract.

1.11 WARRANTY

For all major pieces of equipment, submit a warranty from the equipment manufacturer as specified in Section 01740. The manufacturer's warranty period shall be concurrent with the Contractor's as stipulated in the specifications for each piece of equipment.

1.12 SPARE PARTS

Spare parts for certain equipment provided under Divisions 11, 13, 15, and 16 have been specified in the pertinent sections of the Specifications. The Contractor shall collect and store all spare parts so required in an area to be designated by the Engineer. In addition, the Contractor shall furnish to the Engineer an inventory listing all spare parts, the equipment they are associated with, the name and address of the supplier, and the delivered cost of each item. Copies of actual invoices for each item shall be furnished with the inventory to substantiate the delivered cost.

1.13 GREASE, OIL AND FUEL

All grease, oil, and fuel required for testing of equipment shall be furnished with the respective equipment. The Owner shall be furnished with a year's supply of required lubricants including grease and oil of the type recommended by the manufacturer with each item of equipment supplied.

The Contractor shall be responsible for changing the oil in all drives and intermediate drives of each mechanical equipment after initial break-in of the equipment, which in no event

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01600 - MATERIAL AND EQUIPMENT

shall be any longer than three weeks of operation.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SPECIFICATIONS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A.** The Contractor shall comply with the requirements stated in the General Conditions and in the Specifications for administrative procedures in closing out the Work.
- B.** The following is a list of items required to complete the Project.
1. Owner may request use of substantially completed portions of the work without such use constituting acceptance. Provision should be made for consent or notification of the survey and the insurers for the Project;
 2. Contractor to request Substantial Completion inspection of the project or a portion thereof when construction is sufficiently complete to be utilized for the purposes intended;
 3. Engineer, Contractor, and Resident Project Representative to make substantial completion inspection. A list of incomplete items will be prepared by the Engineer.
 4. Engineer will issue a Substantial Completion Certificate (E.J.C.D.C. Form 1910-8D) with a date of substantial completion with the attached list of uncompleted items. Certificate will be filed by the Owner for a prescribed period of time. Besides listing the uncompleted items, the substantial completion shall designate the responsibilities for utilities, maintenance and insurance; and any exceptions to guarantees or warranties.
 5. Contractor shall complete list of uncompleted items. Upon the completion of work, he shall request a final inspection.
 6. Final Inspection shall be made by Owner, Contractor, Engineer, Resident Project Representative, Regulatory Agencies, Funding Agency and any other agency involved in this project.
 7. Contractor shall make final request for payment with the appropriate data; i.e., clear-lien certificate, release from surety, etc., all as required by State Law.
 8. Engineer to process final payment request and present request to Owner.

1.02 SUBSTANTIAL COMPLETION

- A.** When the Contractor considers the Work is substantially complete, he shall submit to the Engineer:
1. A written notice that the Work or designated portion thereof is substantially complete.
 2. A list of items to be completed or corrected.
- B.** Within five (5) working days after receipt of such notice, the Engineer will make an inspection to determine the status of completion. The Engineer's opinion as to the status of completion shall be based on completion of the following as applicable:

TECHNICAL SPECIFICATIONS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01700 - CONTRACT CLOSEOUT

1. Installation of all piping, valves, force mains, and/or gravity sewers including pressure, leakage or other required tests.
2. Installation of all equipment including, but not limited to, fans, blowers, aerators, dehumidifiers, and surge suppressors.
3. Installation or construction of structures including all required protective or aesthetic coatings or devices including required tests.
4. Installation of electrical conduits, wiring, load centers, controls, and all other electrical elements as required including tests, inspections, and approval by local agencies for compliance with ordinances and codes.
5. Backfill and compaction of backfill as indicated by required tests for all structures, pipelines, conduits, and other subterranean installations.
6. Installation or restoration of pavements including required tests for sub-base, base and pavement materials, and approval by the local municipality. Pavements shall not be individually considered and shall be considered only with other portions of the Work requiring the installation or restoration of pavement.
7. All painting required by the Contract Documents except for touch-up.
8. Top soiling, final grading, fertilizing, seeding, sodding, or landscaping except for growth of vegetation and watering to establish the required ground cover of vegetative growth.
9. Release of all permits whether or not the permit was acquired by the Contractor.
10. Installation of all doors, windows, louvers, and other building appurtenances including painting, finish hardware, glazing, locks, and other required devices to secure the Work.
11. All required instructions for the Owner's operation and maintenance personnel including a minimum of one approved copy of the required operation and maintenance manual for use by the Owner's personnel.

C. Should the Engineer determine that the Work is not substantially complete:

1. The Engineer will promptly notify the Contractor in writing, giving the reasons therefore in accordance with the General and Supplemental Conditions.
2. Contractor shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the Engineer.
3. The Engineer will re-inspect the Work.

D. When the Engineer finds that the Work is substantially complete, he will:

1. Prepare and deliver to Owner a tentative Certificate of Substantial Completion with a tentative list of items to be completed or corrected before final payment in accordance with the General and Supplementary Conditions.
2. After consideration of any objections made by the Owner as provided in the General and Supplemental Conditions of the Contract, and when the Engineer considers the Work substantially complete, he will execute and deliver to the Owner and the Contractor a definite Certificate of Substantial Completion with

TECHNICAL SPECIFICATIONS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01700 - CONTRACT CLOSEOUT

a revised tentative list of items to be completed and/or corrected and a cost list for each of those items including the cost of mobilization, all in accordance with LA Revised Statutes 38:2248.

1.03 FINAL INSPECTION

A. When Contractor considers the Work is complete, he shall submit written certification that:

1. Contract Documents have been reviewed.
2. Work has been inspected for compliance with Contract Documents.
3. Work has been completed in accordance with Contract Documents.
4. Equipment and systems have been tested in the presence of the Engineer and Owner's representative and are operational.
5. Work is completed and ready for final inspection.

B. The Engineer will make an inspection to verify the status of completion with five working days after receipt of such certification.

C. Should the Engineer consider that the work is incomplete or defective:

1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Engineer that the Work is complete.
3. The Engineer will re-inspect the Work.

D. When the Engineer finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

1.04 RE-INSPECTION FEES

Should the Engineer perform re-inspections due to failure of the Work to comply with the claims of status of completion made by the Contractor:

- A. Owner will compensate the Engineer for such additional services.
- B. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

- A. Evidence of compliance with requirements of governing authorities.
- B. Project Record Documents: Requirements of Section 01720.

TECHNICAL SPECIFICATIONS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01700 - CONTRACT CLOSEOUT

- C. Manufacturer's Certificates of Installation: Requirements of Section 01600.
- D. Warranties and Bonds: Requirements of Section 01740.
- E. Keys and Keying Schedule.
- F. Spare Parts and Maintenance Materials: Requirements of Section 01730.
- G. Certificate of Insurance for Products and Completed Operations.

1.06 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Engineer.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - a. Previous Change Orders
 - b. Unit Prices
 - c. Deductions for uncorrected Work
 - d. Penalties and Bonuses
 - e. Deductions for liquidated damages
 - f. Deductions for re-inspection payments
 - g. Other adjustments
 - 3. Total Contract Sum, as adjusted.
 - 4. Previous Payments.
 - 5. Sum remaining due.
- C. Engineer will prepare a final Change Order reflecting approved adjustments to the Contract Sum, which were not previously made by Change Orders.
- D. In accordance with the requirements of Section 01035 - Modification Procedures, the Engineer will submit the final Change Order and a recommendation for acceptance of the Work to the Owner for approval.

1.07 APPLICATION FOR PAYMENT

Upon receipt of approval of the final Change Order, the Contractor shall submit an Application for Payment in accordance with procedures and requirements stated in the General Conditions.

1.08 CONTRACT CLEAR LIEN CERTIFICATE AND PAYMENT OF RETAINAGE

- A. Upon receipt of the Owner's acceptance of the work, the Contractor shall make filings with the Recorder of Mortgages as required by Louisiana State Public Contract Statute.

TECHNICAL SPECIFICATIONS
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01700 - CONTRACT CLOSEOUT

B. In accordance with the Louisiana State Public Contract Statute, the Recorder of Mortgages shall issue a Clean Lien and Privilege Certificate upon expiration of a period of not less than forty-five (45) days, provided no liens are recorded against the Project.

C. Upon receipt of the Clear Lien and Privilege Certificate, the Contractor shall submit an Application for Payment to the Engineer requesting the release of the Project retainage with the certificate attached as evidence of authority for the Owner to pay the retainage.

D. The Engineer shall review the Application for Payment for the Project retainage and if in order shall transmit the application to the Owner for Payment.

E. In accordance with the General Conditions, the Owner shall release the Project retainage and make payment to the Contractor the legal sum of the retainage for which the Contractor is entitled.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01710 - SITE CLEANING

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Cleaning shall include daily "policing" of the work and surrounding areas to clear general debris, waste paper, wood scraps, broken concrete, and other objectionable material along with the final cleanup of site(s) required for Project acceptance.

1.02 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties, free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide onsite containers for the collection of waste materials, debris and rubbish. All waste materials including containers, food debris and other miscellaneous materials must be disposed of daily in onsite containers.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- D. Prior to final completion or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire Work is clean.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01710 - SITE CLEANING

E. Apply a finished paint coat per Section 09010 to all equipment incorporated into the Project. Final finish coat of paint shall be applied after equipment has been installed.

3.03 FUELING

Upon servicing all equipment, all fuel storage and equipment tanks shall be filled to completion.

END OF SECTION

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

Maintain at the site for the Owner one record copy of:

- A. Conformed Drawings.
- B. Conformed Specifications.
- C. Change Orders and other Modifications to the Contract.
- D. Engineer's Field Orders or written instructions.
- E. Approved Shop Drawings, Working Drawings and Samples.
- F. Field Test records.
- G. Construction photographs.
- H. Latest Approved Progress Schedule.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

- 1. Provide files and racks for storage of documents.
- 2. Provide locked cabinet or secure storage space for storage of samples.

B. File documents and samples in accordance with CSI section numbers.

C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.

D. Make documents and samples available at all items for inspection by the Engineer.

E. As a pre-requisite for monthly progress payments, the Contractor is to exhibit the currently updated "record documents" for review by the Engineer and Owner.

1.03 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code designated by the Engineer.

1.04 RECORDING

A. Label each document "PROJECT RECORD" with rubber stamp.

B. Record information concurrently with construction progress and do not conceal any work until required information is recorded.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01720 - PROJECT RECORD DOCUMENTS

C. Legibly mark drawings to record actual construction:

1. The Contractor shall use the following color code in marking Contract Drawings.
 - a. Yellow for no change.
 - b. Red to indicate additions, deletions and changes.
2. Elevations of various structure elements in relation to elevation datum.
 - a. Elevations referenced to control points established by the Owner's agent.
 - b. Specifically, elevations of drainage culvert inverts, building slabs, top of roadway and driveway curbs, bridges, etc.
3. All underground piping with elevations and dimensions, changes to piping location, horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements, actual installed pipe material, class, etc.
 - a. Elevations of constructed underground piping at 100 ft. increments and points where changes occur in either the slope or horizontal direction.
 - b. Three swing ties from referenced permanent surface improvements to the pipe centerline at 500 ft. increments and the center of each manhole cover, valve, the branch, vent, end of service connection at the property line, other fittings and appurtenances.
 - c. Identify existing utilities, which parallel the proposed construction, including size and offset distance horizontally and vertically, when exposed by the construction activity.
 - d. Identify existing utilities including size, material type, vertical clearance over or under, intersecting station, and angle of intersection crossing proposed construction.
4. Location of internal utilities and appurtenances concealed in the construction by referencing to visible and accessible features of the structure.
5. Field changes of dimension and detail.
6. Changes made by Field Order or by Change Order.
7. Details not on original contract drawings.
8. Equipment and piping relocations.
9. Identify the actual motor installed by manufacturer's name, nameplate horsepower and serial number.
10. Identify the actual pump installed by manufacturer's name, model number, impeller size, rated capacity and serial number.
11. Major architectural and structural changes including relocation of doors, windows, etc.

