

**FORMS OF SPECIFICATIONS, CONTRACT, BONDS AND
BID PROPOSALS**

FOR

HIDALGO COUNTY PRECINCT NO. 2

**SIOUX ROAD IMPROVEMENTS
(from I Road to 3,500 feet East of Raul Longoria Road)**

CONTRACT NO.: C-15-209-07-21



PREPARED BY:

**RAUL E. SESIN, P.E., PROJECT ENGINEER
HIDALGO COUNTY
902 N. DOOLITTLE ROAD
EDINBURG, TEXAS 78542**

Hidalgo County Precinct No. 2
Sioux Road Improvements
From I Road to 3,500 ft. East of Raul Longoria Road
Contract No.: 2015-209-07-21

TABLE OF CONTENTS

- 1) Advertisement and Invitation for Bids
- 2) Hidalgo County Legal Notice
- 3) Bidder Acknowledgement
- 4) Statement of Credentials
- 5) Information for Bidders
- 6) Bid Form
- 7) Bid Bond
- 8) Contract
- 9) Non Collusion
- 10) Payment Bond
- 11) Performance Bond
- 12) Exhibit C -Insurance Requirements
- 13) General Conditions of the Agreement
- 14) Title 29 Labor
- 15) Standard General Condition of Construction Contract
- 16) Supplemental General Condition
 - Exhibit A General Notes
 - a. Technical Specifications
 - b. Asphalt Pavement and Caliche Thickness Report
- 17) Exhibit B
 - a. Debarment
 - b. W-9
 - c. Bidder/Vendor Application
 - d. Conflict of Interest Memo
 - e. Conflict of Interest Form
 - f. Sales Tax and Local Sales Tax Certificate
- 18) Exhibit D Border Wage Rates
 - a. Government code Ch 2258
 - b. Prevailing Wage Rate
 - c. Davis Bacon
- 19) Exhibit E
 - a. Change Order
 - b. Payment of Application
 - c. Estimate Quantity Update
 - d. Schedule of Values
 - e. Contract Time Statement
 - f. List of Suppliers
 - g. Partial Release of Lien
 - h. Contractor's Affidavit of Payment of Debts and Claims
 - i. Prevailing Wage Rates Certificate Statement
 - j. Certificate of Construction Completion
 - k. Contractor's Affidavit of Release of Liens
 - l. Quantity Work Sheet
- 20) Construction Identification Sign

ADDENDUM NO. 1

October 1, 2014

HIDALGO COUNTY PRECINCT NO. 2

"SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3500 FEET EAST OF RAUL LONGORIA ROAD)"

BID NO.: 2015-209-06-24-MSS

Bid Opening Date: JULY 1, 2015

PLEASE NOTE CHANGES AS FOLLOWS:

1. Extension of Bid Opening Date from June 24, 2015 to Wednesday, July 1, 2015 at 3:00 p.m

I, Yara M. Corbitt,, acknowledge receipt of ADDENDUM NO. 1 dated, June 16,
2015, for RFB- **HIDALGO COUNTY PRECINCT NO. 2 -"SIOUX ROAD IMPROVEMENTS**
(FROM I ROAD TO 3500 FEET EAST OF RAUL LONGORIA ROAD)".

Texas Cordia Construction, LLC

Printed Bidder Name

07-01-15

Date

NOTE: PLEASE SUBMIT THIS ADDENDUM WITH YOUR
BID PACKET, IN ORDER TO COMPLETE THE
BID.....



PURCHASING DEPARTMENT
County Of Hidalgo

June 29, 2015

RE:

ADDENDUM NO.2

FOR BID No. 2015-209-06-24-MSS

Hidalgo County Precinct No. 2 – Sioux Road
Improvements (From I Road to 3500 feet East of Raul
Longoria Road)

Dear Gentlemen:

Attached you will find ADDENDUM NO. 2, PAGE 1 OF 2 in connection with HIDALGO COUNTY
PRECINCT NO. 2 -request for bids for "SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3500
FEET EAST OF RAUL LONGORIA ROAD".

Please add this ADDENDUM NO. 2 to your bid packet so as to permit your company to submit a complete bid.
See original bid packet LEGAL NOTICE page 3 paragraph 9.

Acknowledge receipt of ADDENDUM NO. 2 by signing and returning this notice to us VIA EMAIL AT
nora.cavazos@hcddl.org

If you do not receive all pages of ADDENDUM NO. 2 please notify us immediately at (956) 292-7080.

Please be advised that this ADDENDUM NO. 2 will complete your bid packet for HIDALGO COUNTY
PRECINCT NO. 2 -request for bids for "SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3500
FEET EAST OF RAUL LONGORIA ROAD".

Thank you for your prompt attention to this matter.

Martha L. Salazar
Martha L. Salazar, CPPB
Hidalgo County Purchasing Agent

MLS/mss

BY:

Yara M. Corbitt, P.E.

ADDENDUM NO. 2
ACKNOWLEDGMENT OF RECEIPT

Yara M. Corbitt, P.E.
Texas Cordia Construction, LLC

ADDENDUM NO. 2

June 29, 2015

HIDALGO COUNTY PRECINCT NO. 2
"SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3500 FEET EAST OF RAUL LONGORIA ROAD)"

BID NO.: 2015-209-06-24-MSS

Bid Opening Date: JULY 1, 2015

PLEASE NOTE CHANGES AS FOLLOWS:

1. Base Bid Item #4 Item Description had changed to reflect 2.5% Lime Stabilization.
2. Add Alternate #2 (Biaxial Geogrid 1200) had been added.
3. Add Alternate #3 (Cement Stabilization 2%) has been added.
4. Added Technical Specification for Biaxial Geogrid 1200.
5. Added Atterberg Limits of Flexible Base Report.

I, Yara M. Corbitt, acknowledge receipt of ADDENDUM NO. 2 dated, 6-29-15, 2015, for RFB- **HIDALGO COUNTY PRECINCT NO. 2 -"SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3500 FEET EAST OF RAUL LONGORIA ROAD)"**.

Texas Cordia Construction, LLC

Printed Bidder Name

07/01/15

Date

NOTE: PLEASE SUBMIT THIS ADDENDUM WITH YOUR BID PACKET, IN ORDER TO COMPLETE THE BID.....

REQUEST FOR BIDS

TO SUPPLY HIDALGO COUNTY PRECINCT NO. 2 with sealed bids for: "Sioux Road Improvements (from I Road to 3,500 feet East of Raul Longoria Road.)"

A BIDDER'S BOND from a reliable surety company licensed to operate in the State of Texas or certified Cashier's Check, payable without recourse to the County of Hidalgo, for the amount of not less than 5% of the total bid shall accompany the bid as guaranty that, if awarded the contract, the bidder will enter into a contract with the County of Hidalgo. Payment and Performance Bonds shall be executed except in the event into a single payment contract with the County of Hidalgo in lieu of a Performance Bond. In the event the total amount bid is \$25,000 or less, the successful contract has the option to enter into a single payment contract with the County of Hidalgo in lieu of a Payment and Performance Bond.

Bid Packets may be obtained from the office of Hidalgo County Drainage District No. 1 Office, 902 N. Doolittle Road, Edinburg, TX 78539 Phone No. (956) 292-7080.

PRE-BID CONFERENCE is scheduled for **Monday, June 15, 2015 @ 3:00 P.M.** at **HIDALGO COUNTY NEW ADMINISTRATION BUILDING - PURCHASING DEPARTMENT 2812 S Business Hwy 281, EDINBURG, TEXAS 78539**

UPON SUBMITTING SEALED BID, bidders are required to properly identify (handwritten, typed or printed) sealed envelope and/or packet as follows: Bidder's name and address on the upper left hand corner of the sealed envelope and/or package and **Bid No.: 2015-209-06-24-MSS – Hidalgo County Precinct No. 2 – "Sioux Road Improvements (from I Road to 3,500 feet East of Raul Longoria Road)." on the lower left hand corner of sealed envelope/and or packet. OVERNIGHT MAIL MUST ALSO BE PROPERLY LABELED ON THE OUTSIDE OF EXPRESS ENVELOPE OR PACKAGE.**

The sealed bid must contain one (1) original and three (3) copies of bid and must be clearly identified and addressed for delivery to:

Martha L. Salazar, CPPB, Hidalgo County Purchasing Agent
Hidalgo County Purchasing Department

US Postal Mail/Courier Address

Hidalgo County New Administration Building
2812 S. Business Hwy 281
Edinburg, Texas 78539

Physical Location:

Hidalgo County New Administration Building
2802 S. Business Hwy. 281
(Southeast of Canton Rd & Business 281)
Edinburg, Texas 78539

Sealed bids will be accepted until 3:00 PM on Wednesday, June 24, 2015 at which time they will be opened in the Hidalgo County Purchasing Department Conference Room at **Physical Location: 2802 S. Business Hwy 281, Hidalgo County New Administration Building, Edinburg, Texas 78539**. NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY BID RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED

Attention is called to the fact that not less than, the federally determined prevailing (**Davis-Bacon and Related Acts**) wage rate, as issued and contained in the contract documents, must be paid on this project. In addition, the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, age, disability or national origin.