D. Specifications and Addenda: Legibly mark each Section to record:

1. Manufacturer, trade name, catalog number, and supplier of each Product and item of equipment actually installed.
2. Changes made by Field Order or by Change Order.

TECHNICAL SECTION
DIVISION 01 - GENERAL REQUIREMENTS
SECTION 01720 - PROJECT RECORD DOCUMENTS

E. Shop Drawings (after final review):

Five (5) sets of record drawings for each process equipment, piping, electrical system and instrumentation system.

F. Certified site survey and line elevations and stationing at 100 ft. increments and all points of change of direction of pipelines per Section 01050 by a registered land surveyor.

1.05 SUBMITTAL

A. At Contract closeout, deliver Record Documents to the Engineer for the Owner.

B. Accompany submittal with transmittal letter in duplicate containing:

1. Date.
2. Project title and number.
3. Contractor's name and address.
4. Title and number of each Record Document.
5. Signature of Contractor or his authorized representative.

PART 2 - PRODUCT - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

DIVISION TWO

SITE CONDITIONS

TECHNICAL SECTION
DIVISION 2 – SITE CONDITIONS
SECTION 02030 – CHAIN LINK SECURITY FENCE

PART 1 - GENERAL

1.01 GENERAL

The fencing shall be of the chain link type with top rail and single extension arms carrying three strands of barbed wire. The fence fabric shall be six (6) feet in height and the overall fence height shall be seven (7) feet, including the barbed wire. All fabric and metal parts of the fence shall be similar to USS Cyclone "Invincible" type fence or equal.

1.02 SUBMITTALS

- A.** All products and/or materials to be used in this project shall be submitted to the Engineer in accordance with Section 01340 of Division 1- General Requirements.
- B.** Manufactures shall submit with his shop drawings any recommended installation procedures which when approval by the Engineer shall become the basis for inspecting, accepting, and/or rejecting actual installation, procedures used on this Project.
- C.** The manufactures shall submit in writing a certification that the product meets these Specifications. Certification shall be in the format similar to the certification form shown at the end of Section 01340.
- D.** Mill certificates shall be furnished upon request of the Engineer.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Aluminum-coated Steel Wire Fabric** - Steel wire fabric shall be chain link No.9 gauge woven in a 2-inch diamond mesh, top and bottom selvage to have a twisted and barbed finish. Steel wire shall be galvanized after fabrication and shall conform to the requirements of ASTM A392 with Class 2 coating.
- B. Line Posts** - Line posts shall be 2-1/2 inch O.D. steel pipe weighing 3.65 pounds per foot or H column weighing 4.1 pounds per foot. Posts shall be hot dip galvanized. The use of 2.25 x 1.70 roll-formed C-sections shall also be acceptable.
- C. Top Rail** - Top rail shall be 1-1/4 inch O.D. steel pipe and weighing 2.27 pounds per foot provided with 7-inch couplings every twenty feet. The use of a 1.625 x 1.25 roll-formed C-section shall also be acceptable.
- D. Braces** - Braces shall be 1-1/4 inch O.D. steel pipe weighing 2.27 pounds per foot to be installed midway between the top rail and the ground.

TECHNICAL SECTION
DIVISION 2 – SITE CONDITIONS
SECTION 02030 – CHAIN LINK SECURITY FENCE

- E. Terminal Posts - All end, corner and pull posts shall be 3 inch O.D. steel pipe weighing 5.79 pounds per foot.
- F. Fittings - All fittings used in fence assembly shall be malleable cast iron or pressed steel.
- G. Post Tops - All posts shall be equipped with tops designed to hold the top rail and to exclude moisture.
- H. Extension Arm - Extension arms to hold the barbed wire shall extend at a 45-degree angle with lock wire for securely fastening the barbed wire equally spaced with the top strand located twelve inches above the fabric and twelve inches out from the fence line.
- I. Barbed Wire - Barbed wire to be of the four point pattern composed of two strands of 12-1/2 inch-gauge line steel wires with a minimum aluminum coating of 0.30 oz. per square foot of wire surface.
- J. Wire Fabric Connections - The fabric shall be attached to the posts with an approved type fastener standard with the manufacturer.

PART 3 - EXECUTION

3.01 INSTALLATION REQUIREMENTS

Finished fencing shall be in proper alignment with posts plumb and all wire work taut. Care shall be exercised to equalize the tension or pull on each side of the posts. All corner, end, angle, pull and gate posts shall be braced. All hardware shall be thoroughly secured, properly adjusted and left in perfect working order.

- A. Concrete Bases - Concrete bases for metal posts shall conform to the applicable requirements of Division 3 "Concrete" of these Specifications.
- B. Posts - Post spacing shall be a maximum of 10 feet on centers. Line posts shall be set in concrete 3'-4" x 12" diameter to a depth of 3 feet below finished grade. Terminal and gate posts shall be set in concrete 3'-4" x 16" diameter to a depth of 3 feet below finished grade. Top of concrete base to carry 1-inch cone. Fencing shall not be applied to posts until the concrete base is at least 7 days old.
- C. Fabric - Chain link fabric shall be stretched taut and clipped to line posts with wire ties on approximately 12-inch centers. Fabric selvage shall be attached to the top rail with tie clips at intervals not exceeding 2 feet.

TECHNICAL SECTION
DIVISION 2 – SITE CONDITIONS
SECTION 02030 – CHAIN LINK SECURITY FENCE

D. Barbed Wire - Each strand shall be pulled taut and securely fastened to the extension arms by pins, ties, or other approved mechanical means.

E. Grading - Ground surface along the fence line shall be graded as necessary to maintain adequate clearance, but to eliminate openings.

3.02 UTILIZATION OF EXISTING FENCE MATERIALS

The Contractor may utilize to the maximum extent possible any existing fence fabric and gates, which are to be removed during the course of construction unless otherwise directed by the Engineer. Where these materials are to be reused, new fence posts, fittings, braces, barbed wire and connections shall be provided.

END OF SECTION

DIVISION FIVE

METALS

TECHNICAL SECTION
DIVISION 5 – METALS
SECTION 05010 – STRUCTURAL STEEL

PART 1 – GENERAL

1.01 GENERAL

This Work includes the furnishing of all materials, equipment and labor necessary for fabrication and erection of all structural steel items shown on the Drawings and as specified herein.

The Contractor shall furnish all bolts, nuts, shims, pins, and other anchors and all miscellaneous items, which may be required by the Drawings or job conditions, to secure all items permanently in place, whether or not specifically called for or shown on the Drawings, as approved by the Engineer.

1.02 SHOP DRAWINGS

The Contractor shall furnish 8 copies of shop drawings, clearly indicating this Work in all details, for approval. The Engineer shall approve shop drawings before any of the Work is executed. Drawings shall show sizes, gauges and types of materials used for the various sections, details of construction, methods of assembly, hardware, weld size, type, and length, etc. Where necessary, the Contractor shall check and verify dimensions of all miscellaneous steel work at the site.

The approval of shop drawings will be for size and arrangement of principal auxiliary members and strength of connections. Any errors in dimensions shown on the shop drawings shall be the full responsibility of the Contractor.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Structural Steel - Structural steel for all work (except as otherwise indicated or specified) shall conform to ASTM Specifications A36, latest revision.
- B. Cast Steel - Cast steel shall conform to ASTM Specification A-27, latest revision, Grade 65-35.
- C. Bolts - High strength steel bolts shall conform to ASTM Specification A325; use high strength steel bolts for all connections of beams, girders and trusses to columns or hangers, bracing connections, and elsewhere as noted on the Drawings. All other bolts used in connection with structural steel shall conform to ASTM Specification A307, latest revision.

TECHNICAL SECTION
DIVISION 5 – METALS
SECTION 05010 – STRUCTURAL STEEL

D. Filler Metal for Welding - Welding electrodes for manual shielded metal-arc shall conform to ASTM Specification A233, E60 or #70 Series, latest revision. Bare electrodes and granular flux used in the submerged-arc process shall conform to Section 1.17.3 of AISC Specification for Structural Steel for Buildings, latest revision.

E. Evidence of Conformity - Certified test reports of structural steel and cast steel shall constitute sufficient evidence of conformity with the Specifications. Manufacturer's certification for bolts and nuts and filler metal for welding shall constitute evidence of compliance.

PART 3 - EXECUTION

3.01 INSPECTION

The materials and workmanship to be furnished under this Specification shall be subject to inspection in the mill, shop, and field by the Engineer, or by qualified inspectors retained by the Owner. Inspection will be conducted without expense to the Contractor; however, inspection in the mill or shop shall not relieve the Contractor of his responsibility to furnish materials and workmanship in accordance with Contract requirements.

3.02 FABRICATION

Unless otherwise indicated on the Drawings or specified, the fabrication of structural steel shall be in accordance with the American Institute of Steel Construction - "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings," latest revision.

Shop connections shall be welded. Shop connections indicated on the Drawings are generally intended only to show the type of connection to be provided; the fabricator shall design all connections. On request from the fabricator, the Engineer will furnish loads and moments for which connections must be designed.

3.03 ERECTION

A. Applicable Standards - Except as otherwise indicated on Drawings or specified, the erection of structural steel shall be in accordance with the American Institute of Steel Construction "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings, latest revision and the "Code of Standard Practice for Steel Buildings and Bridges", latest revision.

TECHNICAL SECTION
DIVISION 5 – METALS
SECTION 05010 – STRUCTURAL STEEL

B. Methods for Erection - Prior to starting work, the Contractor shall submit to the Engineer a description of the methods, sequence of erection and type of equipment he proposes to use for erecting the structural steel work. This submission or approval shall not relieve the Contractor of his responsibility for providing the proper methods, equipment, or workmanship, or safety precautions.

C. Field Connections - Field connections shall be bolted using high strength bolts for strength connections.

D. High Strength Steel Bolts - Where structural joints are made using high strength bolts, hardened washers and nuts tightened to a high tension, the materials, methods of installation and tension control, type of wrenches to be used, and inspection methods shall conform to specifications for "Structural Joints Using ASTM A325 Bolts," latest revision as approved by the research Council on Riveted and Bolted Structural joints of the Engineering Foundation. The high strength bolts used shall have a suitable identifying mark placed on the top of the head before leaving the factory.

Tightening-of-nuts shall be done by the turn-of-nut method. The minimum bolt tension for the size of bolt used shall be in accordance with tables listed in the above referenced standards. Bolts that have been completely tightened shall be marked with identifying symbol.

E. Welding - Where structural joints are made by welding, the details of all joints, the technique of welding employed, the appearance and quality of welds made, and the methods used in correcting defective work shall conform to requirements of the "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings" of the American Institute of Steel Construction, latest revision, and the "Code for Arc and Gas Welding in Building Construction" of the American Welding Society, latest revision. Welds shall be made only by operators who have been previously qualified by tests, as prescribed in the "Standard Qualification Procedure" of the American Welding Society to perform the type of work required.

F. Field Cutting - The use of a gas-cutting torch in the field for correcting fabrication errors will not be permitted.

G. Setting Plates - Column base plates shall be set level to correct elevations. The entire bearing area under plates shall be grouted solid with EMBECO non-shrink grout or an equal approved by the Engineer. At the Contractor's option, 1/4-inch

TECHNICAL SECTION
DIVISION 5 – METALS
SECTION 05010 – STRUCTURAL STEEL

leveling plates may be furnished and set in place on grout bed (reducing grout depth 1/4 inch) before erection of columns.

H. Templates - Templates shall be furnished as indicated on drawings or as required. The Contractor shall furnish instructions for the setting of anchors and bearing plates and shall ascertain that the items are properly set during the progress of the Work.