BIDS MAY BE HELD by the County of Hidalgo for a period not to exceed ninety (90) days from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of bidders, prior to awarding of the contract.

THE COUNTY reserves the right to refuse and reject any/all bids and to waive any/all formalities or technicalities, or to accept the bids considered the best and most advantageous to the County.

BY ORDER OF THE COMMISSIONERS COURT OF HIDALGO COUNTY, TEXAS on this the 2nd day of June, 2015.

MARTHA L. SALAZAR, CPPB
HIDALGO COUNTY PURCHASING AGENT

REPORT ROAD HAZARDS @ 1-866-HCR-SAFE OR 1-866-427-7233

**REQUEST FOR
SEALED BIDS (RFB)**

TO SUPPLY HIDALGO COUNTY with sealed bids for the following Construction Project:

Request for Sealed Bids (RFB)	2015-209-06-24-MSS	-HIDALGO COUNTY PRECINCT NO. 2- "Sioux Road Improvements (from I Road to 3,500 feet East of Raul Longoria Road)."
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PROCUREMENT PACKETS. Interested contractors may obtain bid packets at project engineer's office: **Hidalgo County Drainage District Office, Nora D Cavazos, 902 N. Doolittle Road, Edinburg, TX 78539, Ph. (956) 292-7080.**

PRE-BID CONFERENCE is scheduled for **Monday, June 15, 2015 at 3:00 P.M.** at HIDALGO COUNTY PURCHASING DEPARTMENT CONFERENCE ROOM-2802 S. Business Hwy 281, Edinburg, TX 78539

A BIDDER'S BOND from a reliable surety company licensed to operate in the State of Texas or certified Cashier's Check, payable without recourse to the County of Hidalgo, for the amount of not less than **5%** of the total bid shall accompany the bid as guaranty that, if awarded the contract, the bidder will enter into a contract with the County of Hidalgo. A Payment Bond is required in the amount of one hundred percent (100%) of the Contract Amount, if the contract exceeds \$25,000. A Performance Bond is required in the amount of one hundred percent (100%) of the Contract Amount, if the contract exceeds \$100,000.

UPON SUBMITTING SEALED BID, bidders are required to properly identify (handwritten, typed or printed) sealed envelope and/or packet with Bidders' name and address on the upper left hand corner of the sealed envelope and/or package and **Bid No. and project name** on the lower left hand corner of sealed envelope/and or packet. **OVERNIGHT MAIL MUST ALSO BE PROPERLY LABELED ON THE OUTSIDE OF EXPRESS ENVELOPE OR PACKAGE.**

The sealed bid must contain one (1) original and three (3) copies of bid and must be clearly identified and addressed for delivery to:
Martha L. Salazar, CPPB, Hidalgo County Purchasing Agent

Hidalgo County Purchasing Department

US Postal Mail/Courier Address: Hidalgo County New Administration Building, 2812 S. Business Hwy 281, Edinburg, TX 78539

Physical Location: Hidalgo County New Administration Building, 2802 S. Business Hwy. 281 (Southeast of Canton Rd & Business Hwy 281) Edinburg, TX

BIDS ACCEPTANCE: Sealed bids will be accepted until **3:00 p.m. on Wednesday, June 24, 2015** at which time they will be opened in the Hidalgo County Purchasing Department Conference Room at **Physical Location: 2802 S. Business Hwy 281, Hidalgo County New Administration Building, Edinburg, Texas 78539.** NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY BID RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED.

Attention is called to the fact that not less than, the most current federally determined prevailing (**Davis-Bacon and Related Acts**) wage rate, as issued and contained in the contract documents, must be paid on this project. In addition the successful bidder must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, age, disability or national origin.

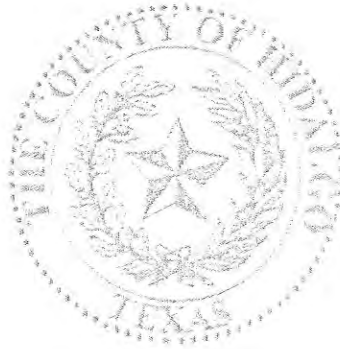
BIDS MAY BE HELD by the County of Hidalgo for a period not to exceed ninety (90) days from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of bidders, prior to awarding of the contract.

Typed-written RFI's shall be sent to Engineer. Please follow with a call to confirm receipt of RFI. RFI's will not be answered by phone. NO HAND WRITTEN RFI'S will be answered. All inquiries shall be forwarded by **June 17, 2015**. Inquiries beyond this date will not be responded. Contact project engineer for copies of Addenda.

BY ORDER OF THE COMMISSIONERS COURT OF HIDALGO COUNTY, TEXAS on this the 02th day of June 2015.

**MARTHA L. SALAZAR, CPPB
HIDALGO COUNTY PURCHASING AGENT**

REPORT ROAD HAZARDS@1-866-HCR-SAFE OR 1-866-427-7233



REQUEST FOR BIDS (RFB)

HIDALGO COUNTY PRECINCT NO. 2

**“Sioux Road Improvements
(from I Road to 3,500 feet East of Raul Longoria Road)”**

RFB NO: 2015-209-06-24-MSS

Acceptance Date: June 24, 2015

Martha L. Salazar, CPPB, Purchasing Agent
Hidalgo County Purchasing Department

Project Buyer Contact Information:

Moises Salazar, Buyer III
(956) 292-7000 Ext. 4863
moises.salazar@co.hidalgo.tx.us

LEGAL NOTICE

BID NO:2015-209-06-24-MSS

1. Sealed bids will be received for **"HIDALGO COUNTY PRECINCT NO. 2 – SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3,500 FEET EAST OF RAUL LONGORIA ROAD)"** in accordance with the specifications attached as Exhibit "A" hereto. Bids should address all specifications set forth. Bidders may suggest substitutions of features which they feel would be in the best interest of Hidalgo County ("County"). Strong rationale must be presented for any deviation from the specifications. Hidalgo County reserves the right to reject the deviation and its effect on the overall bid.
2. One (1) original and three (3) copies of all bids are required with the bidders name and return address clearly typed/printed on upper left hand corner and the proper notation clearly typed/printed on the lower left hand corner of the envelope and/or package: **"BID-2015-209-06-24-MSS - HIDALGO COUNTY PRECINCT NO. 2 - SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3,500 FEET EAST OF RAUL LONGORIA ROAD)"** and in County's Purchasing Department, physical address: 2802 S. Business Hwy 281, mailing address 2812 S. Business 281 New Administration Building,, Edinburg, Texas, **on or before 3:00 p.m., WEDNESDAY, JUNE 24, 2015.**

NO FACSIMILES OR LATE ARRIVALS WILL BE ACCEPTED. ANY RFB RECEIVED AFTER THAT TIME WILL NOT BE OPENED AND WILL BE RETURNED. OVERNIGHT MAIL MUST ALSO BE PROPERLY LABELED ON THE OUTSIDE OF EXPRESS ENVELOPE OR PACKAGE WITH REFERENCE TO "REQUEST FOR BIDS – 2015-209-06-24-MSS - HIDALGO COUNTY PRECINCT NO. 2 – SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3,500 FEET EAST OF RAUL LONGORIA ROAD)".

WRITTEN QUESTIONS WILL BE ACCEPTED. Written RFI's shall be sent to the office of project engineer: Raul Sesin, P.E., Hidalgo County Planning Department to the attention of, *Nora D Cavazos* at nora.cavazos@hcddl.org . Please call 956-292-7080 to confirm receipt RFI. RFI's will not be answered by phone. NO HAND WRITTEN RFI'S will be answered. All inquiries shall be forwarded by June 17, 2015. Inquiries beyond this date will not be responded. Contact project engineer for copies of Addenda. All bidders who paid a deposit will be required to return Addenda as part of the Construction Documents in order to receive full deposit refund.

Hidalgo County reserves the right to refuse and reject any/all RFB and to waive any/all formalities or technicalities, or to accept the RFB considered the best and most advantageous to Hidalgo County

3. Hidalgo County reserves the right to separate and accept, or eliminate any item(s) listed under this qualification that it deems necessary to accommodate budgetary and/or operational requirements. Hidalgo County also reserves the right to reject any or all qualifications submitted and further reserves the right to design the evaluation criteria to be used in selecting the lowest and best qualification for approval. Receipt of any qualification shall under no circumstances obligate Hidalgo County to accept the lowest dollar amount. The award of this contract shall be made to the responsible bidder whose qualification is determined to be the best evaluated offer resulting from negotiation,

LEGAL NOTICE

BID NO:2015-209-06-24-MSS

taking into consideration the relative importance of price and other evaluation factors as herein set forth.