I. Framing - The framing shall be carried up true and plumb and temporary bracing shall be introduced wherever necessary to take care of all loads to which the structure may be subjected, including erection equipment and its operation. Such bracing shall be left in place as long as may be required for safety. The Contractor as part of his equipment shall finally remove it. As erection progresses, the work shall be securely connected to take care of all dead loads, wind, and erection stresses.

3.04 GALVANIZING

All structural steel shall be sandblasted to a near-white finish and then hot-dip galvanized. Galvanizing shall be in accordance with the applicable specifications of the ASTM.

END OF SECTION

TECHNICAL SECTION
DIVISION 5 - METALS
SECTION 05020 - MISCELLANEOUS STEEL ITEMS, FABRICATION AND ERECTION

PART 1 – GENERAL

1.01 GENERAL

This Work includes the furnishing of all materials, equipment, and labor necessary for fabrication and erection of all miscellaneous steel items shown on the drawings and as specified herein.

The Contractor shall furnish all lintels bolts, nuts, shims, pins, screws, straps and other anchors and miscellaneous items, which may be required by the drawings or job conditions, to secure all items securely in place, whether or not specifically called for or shown on the drawings.

1.02 SHOP DRAWINGS

Eight copies of complete shop and erection drawings shall be submitted for approval. Shop drawings shall show in detail all field connections and member sizes throughout.

1.03 STEEL MATERIALS

Steel shall conform to the current edition of the Standard Specifications of ASTM for Steel for Buildings, latest revision. It shall be clean and free from mill scale or flake rust or rust pitting. Allowable stresses in the steel shall be per the Standard Specifications of the AISC. This Specification shall also apply to welds, bolts, spacing, etc.

PART 2 – PRODUCT

2.01 MISCELLANEOUS STEEL ITEMS

A. Steel Stairs and Handrails (Galvanized)

1. General Requirements: Contractor shall Provide steel stairs and handrails of type specified at locations indicated on the drawings. Except where other loads are designated, stairs shall be designed to support a minimum live load of 100 pounds per square foot and a concentrated load of 300 pounds with a safety factor of four. Fabrication and erection shall comply with the state and local Building Codes, ANSI G-41.5, latest revision, and ANCI B125.1, latest revision. All anchors, bolts, angles, supports, and other accessories required for a complete working installation shall be provided. Stairs shall be erected plumb and level and secured in place as detailed on the drawings and approved shop drawings.

2. Steel Stair Treads: Stair treads shall be galvanized 1" x 3/16" welded steel grating with 3/16" checkered plate nosing.

TECHNICAL SECTION
DIVISION 5 - METALS

SECTION 05020 - MISCELLANEOUS STEEL ITEMS, FABRICATION AND ERECTION

3. Stair and Platform Handrails: Steel handrails shall meet all current OSHA requirements and be supplied with a four-inch kick plate. Handrails shall be fabricated from 1½-inch diameter galvanized steel pipe. Attachments and splices shall be galvanized steel. Railings shall be fabricated and erected plumb, straight and true with tight joints. Welding shall be as outlined in Section 05010 of these Specifications.

B. Bar Grating - Bar grating shall be rectangular welded with bearing bars on 1-3/16" centers and cross bars on 4" centers. Bar grating shall be hot-dip galvanized. Sizes of bearing bars are designated on the drawings. All edges of grating to be banded including edges of round or rectangular openings.

PART 3 – EXECUTION

3.01 WORKMANSHIP

Workmanship shall be in accordance with the AISC Specifications for Fabrication and Erection, latest revision. All materials, straightening, cleaning, punching, reaming, welding, planning, assembly, riveting, and torch cutting shall be in accordance with the AISC Specifications and Code of Standard Practice, latest revision.

3.02 FABRICATION

All members shall be free from twists, kinks, buckles, or open joints. All members shall be so accurately made that when assembled the parts shall come together without distortion and without shimming. Field welding shall be done by certified welders with adequate experience in structural welding. All connections shall be welded, unless the type of connection is specifically called for on the drawings. All exposed welds shall be ground smooth, or to a neat fillet depending on location.

3.03 PAINTING

All non-galvanized iron and steel work shall be thoroughly cleaned and painted as specified in Section 09010 of these Specifications.

3.04 ERECTION

All work shall be erected in a neat, workmanlike manner, true to line, plumb and level. All fastenings to the masonry, concrete or other work shall be adequate for the loads imposed. Contractor shall coordinate this Work with other trades. **END OF SECTION**

APPENDICES

APPENDIX A

Geotechnical Investigation

**REPORT OF
GEOTECHNICAL INVESTIGATION
RIVER WATER CLARIFIER
EDGARD WATER TREATMENT PLANT
St. John the Baptist Parish, Louisiana**

FOR

**ENVIRONMENTAL ENGINEERING SERVICES, INC.
Laplace, Louisiana**

**PREPARED BY:
BILLY R. PROCHASKA, P.E.
9935 HILLYARD AVENUE
BATON ROUGE, LOUISIANA 70809**

**BRP 10-110
April 15, 2010**

BILLY R. PROCHASKA, P.E.
9935 HILLYARD AVENUE
BATON ROUGE, LOUISIANA 70809
PHONE/FAX (225) 223-6560
Email: billyprochaska@cox.net

April 15, 2010

Environmental Engineering Services, Inc.
610 Belle Terre Boulevard
LaPlace, Louisiana 70068

Attn: Mr. Oscar Boudreaux, P.E.

Re: Geotechnical Investigation
New Clarifier – Edgard Water Treatment Plant
St. John the Baptist Parish, Louisiana
BRP Job No. 10-110

Gentlemen:

Presented herein are the results of our investigation for foundation construction of a new river water clarifier in the existing water treatment plant on La. 18, River Road near Edgard.

PROPOSED CONSTRUCTION

The new conical bottomed tank will be constructed south of the existing filter units in the plant. The estimated weight of the tank, contents and foundation is 250 Tons, 500 Kips. This construction will be performed on a very limited site located adjacent to several private residences.

SITE CONDITIONS

One boring was made at the location shown on the attached site plan, EESI drawing GO1. The boring was continuously sampled to ten feet and then five foot centers to the terminating depth of 100 feet.

Subsoil Stratigraphy.

The boring encountered medium clay to approximately ten (10) feet. Between ten (10) and approximately 33 feet soft clay was sampled. The boring then entered firm very silty sand and silty sand to approximately 48 feet. Between 48 and 53 feet dense sand was sampled. After penetrating approximately two (2) feet of soft to medium clay, firm sand was sampled to approximately 63 to 64 feet. At that depth very dense sand was sampled to the termination depth of 100 feet. Details of the Stratigraphy are presented on the boring log in Appendix A and Figure 1.

Ground Water.

The borehole was advanced by dry auger drilling to ten feet. Water was encountered at seven (7) feet. The depth to free water will vary with rainfall and other seasonal environment fluctuations.

BILLY R. PROCHASKA, P.E.

Special Considerations.

Site Classification. Using the above stratigraphy the site classification is Class-E according to the International Building Code, Table 1613.2, pg 303 – 2006 Edition.

Seepage Potential. Excavation into and pile penetration of the clay can reduce the effectiveness of the clay cap to prevent seepage of river water from the underlying sand to the surface during high stages of the Mississippi River. The record stage of the river at Reserve was 26.00 during the 1929 flood. The site has a general surface elevation of approximately 17.0 feet.

Assuming the river provides an “infinite” source of water and that the head loss as water flows under the levee results in an unbalance head of nine (9) feet above the present surface. While this will not cause uplift of the clay cap, it can increase the seepage. The estimated volume seeping from the area covered by the tank foundation is 46 gallons a day, 0.32 gallon per minute. This is assumed that the water normally forced upward will flow along the pile/soil interface as this path will have less resistance to flow than through the soil.

The velocity of seepage should not cause any erosion of the soil adjacent to the piles but could create a wet area adjacent to the foundation. This can be controlled by installing a “French” drain with approximately six (inches) of washed sand enclosed in a non-geotextile, covered with a gravel bed containing collector pipes leading to a discharging into the surface drainage ditches and a compacted clay or concrete extending to the ground surface.

FOUNDATION ANALYSES

Based on the estimated loads, weight of the tank, contents and foundation, and weak soil profile a deep pile foundation will be required. A shallow foundation large enough to safely support the unit will cause an increase in stresses in the soft clay resulting in excessive and possibly differential settlement that can affect the performance of the unit. In the selection of the following pile types we have considered the site conditions, both surface and subsurface conditions as well as the adjacent residential structures. The candidate pile types are treated timber, pre-cast concrete and auger-cast piles.

Pile Capacities

The results of our capacity calculations are presented on Figures 2,3 and 4. The bottom of the pile cap was assumed two feet below the present grade and the ground water level was assumed at the ground surface.

CALCULATED CAPACITIES		
PILE TYPE	DESIGN LOAD*	TIP DEPTH
ASTM D-25 Timber	25 Tons	65 ft.
12” Sq. Pre-cast Concrete	23.6 Tons	50 ft.
16” Dia. Augercast	20.0 Tons	40 ft.

** Factor of Safety of 2.0 applied.*

BILLY R. PROCHASKA, P.E.

If these piles are installed three or more diameters center to center, group efficiency reduction in pile capacity is not required. The selection of pile will require consideration of the limited working area, affect of construction on the plant facilities and the vibrations induced in the adjacent private residences.

According to furnished drawings, the existing clarifier is supported on timber piles with a design load of 25 tons with tips at approximately 53 feet below the present surface. The depths cited above are deeper, as a soft clay stratum is located at that depth and could lead to undesirable settlements. A probe pile should be driven to verify the driving conditions prior to ordering job piles.

The concrete piles will require heavier equipment to handle the heavy piles. The driving of these displacement piles will cause greater vibrations. Twelve inch piles are difficult to handle in lengths over 50 feet long. Larger cross section concrete piles will cause higher vibrations and require heavier equipment. Should piles fail to "fetch" the concrete pile is difficult to lengthen.

The augercast piles will not create the vibrations caused by driven piles, but installation techniques and operator experience is most critical in the success of this pile system. The calculations were terminated at 40 feet as the installation will be more difficult as the depth of embedment increases.

Pile Driving

The piles will experience increased driving resistance as the piles encounter the sands at approximately 33 and increase steadily to approximately 50 feet below grade and then drop drastically through the clay stratum. The driving resistance will then increase and practical refusal will be encountered at approximately 60 to 65 feet.

Driving Equipment

The piles should be advanced with a hammer having a manufacturer rated energy that can advance the piles to the minimum desired tip depth and the depth required to achieve the desired capacity at a driving resistance/blow counts of 150 blows per foot or less for the concrete piles. Timber piles should be limited to 30 blows per foot with a hammer rated energy of 15,000 ft-lbs.

The contractor should be required to submit prior to construction, dynamic driving analyses (Wave Equation) utilizing the properties of the soils, hammer and pile to indicate the capability of the hammer to advance the piles to the desired depth without damaging the piles or developing excessive blow counts. The hammer should be provided with proper cushion block. Should the contractor request advancing the piles with a vibratory hammer, the pile should be stopped five feet short of the planned tip depth and then driven to final depth with an impact hammer.

PDA Logging

Probe piles should be driven prior to ordering the job piles. These piles should be driven with the same equipment as the production piles. In addition to the normal log blow counts with depth, a Pile Driving Analyses should be conducted of each probe pile. These analyses can substitute for static load tests. The hammer efficiency, stresses in the pile as well as the capacity, both side and tip resistance are calculated during the driving.

BILLY R. PROCHASKA, P.E

The piles should be re-tapped 24 hours after initial driving to evaluate the gain in capacity with the dissipation of the pore water pressures developed in the driving operations.

Should questions arise during construction the PDA can be easily mobilized to assist in solving problems or questions with the pile driving operations, such as breaking of piles or excessive driving resistance.