4. The Bidder shall not substitute items named in the bid without the express written consent of Hidalgo County. Failure of the delivered item(s) to perform as specified, or failure to meet the stated delivery schedule shall release Hidalgo County from all obligations to the contracting party with regard to the item(s) in question. In such event, County may elect to award the contract to the next-lowest responsible bidder, or to reject all bids and re-advertise.
5. For work to be performed at a County owned or operated location, each bidder shall, in its sole discretion, visit the job site before preparing the bid and thoroughly familiarize himself/herself with existing conditions. Bidder should take field dimensions and note all circumstances which affect the dollar amount of the bid.
6. Descriptive specifications are referenced in this document to indicate the general kind and quality of equipment desired by Hidalgo County. Due to various styles and models of equipment, bidders are required to include illustrations, specifications, explanation of warranties, and service data with their bid including catalogue numbers and any necessary references.
7. No bid may be withdrawn within thirty (30) days from the scheduled time to open bids.
8. Proposed prices are to remain firm for a minimum of ninety (90) days after bid opening.
9. Any interpretations, amendments, corrections or changes to this bid document must be in a written addendum and signed by the County Judge or his designee. Addenda will be mailed to all who are known to have received a copy of the Request for Bids. Bidders shall acknowledge receipt of all addenda as a part of their bid.
10. County reserves the right to accept or reject any or all bids.
11. Costs are to be net F.O.B., County Prepaid.
12. County is exempt from Federal Excise Tax, State Tax and Local Tax. Do Not include tax in cost figure. If it is determined that tax was included in the cost figures it will not be included in the tabulation of any awards. Tax exemption certificates will be furnished upon request.
13. Funds for this procurement have been provided through the County budget for this fiscal year only. County, on an annual basis, has the right to reconsider a contract during the budget process for ensuing years if financial resources of County are insufficient to meet the liabilities of said contract. The award of a bid or contract hereunder will not be construed to create a debt of the County which is payable out of funds beyond the current fiscal year.
14. Upon award and prior to execution of a contract, Sole Proprietorships are required to

LEGAL NOTICE

BID NO:2015-209-06-24-MSS

submit a copy of their social security cards to the Hidalgo County Auditor's Office in order to establish an account with the County. All awarded vendors must submit a completed W-9 and a copy of their Federal ID Number Certificate.

15. DELIVERY INSTRUCTIONS:

- . No deliveries accepted after 3:00 P.M., Monday-Friday.
- . At least seventy two (72) hours prior notice of delivery must be given to Martha L. Salazar, Purchasing Agent before delivery will be accepted.
- . If you need additional information call the office listed below:

Hidalgo County Purchasing Department
Martha L. Salazar, Purchasing Agent
(956) 318-2626

16. BILLING AND PAYMENT INSTRUCTIONS:

- . Invoices must include:
 - a) Name and address of successful bidder
 - b) Name and address of receiving department or official
 - c) Purchase Order Number (if any)
 - d) Notation - **BID- 2015-209-06-24-MSS - HIDALGO COUNTY PRECINCT NO. 2 -"SIOUX ROAD IMPROVEMENTS (FROM I ROAD TO 3,500 EAST OF RAUL LONGORIA ROAD)"** Descriptive information as to the items or services delivered, including product code, item number, quantity, etc.
- . Discount payments will be considered when offered.
- . Contact person for Billing and Payment questions:

Carlos Jasso, Accountant IV
Hidalgo County Precinct No. 2
300 W. Hall Acres Rd.
Pharr, Texas 78577
(956) 787-1891

17. Schedule

Pre-Bid Conference,	3:00 PM	<u>June 15,</u> 2015
Bid Opening,	3:00 PM	<u>June 24,</u> 2015
Award of Contract		_____, 2015
Commence Work or Deliver Products		_____, 2015

LEGAL NOTICE

BID NO:2015-209-06-24-MSS

18. Bid or Performance Bond and Debarment Certification; Payment Under Contract:

. If the contract proposed is for the construction of public works or is for a contract for goods & services exceeding \$100,000, all bidders shall furnish a good and sufficient bid bond in the amount of five percent of the total contract price. A bid bond must be executed with a surety company authorized to do business in Texas. All bidders are also required to furnish a certification or acknowledgment stating that the contractor or vendor is free from suspension or debarment pursuant to federal regulation 45CFR Part 76.

. Together with the signing of a contract or issuance of a purchase order following the acceptance of a bid, and prior to commencement of the actual work, the bidder shall furnish a performance bond to the County for the full amount of the contract, if that contract exceeds \$100,000.

. If the contract is for \$50,000 or less, no money will be paid to the contractor until completion and acceptance of the work or the fulfillment of the purchase obligation to the County, and, if applicable, the receipt by County of satisfactory evidence that all subcontractors and material men have been paid.

. If a contract is for the construction, alteration or repair of public buildings or public works, the contractor *shall* provide a payment bond for a contract in excess of Twenty Five Thousand Dollars (\$25,000.00), as required by Tex. Govt. Code Ch. 2253.

. For requirements contracts, bond requirements are determined by applying the proposed unit price to the estimated quantities included in the specifications.

19. Ethical Standards:

. It shall be a breach of ethics to offer, give or agree to give any elected official, department head or employee, or former elected official, department head or employee, of the County, or for any elected official, department head or employee or former elected official, department head or employee of the County, to solicit, demand, accept or agree to accept from another person, entity or organization, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation or any part of a program requirement or purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefore pending before any department or agency of the County.

. It shall be a breach of ethics for any payment, gratuity or offer of employment to be made by or on behalf of a subcontractor under a contract to the

LEGAL NOTICE

BID NO:2015-209-06-24-MSS

prime contractor or higher tier subcontractor for any contract for the County, or any person associated therewith, as an inducement for the award of a subcontract or order.

. No public official shall have an interest in a contract awarded hereunder except in accordance with Tex. Loc. Govt. Code Chapter 171.

- **NOTICE:**

ALL COMMUNICATIONS BY A VENDOR TO THE COUNTY, ITS OFFICIALS, AND DEPARTMENT HEADS REGARDING THIS PROCUREMENT SHALL BE DONE THROUGH THE HIDALGO COUNTY PURCHASING DEPARTMENT.

No vendor, its representative, agent, or employee shall engage in private communication with a member of the Hidalgo County Commissioners Court or county department heads regarding any procurement of goods or services by the County from the date that the Bid, RFP, or RFQ is released. No private communication regarding the purchase shall be permitted until the procurement process is complete and a purchase order is granted or a contract is entered into. Members of the commissioners court are required to make a reasonable effort to inform themselves regarding potential procurements and have a duty to inquire of vendors, their representatives or employees, the nature of any private communication being sought prior to engaging in any communication. "Private Communication" means communication with any vendor outside of a posted meeting of the governing body, a regular meeting of a standing or appointed committee, or a negotiation with a vendor which has been specifically authorized by the governing body.

20. Disclosure of Conflict of Interest

. Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that any vendor, person, consultant or contractor considering doing business with Hidalgo County ("the County") to disclose in the Conflict of Interest Questionnaire (the "CIQ") attached as Exhibit D, the vendor, person, consultant or contractor's affiliation or business relationship that might cause a conflict of interest with the County. By law, the CIQ must be filed with the Hidalgo County Clerk's Office no later than the seventh business day after the date the person becomes aware of facts that require that statement to be filed. The disclosure requirement applies to a person or business who contracts or seeks to contract with Hidalgo County for the sale or purchase of property, goods or service. Any purchase order or contract resulting from this process shall be considered null and void if the successful bidder fails to comply with Texas Local Government Code Chapter 176. Vendors, consultants, contractors and others who desire to conduct business with Hidalgo County are encouraged to refer to Texas Local Government Code Chapter 176 for the details of this law. An offense under Texas Local Government Code Chapter 176 is a Class C Misdemeanor.

Please Submit completed CIQ forms to the Hidalgo County Clerk's Office located at 100 N. Closner, Edinburg, Texas 78539-Hidalgo County Courthouse