Vibration Monitoring

Prior to construction, inspections should be made of all residential structures or other facilities, within 300 feet of the pile driving, that could be damaged by pile driving induced vibrations. These inspections should be documented with a written report stating the observed conditions and with photographs.

During the probe pile program vibrations of the nearest structures should be documented with a portable seismograph. If peak velocities approach thresholds for damage as published by the US Bureau of Mines, the driving operations should be halted until the driving procedures are modified to reduce the vibrations. Figures V-1, V-2 and Table 1 are presented to assist in evaluation of the effects on the measured vibrations on the structures.

Augercast Piles.

As previously stated the successful installation of augercast is dependent on the experience of the equipment operator. Close inspection of the installation should be performed. Of particular importance is the proper calibration of the pump system so that the volume of concrete and rate of concrete pumping correspond to the rate of auger withdrawal. Pumped volumes should be recorded at five (5) foot centers and compared to the theoretical volume. Monitoring of the pump pressure is also important. Typically in soil of this type the volume of concrete pumped should be approximately 15 to 20% greater than the theoretical volume of the pile.

Integrity testing should be performed on each pile. The accuracy of this test is limited to a pile length of approximately 30 pile diameters, 40 feet for a 16 inch diameter. A probe installation, not in permanently planned location within the foundation, should be made and load tested to no less than twice the design capacity.

This pile, installed under a positive pressure as the auger is withdrawn, is less likely to facilitate seepage along the pile/soil interface than the driven piles.

LIMITATIONS

These interpretations, analyses, and recommendations are based on site conditions, surface and subsurface as determined by the boring. The assumption has been made that the exploratory boring in relation to area of project site, and depth of boring, is representative of subsurface conditions throughout the project area. This work was performed with the standard of care typical of geotechnical engineers in this area. No further warranty or guarantee is expressed or implied.

These recommendations presented in this report are dependent on construction methods and procedures. Sound engineering judgment must be followed when applying these recommendations to design, plans and also at the time of construction monitoring.

BILLY R. PROCHASKA, P.E.

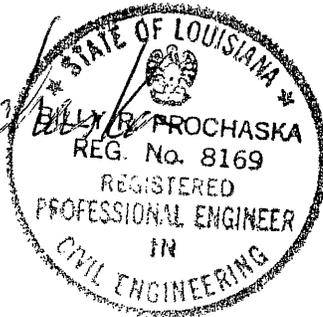
If during construction subsurface conditions are found to vary considerably from those reported herein, Billy R. Prochaska, P.E. should be notified immediately. Review and/or revision as necessary of pertinent interpretations, analyses and design recommendations will then be undertaken.

We have enjoyed serving you on this project and we look forward to working with you again in the near future. Should any questions arise concerning this report, please contact this office.

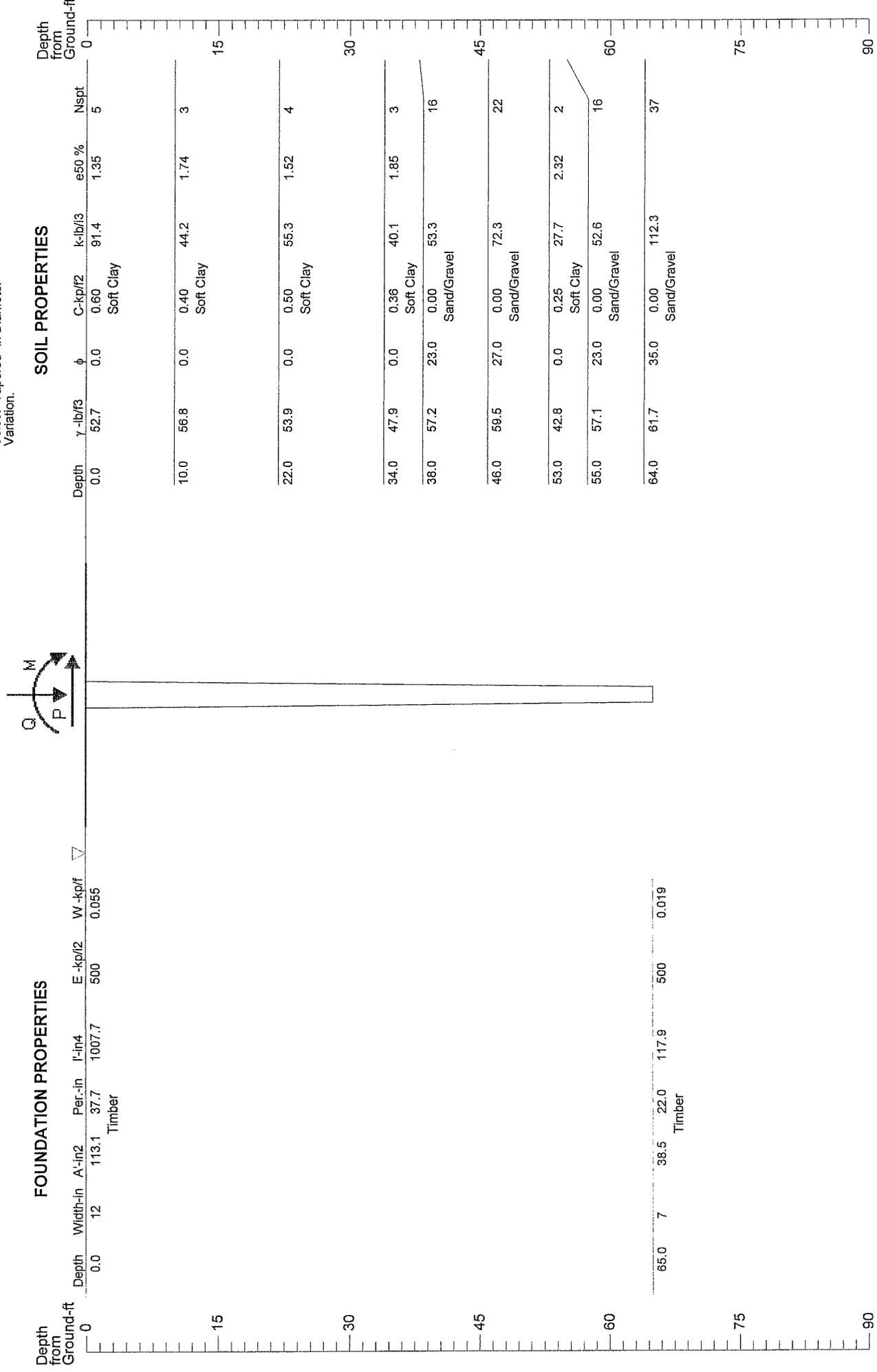
Very Truly Yours,

Billy R. Prochaska
Billy R. Prochaska, P.E.

3cc Submitted



FOUNDATION PROFILE & SOIL CONDITIONS



Batter Angle=0 (Pile diameter not to scale) Surface Angle=0



BILLY R. PROCHASKA, P.E.
9935 HILLYARD AVENUE
BATON ROUGE, LOUISIANA 70809
PHONE/FAX (225)223-6560
e-mail billyprochaska@cox.net

APRIL 15, 2010

INVOICE NO. BRP 10-110

TO: ST. JOHN THE BAPTIST PARISH
C/O ENVIRONMENTAL ENGINEERING SERVICES, INC.
610 BELLE TERRE BOULEVARD
LAPLACE, LOUISIANA 70068

RE: GEOTECHNICAL ENGINEERING SERVICES
NEW RIVER WATER CLARIFIER
EDGARD WATER TREATMENT PLANT

REPORT TRANSMITTED 4/15/10

PER AUTHORIZATION DATED 3/2/10

LUMP SUM \$6,200.00

COPY

This invoice is for professional services and payable upon receipt. Accounts over 30 days of age subject to 1.5% per month interest. Accounts over 90 days will have collection charges added in addition to interest.

BILLY R. PROCHASKA, P.E.
9935 HILLYARD AVENUE
BATON ROUGE, LOUISIANA 70809
PHONE/FAX (225)223-6560
e-mail billyprochaska@cox.net

APRIL 15, 2010

INVOICE NO. BRP 10-110

TO: ST. JOHN THE BAPTIST PARISH
C/O ENVIRONMENTAL ENGINEERING SERVICES, INC.
610 BELLE TERRE BOULEVARD
LAPLACE, LOUISIANA 70068

RE: GEOTECHNICAL ENGINEERING SERVICES
NEW RIVER WATER CLARIFIER
EDGARD WATER TREATMENT PLANT

REPORT TRANSMITTED 4/15/10

PER AUTHORIZATION DATED 3/2/10

LUMP SUM \$6,200.00

This invoice is for professional services and payable upon receipt. Accounts over 30 days of age subject to 1.5% per month interest. Accounts over 90 days will have collection charges added in addition to interest.

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return) Billy R. Prochaska	
	Business name, if different from above Billy R. Prochaska, P.E.	
	Check appropriate box: <input checked="" type="checkbox"/> Individual/Sole proprietor <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ <input type="checkbox"/> Exempt payee <input type="checkbox"/> Other (see instructions) ▶	
	Address (number, street, and apt. or suite no.) 9935 Hillyard Avenue	
	City, state, and ZIP code Baton Rouge, Louisiana 70809	
	List account number(s) here (optional)	
		Requester's name and address (optional) St John Baptist Parish Gov't.

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number		
435	56	8279
or		
Employer identification number		

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here	Signature of U.S. person ▶ <i>Billy R Prochaska</i>	Date ▶ <i>4/15/10</i>
------------------	---	-----------------------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