**COMPLETION AND SUBMISSION OF FORM CIQ IS THE SOLE
RESPONSIBILITY OF THE PROSPECTIVE BIDDER.**

21. If, during the life of any contract or bid awarded, the successful bidder's net prices generally available to other customers for items awarded herein are reduced below the contracted price, it is understood and agreed that the benefits of such reduction shall be extended to County.
22. Bids, and all goods and services provided thereunder, shall comply with all federal, state and local laws concerning this type(s) of goods and/or services
23. Minimum Standards For Responsible Prospective Bidders: A prospective bidder must affirmatively demonstrate bidder's responsibility. A prospective bidder, by submitting a bid, represents to County that it meets the following requirements:
 - **Possess and submit a Certificate of Account Status indicating bidder is in "Good Standing" with the Texas Comptroller of Public Accounts if such bidder is incorporated in the State of Texas. If the bidder is not incorporated with the Texas, the bidder must submit the appropriate evidence of filing with the Texas Secretary of State stating that the business is authorized to transact business in Texas.**
 - Possess or is able to obtain adequate financial resources as required to perform under the bid;
 - Be able to comply with the required or proposed delivery schedule;
 - Have a satisfactory record of performance;
 - Have a satisfactory record of integrity and ethics;
 - Be otherwise qualified and eligible to receive an award.
24. Successful bidder will pay or cause to be paid, without cost or expenses to County, all FICA, FUTA/SUTA and Federal Income Withholding Taxes of all employees, and all wages and benefits as required by Federal or State law. Successful bidder's officers, agents and/or employees will not be entitled to any benefits of an employee or elected official of County, including, but not limited to, benefits associated with County's civil service system.
25. Any contract award to a successful bidder will be in effect until (a) the contract expires, (b) delivery and acceptance of products, and/or performance of services ordered, or (c) terminated by County with thirty day's written notice prior to cancellation.
26. County reserves the right to enforce performance of any contract awarded hereunder in any manner prescribed by law or deemed to be in the best interest of the County in the event of breach or default by successful bidder; County reserves the right to terminate any contract immediately in the event a successful bidder fails to:
 - A. Meet schedules;
 - B. Pay any required fees or taxes; or
 - C. Otherwise perform in accordance with the specifications.

27. Successful bidder shall defend, indemnify and save harmless County and all its elected officials, officers, agents and employees from all suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the successful bidder, or of any agent, employee, subcontractor or supplier of successful bidder in the execution of, or performance under, any contract which may result from bid award or which arises from any event or casualty happening on or within County premises themselves or happening upon or in any halls, elevators, entrances, stairways or approaches of or to such County facilities. Successful bidder shall pay any judgment with costs which may be obtained against County growing out of such injury or damages, and shall, upon request, provide a defense to County by counsel reasonably acceptable to County. Successful bidder's indemnity hereunder shall include, but is not limited to, claims relating to patent, copyright or trademark infringement, and the like, arising out of the goods and services provided by successful bidder.
28. Successful bidder shall warrant that all items/services shall conform with the specifications and/or all warranties provided under the Uniform Commercial Code and be free from all defects in material, workmanship and the like. Items supplied under a contract pursuant to this Request for Bids shall be subject to County's approval. Items found to be defective or not meeting specifications shall be replaced by successful bidder within two business days at no expense to County. Items not picked up within one (1) week after notification shall be deemed a donation to County and may be used or disposed of at County's discretion and without waiver of any other rights of County as to the item's nonconformity.
29. *Vendors hereby assigns to purchaser any and all claims for overcharges associated with this contract which arise under the antitrust laws of the United States, 15 USCA, Section 1 et. seq., and which arise under the antitrust laws of the State of Texas, Bus. & Com. Code, Section 15.01, et. seq.*
30. This document and any disputes arising hereunder shall be governed and construed according to the laws of the State of Texas, and will be performable exclusively in Hidalgo County, Texas.
31. The successful bidder shall not assign, sell, transfer or convey its rights under any awarded contract, in whole or in part, without the prior written consent of County.

BIDDERS ACKNOWLEDGEMENT
Bid
for
HIDALGO COUNTY PRECINCT NO. 2

"SIOUX ROAD IMPROVEMENTS
(from I Road to 3,500 feet East of Raul Longoria Road)"
BID NO.: 2015-209-06-24-MSS

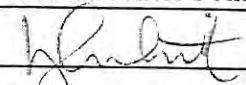
To: Martha L. Salazar, CPPB, Purchasing Agent
Hidalgo County Purchasing Department
2802 S. Bus. Hwy. 281
Edinburg, Texas 78539

In accordance with the Specifications, and subject to all laws and regulations of the United States and state and local laws, the undersigned bidder proposes and commits to furnish all labor, equipment, material, software and services as set forth in the documents hereinbefore mentioned. The undersigned bidder further agrees, upon acceptance of its bid, to execute a contract and/or Purchase Order issued by Hidalgo County for performing and completing the work described in the Specifications within the time stated and for the prices proposed in the documents attached hereto and made a part hereof.

Bidder acknowledges receipt of all of the pages of the documents referenced in the Invitation to Bid Table of Contents presented in connection with this procurement. Bidder understands that Hidalgo County reserves the right to reject any or all bids and further reserves the right to design the evaluation criteria to be used in selecting the lowest and best bid.

Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids, as contained in the Specifications.