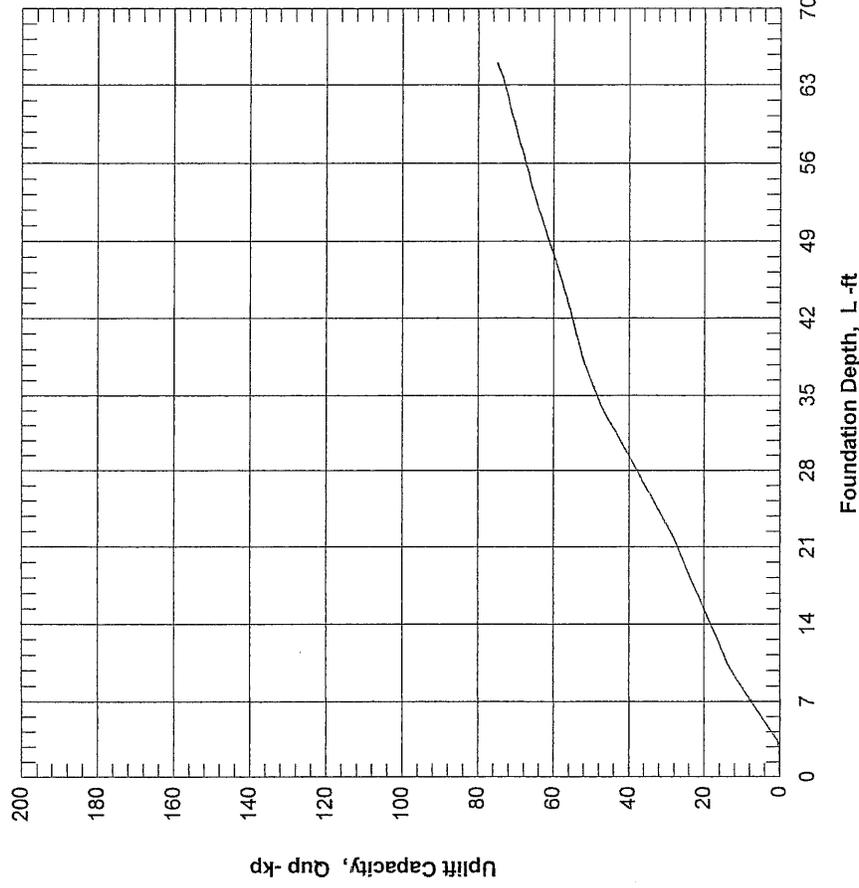
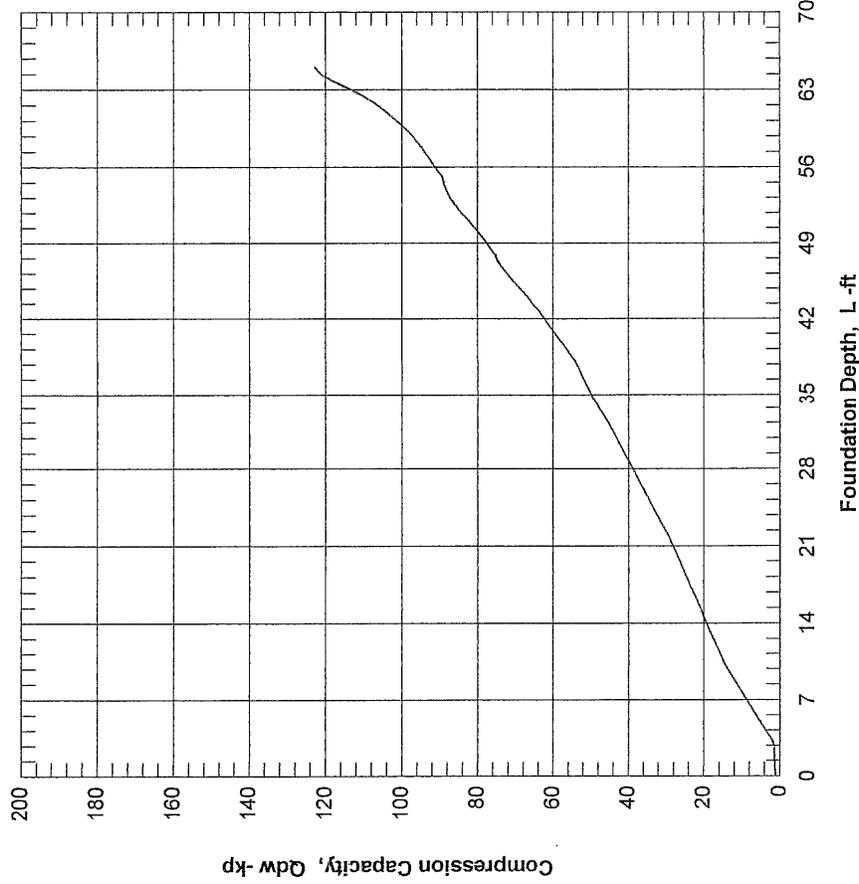
- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

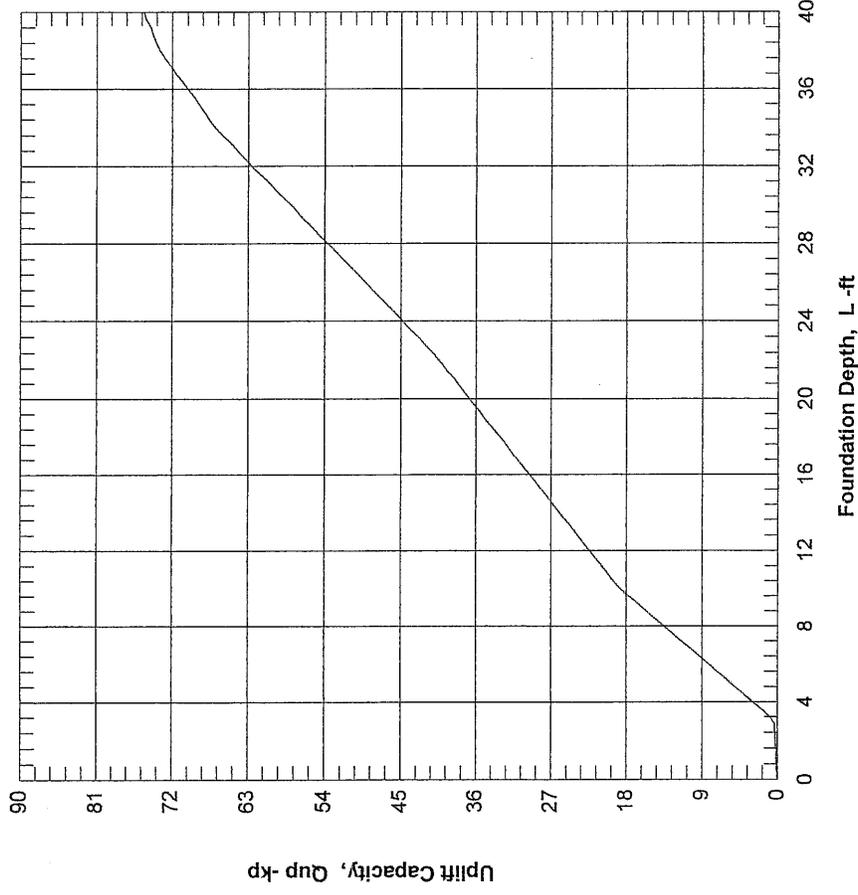
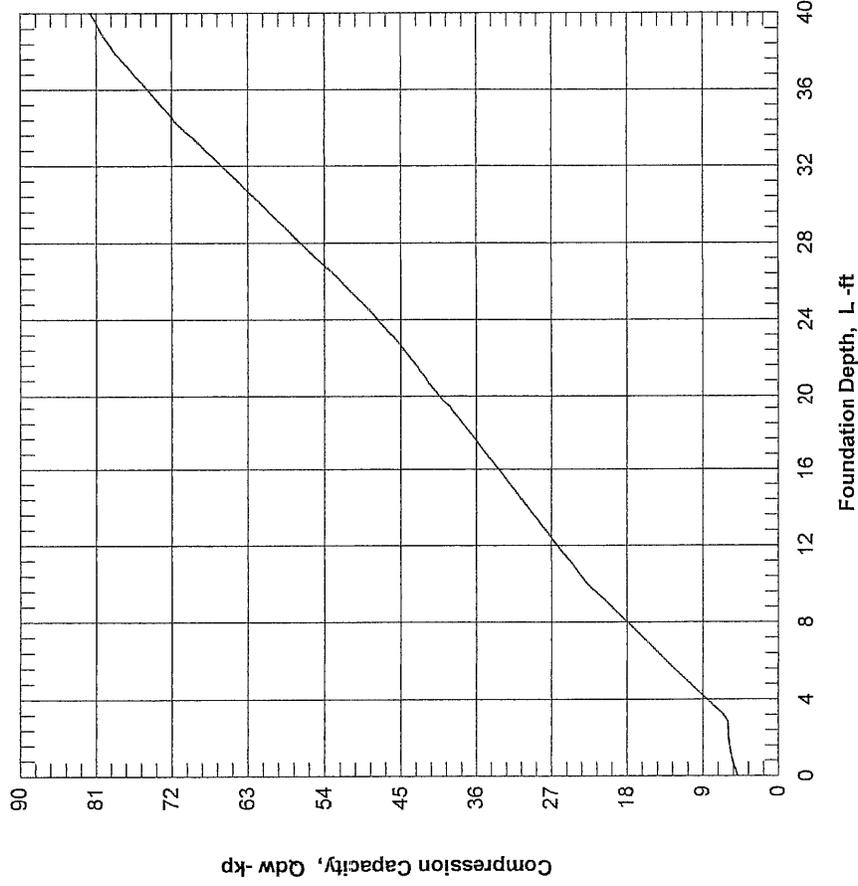
The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,

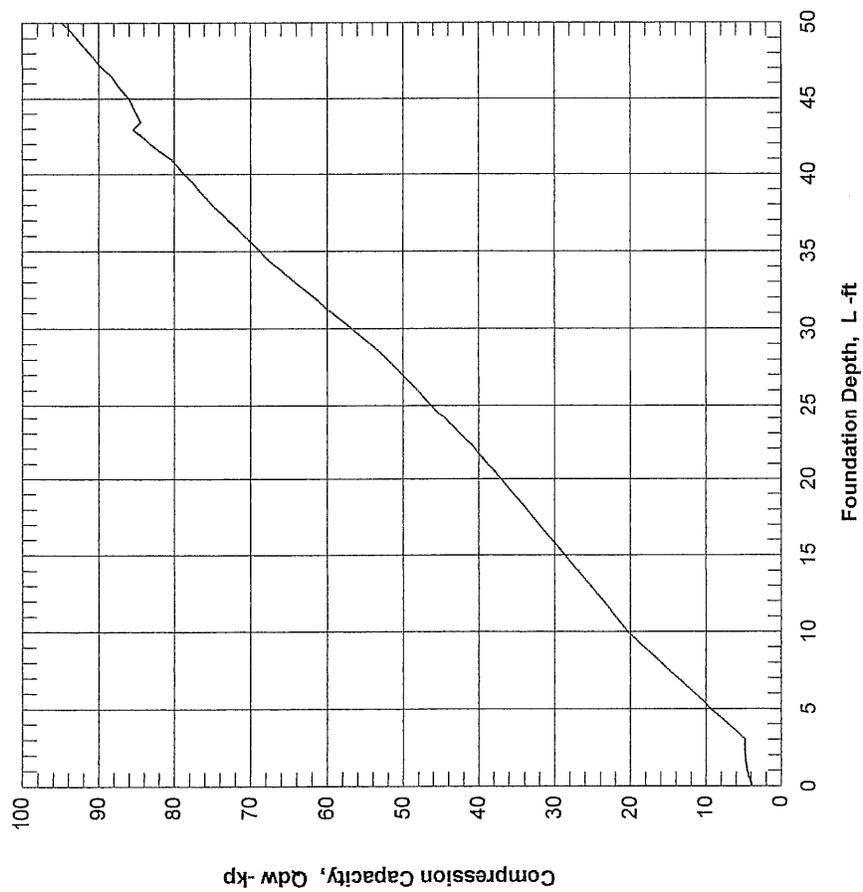
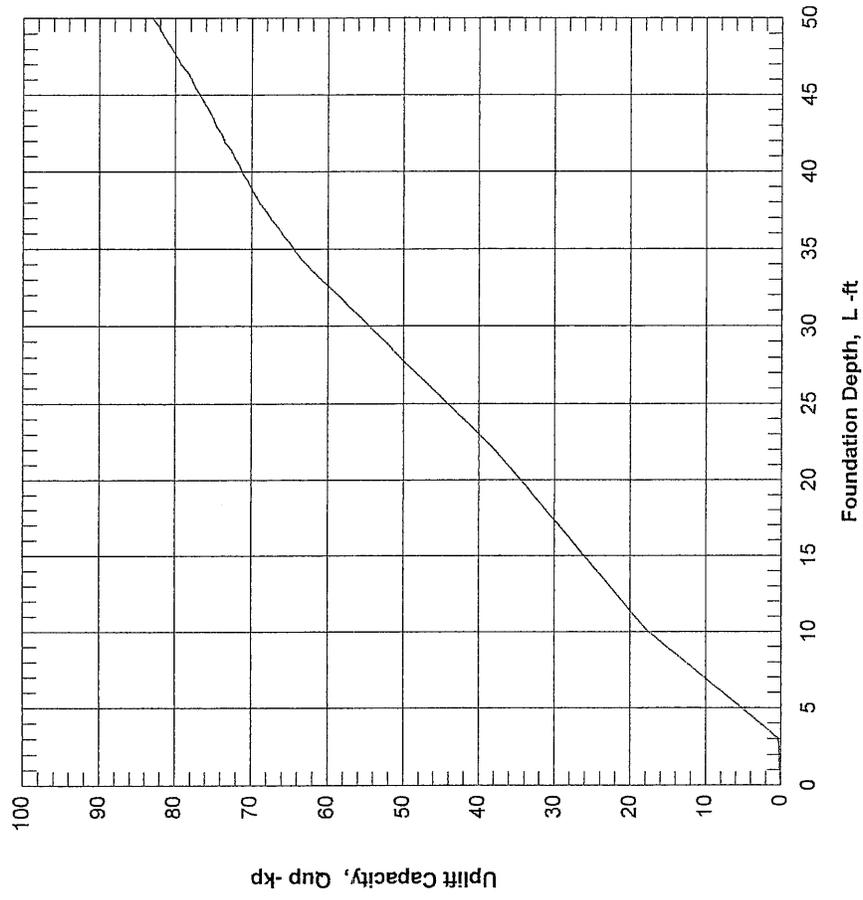
ULTIMATE CAPACITY VS FOUNDATION DEPTH

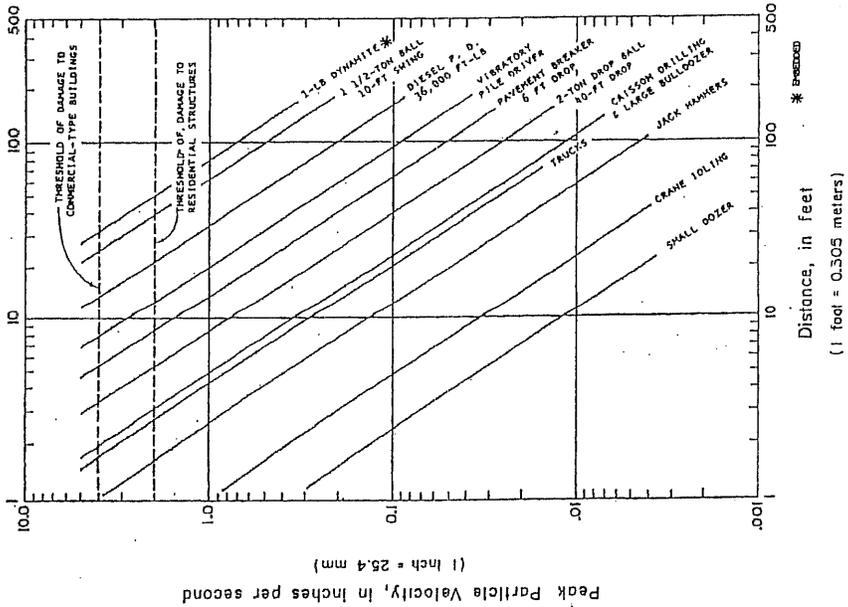


ULTIMATE CAPACITY VS FOUNDATION DEPTH

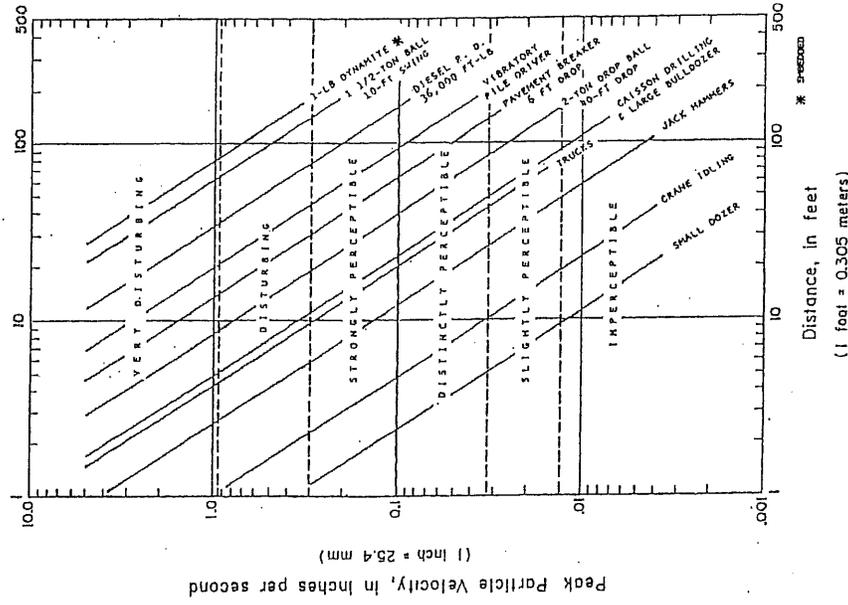


ULTIMATE CAPACITY vs FOUNDATION DEPTH





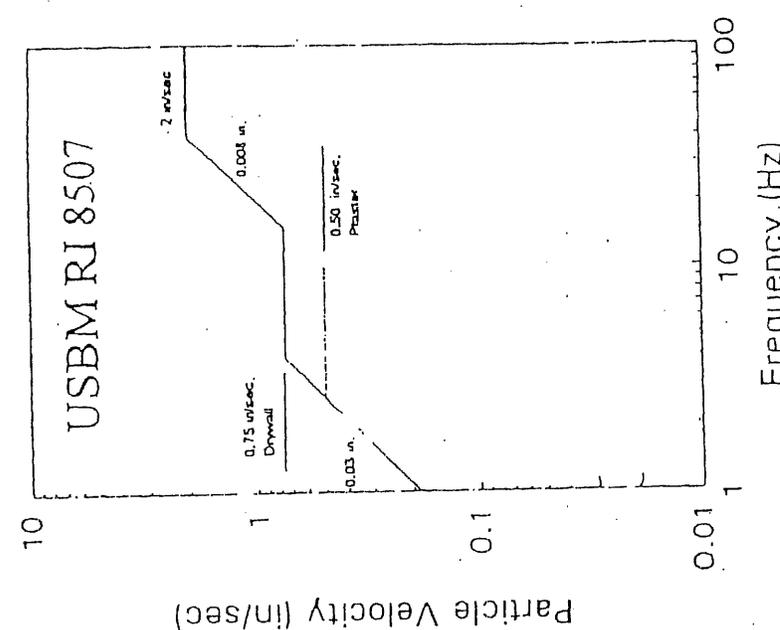
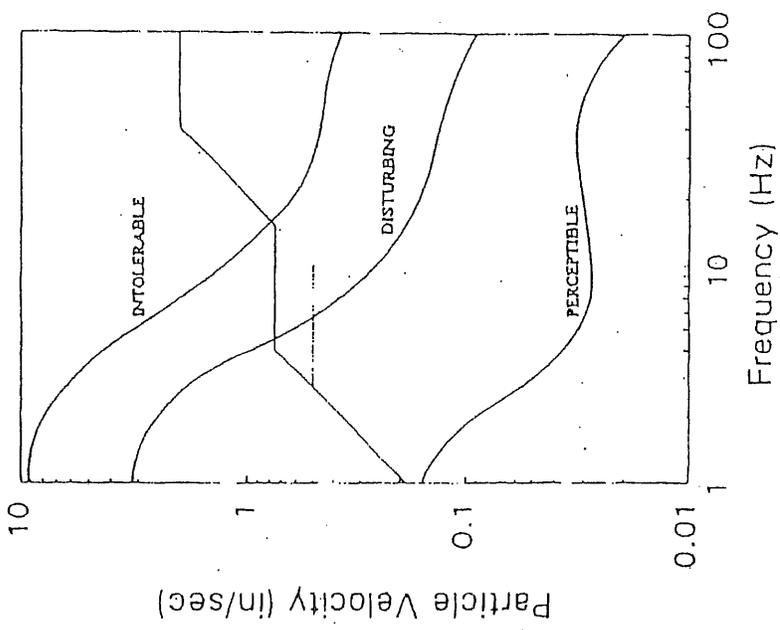
—Construction Vibration Intensities Related to Damage Criteria



—Construction Vibration Intensities Related to Human Evaluation

CONSTRUCTION VIBRATION RELATIONSHIPS

FIGURE V-1



Safe Vibration Limit Recommendations for Residential Structures Safe Vibration Limit (USBM RI 8507) and Human Perception (Rathbone)

VIBRATION DAMAGE CRITERIA

TABLE 1.—Criteria Recommended by Chae (4)

Class (1)	Peak particle velocity, in inches per second (2)	Peak particle velocity, in millimeters per second (3)
I ^a	4	100
II ^b	2	50
III ^c	1	25
IV ^d	0.5	12

^aStructures of substantial construction.

^bRelatively new residential structures in sound condition.

^cRelatively old residential structures in poor condition.

^dOld residential structures in very poor condition.

Note: If structure is subjected to repeated blasting, or if blasting is done without instrumentation, lower category by one.

TABLE 2.—New Swiss Standard for Vibrations in Buildings (32)

Building class (1)	Vibration source (2)	Range of frequency, in hertz (3)	Peak particle velocity, in millimeters per second (4)	Peak particle velocity, in inches per second (5)
I ^a	Machines, traffic	10-30	12	(0.5)
		30-60	12-18	(0.5-0.7)
II ^b	Blasting	10-60	30	(1.2)
		60-90	30-40	(1.2-1.6)
	Machines, traffic	10-30	8	(0.3)
		30-60	8-12	(0.3-0.5)
III ^c	Blasting	10-60	18	(0.7)
		60-90	18-25	(0.7-1.0)
		10-30	5	(0.2)
IV ^d	Machines, traffic	30-60	5-8	(0.2-0.3)
		10-60	12	(0.5)
		60-90	12-18	(0.5-0.7)
	Blasting	10-30	3	(0.12)
		30-60	3-5	(0.12-0.2)
		10-60	8	(0.3)
		60-90	8-12	(0.3-0.5)

^aBuildings in steel or reinforced concrete, like factories, retaining walls, bridges, steel towers, open channels; underground chambers and tunnels with and without concrete alignment.

^bBuildings with foundation walls and floors in concrete, walls in concrete or masonry; stone masonry retaining walls; underground chambers and tunnels with masonry alignments; conduits in loose material.

^cBuildings as mentioned previously but with wooden ceilings and walls in masonry.

^dConstruction very sensitive to vibrations; objects of historic interest.

ACCEPTABLE PEAK PARTICLE VELOCITIES
FOR VARIOUS TYPES OF CONSTRUCTION

TABLE V-I

BLLY R. PROCHASKA, P.E.

APPENDIX A

FIELD AND LABORATORY INVESTIGATION

BRP 10-110

BILLY R. PROCHASKA, P.E.

APPENDIX A

SUBSURFACE EXPLORATION AND LABORATORY TESTING PROGRAM

SUBSURFACE EXPLORATION

General. One (1) exploratory undisturbed sample boring was drilled on March 24, 2010. The approximate location of the boring is shown on Plate 1.

Sampling. Samples were obtained continuously to ten and then on five foot centers to the termination depth of 100 feet.

Undisturbed samples were recovered from the various cohesive materials with a 3 inch diameter thin wall Shelby tube (ASTM D-1587). The samples were extruded in the field where they were visually classified by the field technician. Penetrometer readings were made as a relative measure of the soil's strength. Representative portions of the samples were then wrapped and sealed to preserve their natural characteristics during transportation to the laboratory for physical testing.

Disturbed samples were obtained during the performance of the Standard Penetration Test (ASTM D-1986). In this test the sampler is driven with a 140 pound hammer falling 30 inches. The number of blows required to advance the sampler each of three increments of six inches are recorded as the penetration resistance. The sum of the blows in the last two increments is the "N" value that has been related to the strength and density of the soils used in the foundation design.

Upon completion, the boring was grouted full depth with a cement-bentonite grout as required by LaDOTD regulations.

LABORATORY TESTING PROGRAM

Soil mechanics laboratory tests were performed on selected samples representative of the various strata to define their physical characteristics.

Classification Tests. These tests are performed to classify the subsoils more accurately than attained by field methods.

Atterberg Limits. The Atterberg Limits (Liquid and Plastic, ASTM D-4318) were determined on five (5) samples to better assess the soil behavior.

Percentage Finer than 0.075 mm. Four (4) samples were washed over the number 200 sieve in accordance with ASTM D-1140 to determine the percentage fines in the sandy samples.

Individual Moisture Contents. Six (6) individual moisture content determinations were made in accordance with ASTM D- 2216.

BILLY R. PROCHASKA, P.E.

Strength Tests. The undrained compressive strengths of the various strata were determined in the Unconfined and Unconsolidated Undrained Triaxial Compression Test procedures.

Unconfined Compression Tests. Two (2) of these tests were performed using the procedures in ASTM D-2166.

Unconsolidated Undrained Triaxial Tests. Four (4) samples were tested in accordance with ASTM D- 2850 in which the samples is tested at a confining pressure equal to the calculated overburden pressure.

The results of all laboratory tests are presented in the appropriate columns of the Boring Logs.

The borings made by GeoTech Services, LLC and laboratory data reported herein were developed by Tolunay-Wong Engineers, Inc. as directed by Billy R. Prochaska, P.E.

Project EDGARD WATER TREATMENT PLANT

RIVER ROAD

Location ST. JOHN THE BAPTIST PARISH

Boring B-1

File BRP 10-110

Date 3/24/2010

Logger CMW

Page 1 of 1

Client ST. JOHN THE BAPTIST PARISH GOVERNMENT
ENVIRONMENTAL ENGINEERING SERVICES, INC.

Depth (Feet)	Sample	PP/ SPT	Comp. Strength (tsf)	Moist. Content (%)	Dry Density (pcf)	L.L. (%)	P.I. (%)	USCS Class.	Description of Stratum
0		1.75							STIFF BROWN And GRAY SILTY CLAY w/gravel
5		0.50	0.64	32	92	78	55	CH	MEDIUM GRAY And BROWN CLAY w/Silt Lenses
		0.75	0.56*	34	87				
		0.85	0.66	44	76	70	42		
		0.75	0.60**	42	80				
10								CL	SOFT BROWN And GRAY SILTY CLAY w/Clay And Sand Lenses
15		0.25	0.39***	34	89				
20		0.25	0.46****	42	82				
25		DIST.		35		36	14		
30		3b/ft.							
35		16b/ft.		36				SP/SM	FIRM GRAY VERY SILTY SAND (46% passes #200 sieve)
40		22b/ft.							

Legend:

-  Shelby Tube
-  Standard Penetration
-  No Recovery
-  Auger Sample

Comments:
Augered to 4 ft. Water at 6 ft. after 4-6 sample.
Wet rotary 6 ft. to bottom.

*, **, *** & **** UU Triaxial Tests @ 3,5,8 & 10 PSI Cell Pressures Respectively.

- continued-

Depth (Feet)	Sample	PP/ SPT	Comp. Strength (tsf)	Moist. Content (%)	Dry Density (pcf)	L.L. (%)	P.I. (%)	USCS Class.	Description of Stratum
40									
45	X	25b/ft.						SP	FIRM GRAY SILTY SAND w/Clay Lenses
50	X	30b/ft.		27					DENSE SILTY SANDY (19% passes #200 sieve)
55	X	8b/ft.		51		78	54	CH	SOFT To MEDIUM GRAY CLAY w/Sand Lenses
60	X	16b/ft						SP	FIRM GRAY SAND w/Silt
65	X	50b/10in.		18					(4% passing # 200 sieve) DENSE To VERY DENSE GRAY GRAY And BROWN SAND
70	X	37b/ft.						SP	
75	X	42b/ft.		18					(4% passing #200sieve)
80	X	40b/ft.							

Legend:

- Shelby Tube
- Standard Penetration
- No Recovery
- Auger Sample

Comments: -continued-

Project EDGARD WATER TREATMENT PLANT
RIVER ROAD
Location ST. JOHN THE BAPTIST PARISH

Boring B-1
File BRP 10-110
Date 3/24/10
Logger CMW

Client ST. JOHN THE BAPTIST PARISH GOVERNMENT
ENVIRONMENTAL ENGINEERING SERVICES, INC

Page 3 of 3

Depth (Feet)	Sample	PP/SPT	Comp. Strength (tsf)	Moist. Content (%)	Dry Density (pcf)	L.L. (%)	P.I. (%)	USCS Class.	Description of Stratum
80									
85	50b/9"							SP	VERY DENSE GRAY SAND w/Shell & Trace of Organic
90	50b/ft.						w/Coarse Sand Lenses		
95	50b/10"						w/Clay Lenses		
100	50b/8"								
105									Boring terminated at 100 ft. Borehole grouted full depth w/5% cement-bentonite grout.
110									
115									
120									

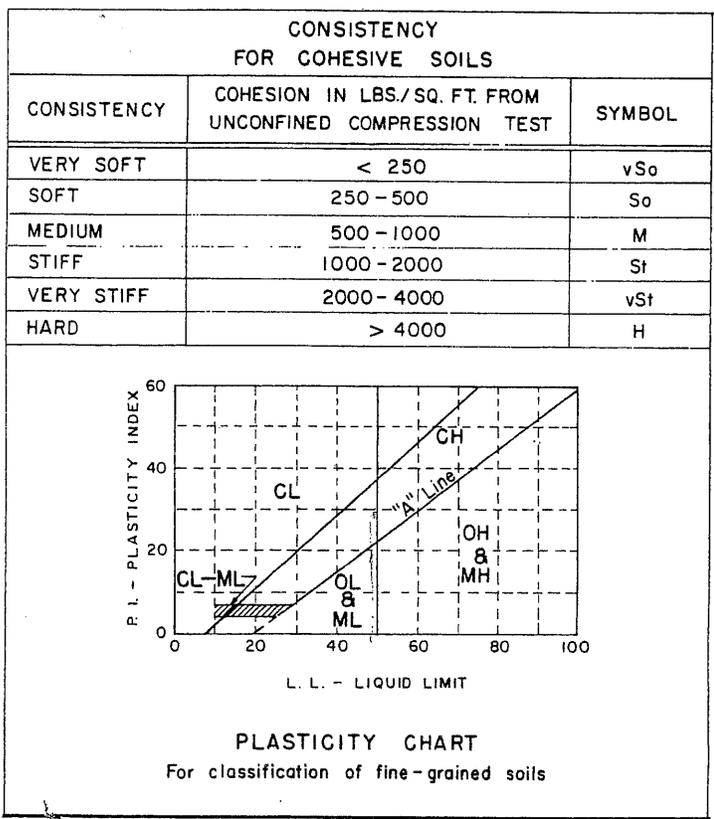
Legend:

-  Shelby Tube
-  Standard Penetration
-  No Recovery
-  Auger Sample

Comments:

UNIFIED SOIL CLASSIFICATION				
MAJOR DIVISION	TYPE	LETTER SYMBOL	SYM BOL	TYPICAL NAMES
COARSE-GRAINED SOILS More than half of material is larger than No. 200 sieve size	GRAVELS More than 50% of coarse fraction is larger than No. 4 sieve size	CLEAN GRAVEL (Little or No Fines)	GW	GRAVEL, Well Graded, gravel-sand mixtures, little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)	GP	GRAVEL, Poorly Graded, gravel-sand mixtures, little or no fines
		CLEAN SAND (Little or No Fines)	GM	SILTY GRAVEL, gravel-sand-silt mixtures
		SANDS WITH FINES (Appreciable amount of fines)	GC	CLAYEY GRAVEL, gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction is smaller than No. 4 sieve size	CLEAN SAND (Little or No Fines)	SW	SAND, Well-Graded, gravelly sands
		SAND WITH FINES (Appreciable amount of fines)	SP	SAND, Poorly-Graded, gravelly sands
		SANDS WITH FINES (Appreciable amount of fines)	SM	SILTY SAND, sand-silt mixtures
		SANDS WITH FINES (Appreciable amount of fines)	SC	CLAYEY SAND, sand-clay mixtures
FINE-GRAINED SOILS More than half the material is smaller than No. 200 sieve size	SILTS AND CLAYS (Liquid Limit < 50)	ML	SILT & very fine sand, silty or clayey, fine sand or clayey silt with slight plasticity	
		CL	LEAN CLAY, Sandy Clay, Silty Clay, of low to medium plasticity	
		OL	ORGANIC SILTS and organic silty clays of low plasticity	
	SILTS AND CLAYS (Liquid Limit > 50)	MH	SILT, fine sandy or silty soil with high plasticity	
		CH	FAT CLAY, inorganic clay of high plasticity	
		OH	ORGANIC CLAYS of medium to high plasticity, organic silts	
HIGHLY ORGANIC SOILS	Pt	PEAT, and other highly organic soil		
WOOD	Wd	WOOD		
SHELLS	SI	SHELLS		
NO SAMPLE				

NOTE: Soils possessing characteristics of two groups are designated by combinations of group symbols



APPENDIX B

Permits

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: St. John the Baptist Parish

File No.: MVN-2010-2354-CO

Date:

APR 04 2011

Attached is:

See Section below

<input checked="" type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION II: The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Martin S. Mayer (504)862-2276
Chief, Central Evaluation Section
U.S. Army Corps of Engineers
P.O. Box 60627
New Orleans, LA 70160

If you only have questions regarding the appeal process you may also contact the Division Engineer through:

James B. Wiseman, Jr.
Administrative Appeals Review Officer
Mississippi Valley Division
P.O. Box 80 (1400 Walnut Street)
Vicksburg, MS 39181-0080
(601) 634-5820
(601) 634-5816 (fax)

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

4/7/11

Telephone number:



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P. O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

Operations Division
Central Evaluation Section

APR 20 2011

SUBJECT: MVN-2010-2354-CO

St. John the Baptist Parish
1801 West Airline Highway
Laplace, Louisiana 70068

Gentlemen:

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

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

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

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

The New Orleans District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the attached Customer Service Survey and return it in the envelope provided or go to the survey found on our web site at <http://per2.nwp.usace.army.mil/survey.html>.

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

Sincerely,

A handwritten signature in black ink that reads "Martin S. Mayer". The signature is written in a cursive style.

Martin S. Mayer
Chief, Central Evaluation Section

Enclosure

RECEIPT FOR COLLECTION VOUCHER

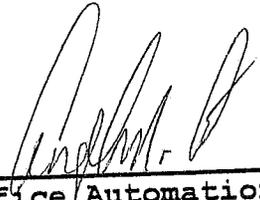
DATE: APR 18 2011

RECEIVED FROM: St. John The Baptist Parish

THE SUM OF one hundred DOLLARS/AND 00 CENTS

(\$ 100⁰⁰) FOR THE FOLLOWING:

	AMOUNT
PERMITTEE: <u>St. John The Baptist Parish</u>	<u>100⁰⁰</u>
PERMIT NUMBER: <u>2010-2354-CO</u>	
CHECK NUMBER: <u>26972</u> DATED: <u>4/12/11</u>	
TOTAL AMOUNT:	<u>100⁰⁰</u>

RECEIVED BY: 
Office Automation Clerk

APR 18 2011
Date

DEPARTMENT OF THE ARMY PERMIT

Permittee: St. John the Baptist Parish

Permit No. MVN-2010-2354-CO

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: Install and maintain an elevated walkway to allow for access to the existing water intake structure during high water events, in accordance with the drawings attached in seven sheets, dated March 25, 2011.

Project Location: In the Mississippi River, right descending bank, at a point 140 miles above the Head of Passes, near Edgard, Louisiana, in St. John the Baptist Parish.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **April 30, 2014**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

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

Special Conditions: Page 4.

Further Information:

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

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

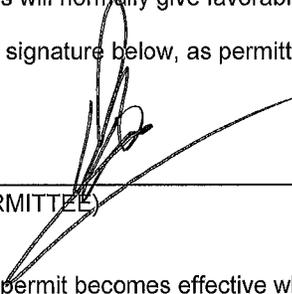
- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- 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  _____ X 4/7/11 _____
 (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 _____ 20 April 2011 _____
 (DATE)

Martin S. Mayer, 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-2010-2354-CO

7. If the proposed project requires any new work not expressly permitted herein, or impacts any wetlands other than the areas indicated on the attached drawings, the permittee must obtain a separate approval from this office, prior to commencement of such work.

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. 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 Post Office Box 661, Charenton, Louisiana 70523, and the US Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch. CEMVN 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.

12. All construction activities over the levee or within 10 feet of the levee toe must be performed when the stage of the Mississippi River is below +11.0 feet NGVD on the Carrollton gage, at New Orleans, Louisiana. Information concerning current river stages may be obtained on our website at www.mvn.usace.army.mil.

13. All piles must be located a minimum of 10 feet from the levee toe.

14. The levee section, if deficient, shall be constructed to the required design levee section using new levee fill material, prior to the installation of the permitted work. All walkway items must be constructed above the design levee section.

15. Any new levee fill, defined as any material placed on or within 10 feet of the levee toe, must have an organic content no greater than 9%, as determined by ASTM D297, Method C. The Plasticity Index of the new fill must be 10 or greater (Atterberg Limits), as determined by ASTM D4318. The material must be classified as either CH or CL by ASTM D2487, with less than 35% sand retained on the No. 200 sieve, as determined by ASTM D1140.

SPECIAL CONDITIONS CON'T: MVN-2010-2354-CO

16. The levee fill must be placed in 6-inch lifts and compacted to 90% Proctor Density, as determined by ASTM D698.

17. Pile driving operations, material deliveries, and walkway installation activities must not be performed from the levee section.

18. Any damage to the levee, batture, and/or bank resulting from the permittee's activities must be repaired at the permittee's expense.

19. Should changes in the location or section of the existing levee and or river, or in the generally prevailing conditions in the vicinity, be required in the future in the public interest, the permittee shall make changes in the project concerned, or in the arrangement thereof, as may be necessary to satisfactorily meet the situation and shall bear the cost thereof.

20. This permit approval does not obviate the permittee from obtaining any required permit from the appropriate levee board.

EDGARD WATER TREATMENT PLANT
CLARIFIER IMPROVEMENTS
EDGARD, ST. JOHN THE BAPTIST PARISH, LOUISIANA

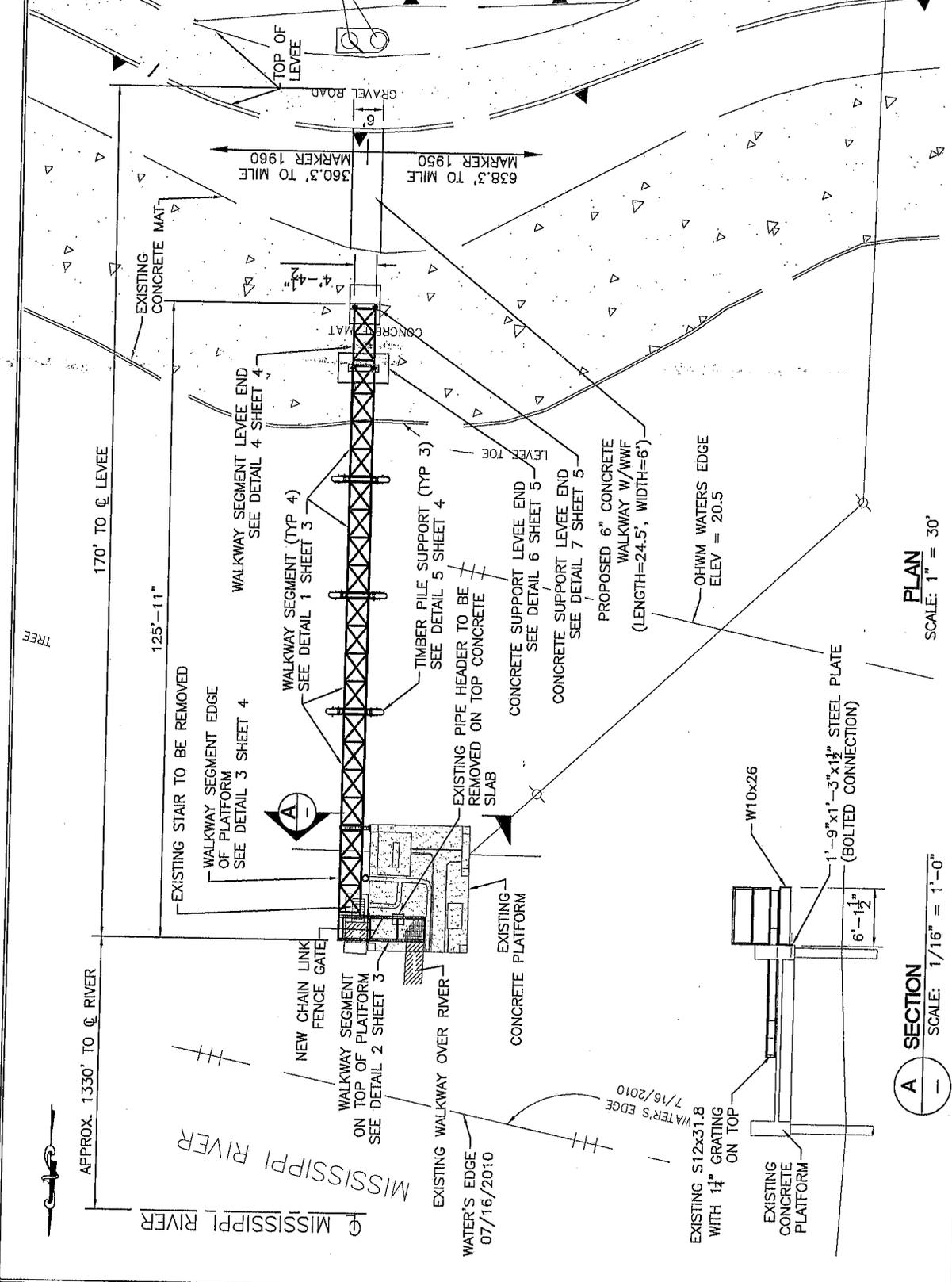
PROJECT NO. 00-33

SHEET **1**

DATE: 7/16/2010

SCALE: AS NOTED

FILE NAME: S:\17-2009\0033\001\001\PERMIT DRAWINGS\walkway.dwg TAB NAME: 1



This drawing and design is the property of E.E.S., Inc. It is furnished on the condition that it is not to be used, in whole or in part, for any project other than that for which it was prepared without the written consent of E.E.S., Inc. All copyright privileges granted by law are hereby specifically reserved.

Environmental Engineering Services, Inc.
 CONSULTING ENGINEERS

610 BELLE TERRE BLVD.
 SUITE 7000
 PHONE: (504) 785-0185
 FAX: (504) 785-0182

LEVEE BRIDGE PLAN AND PROFILE

3-25-11 3 50 7

BOBBY JINDAL
GOVERNOR



ROBERT D. HARPER
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

October 6, 2010

ENVIRONMENTAL ENGINEERING SERVICES, INC.
610 BELLE TERRE BLVD
LAPLACE, LA 70068
Attn: Robert Guillot

RE: Coastal Use Permit P20101168

Dear Mr. Guillot:

You were recently issued Coastal Use Permit Number P20101168. A requirement of this permit is that this office be notified of the commencement date of work on this project. Enclosed is a postage paid business reply card with the permit number written on the card. Upon commencement of the project, simply write the date of commencement on the card, sign it and drop it in the mail. If you are an agent and not responsible for this notification, please ensure the proper individual is given this correspondence.

Alternately, you can transmit the information through the commencement notification feature of the online permit system or simply notify Mr. Chuck Spears at 1(800)267-4019 or 1(225)342-7930. Please be prepared to provide an exact or approximate date construction began when you call.

If you have any questions please do not hesitate to contact this office. Thank you for your cooperation in this matter.

Very Truly Yours,

A handwritten signature in cursive script, appearing to read "Christine Charrier".

Christine Charrier
Program Manager

Enclosure



VA

PROJECT COMMENCEMENT NOTIFICATION
OFFICE OF COASTAL MANAGEMENT
LA DEPT. OF NATURAL RESOURCES
P.O. BOX 44487
BATON ROUGE, LA 70804-4487

COASTAL USE PERMIT # P20101168

APPLICANT St John the Baptist Parish

DATE PERMITTED WORK STARTED ON SITE: _____
MONTH/DAY/YEAR

Please enter in space provided the date on which approved work
under your permit began, sign and return to this office
within three (3) working days after that date.

IF YOU HAVE ANY QUESTIONS,
PLEASE WRITE OR TELEPHONE THIS OFFICE 1-800-267-4019

Signature _____

LAFOURCHE BASIN LEVEE DISTRICT
P.O. BOX 670
VACHERIE, LOUISIANA 70090

FILE# 995
PERMIT NO. 4022

BOND NUMBER 71086198
04/05/2011-04/05/2012

This is to certify that Environmental Engineering Services
610 Belle Terre Blvd.
LaPlace, LA 70068

On behalf of St. John the Baptist

is granted a permit to construct an elevated walkway for the raw water intake structure on the flood side of the right descending Mississippi River levee, near second order levee station 1955+50 in Edgard, St. John the Baptist Parish, Louisiana.

PROVISIONS:

- 1) The work is performed in accordance with the application dated September 24, 2011, December 3, 2010 and January 31, 2011 and accompanying maps. Any changes to the limits or scope of the proposed work must be submitted for additional review. The Levee District must be contacted in writing prior to commencement and at the end of the activities. The applicant is responsible for obtaining providing copies of any permits or lease agreements necessary, as well as documented approval from the area landowners prior to the initiation of the work. All permits and paperwork must be available at the work site.
- 2) Any construction activities over the levee or within 10 feet of the levee toe is limited to when the state of the Mississippi River is below elevation +11.0 feet on the Carrollton gage, at New Orleans, Louisiana. Information concerning river stages may be obtained from www.mvn.usace.army.mil or by calling 504-862-2461.
- 3) The piles are located a minimum of 10 feet from the levee toe.
- 4) The levee section, if deficient, shall be constructed to the required levee section, using new levee fill material, prior to installation of the proposed work. All walkway items shall be constructed above the design levee section.
- 5) Any new levee fill, defined as any material placed on or within 10 feet of the levee toe, shall have an organic content no greater than 9% as determined by ASTM D2974, Method C. The Plasticity Index of the new fill shall be 10 or greater (Atterberg Limits), as determined by ASTM D4318. The material shall be classified as either CH or CL, by ASTM D2487, with less than 35% sand retained on the No. 200 sieve, as determined by ASTM D1140..
- 6) The levee fill shall be placed in 6 inch lifts and compacted to 90% Protector Density, as determined by ASTM D698.
- 7) Pile driving operations, material deliveries and walkways installation activities shall not performed from the levee section.
- 8) Any damage to the levee, batture, and /or bank resulting from the applicant's activities is repaired at the applicant's expense.

Applicant and his surety assume all costs of proper maintenance and upkeep relative to the facility herein permitted.

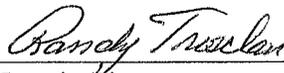
The applicant agrees to indemnify and save grantor harmless from any and all liability, including liability of of grantor to applicant, its heirs, successors and/or assigns, arising out of and or incident to the right herein granted. Applicant further agrees to appear and defend any and all suits instituted against the Board arising out of and/or incident to this permit and to pay in full any judgements rendered against the Board arising out of and/or incident to the granting of this permit:

Should changes in the location or the section of the existing levee and/or channel, or in the generally prevailing conditions in the vicinity, be required in the future, in the Public interest, the applicant shall make such changes in the project concerned or in the arrangement thereof, as may be necessary to satisfactorily meet the situation and shall bear the cost thereof.

Expiration May 9, 2012 or upon 30 day written notice

Vacherie, Louisiana May 9, 2011

Board of Commissioners for the
Lafourche Basin Levee District


Executive Director