Respectfully submitted,

Bidder: Texas Cordia Construction, LLC
Address: 3149-A Center Pointe Drive, Edinburg, Texas 78539
By: 
Printed Name: Yara M. Crobitt
Title: President

(THIS PAGE MUST BE SUBMITTED WITH BID PACKET)

STATEMENT OF CREDENTIALS

1. **GENERAL:** In order to assist the Owner in determining the ability of each Bidder to properly fulfill the requirements of this proposed contract, the Bidder will complete the following items. All questions must be answered and the data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he/she desires.

Name of Bidder: Texas Cordia Construction, LLC

Address: 3149-A Center Pointe Drive, Edinburg, Texas 78539

Date Organized: June 2011 Date Incorporated: June 2011

Office Number: (956) 627-6181 Fax Number: (956) 386-0289

Number of years in business under present name: 4 years

Type of work performed by your company: General Roadway Construction, Bridge Construction, Embankment, Caliche, Excavation, Miscellaneous Concrete

Have you ever failed to complete any work awarded to you? No

Have you ever defaulted on a contract? No

2. **EXPERIENCE:** The Bidder will give below a list of similar projects which he/she has completed within the last five (5) years.

1. Owner: Hidalgo County Drainage District No. 1

Address: 902 N. Doolittle Road, Edinburg, TX 78539

Ph/Fx Number: (956) 292-7080 Email: jaime.salazar@hcdd1.org

Scope of Work Description: Edinburg Drain Stub-Out to Main Drain Control Structure Drainage Impr

Date Completed: 04/06/15 Total Cost: \$212,265.00

2. Owner: Hidalgo County Precinct #2

Address: 300 West Hall Acres, Suite G, Pharr, Tx 78589

Ph/Fx Number: (956) 787-1891 Ext. 2015 Email: erika.zamora@co.hidalgo.tx.us

Scope of Work Description: Roadrunner Subdivision Paving & Drainage Improvements

Date Completed: 03/19/15 Total Cost: \$395,485.00

3. Owner: Hidalgo County Urban County Program

Address: 427 E. Duranta Avenue, Suite 107, Alamo, Texas 78516

Ph/Fx Number: (956) 787-8127 ext. 2237 Email: guadalupe.garcia@co.hidalgo.tx.us

Scope of Work Description: J.O. Subdivision- Roadway Reconstruction and Drainage Improvements

Date Completed: 01/15/14 Total Cost: \$110,665.20

4. Owner: City of McAllen

Address: PO Box 220, McAllen, TX 78505-0220

Ph/Fx Number: (956) 681-1180 Email: rcanterbury@mcallen.net

Scope of Work Description: Quince & 27th Drainage Improvements

Date Completed: 11/21/14 Total Cost: \$837,544.60

5. Owner: Hidalgo County Precinct No.1

Address: 1902 Joe Stephens Ave. Suite 101, Weslaco, Texas 78599

Ph/Fx Number: P:(956)968-8733/F:(956)973-7804 Email: marcie.jackson@co.hidalgo.tx.us

Scope of Work Description: Roadway Reconstruction and Drainage Improvements for Dimas 2
Subdivision

Date Completed: 11/26/13 Total Cost: \$233,000.00

3. **CONTRACTS ON HAND:** The Bidder shall provide below a list of any contracts/projects he/she currently has on hand:

Border Ave. Road and Waterline Improvments (In Progress)

Street and Drainage Improvements Project, Colonia Sebastian (West) - (In Progress)

TxDOT RMC-627175001 Hidalgo - (Pending Notice to Proceed)

4. **SUBCONTRACTORS:** List any subcontractors you propose to use on the Hidalgo County's project that will comprise at least 20% of the total project cost. Use additional page if necessary. This information is considered preliminary and may be revised prior if bid is awarded and re-submitted during the pre-construction phase. However, it is expressly understood that the use of any subcontractor other than those listed with bid shall require written approval from Hidalgo County.

Failure to submit the information as required may result in a disqualification of your bid.

None

6. **PERFORMANCE OF WORK BY BIDDER:** Except as otherwise provided, the bidder shall perform no less than eighty percent (80%) of the work with his own organization, only twenty percent (20%) of the work may be subcontracted.

The organization of the specifications into divisions, sections, articles, etc., and the arrangement and titles of project drawings shall not control the Bidder in dividing the work among subcontractors or in establishing the extent of work to be performed by any trade.

Awarded bidder shall assign a project superintendent who is directly employed by the Bidder, that superintendent will be required to be on the job on a daily basis. No subcontractors will be allowed to act as project superintendents at any point during the construction of said project.

Bidder shall have a significant business presence with the Rio Grande Valley Area, the business must be headquartered in either Hidalgo, Cameron, or Starr County or a local office must be located in either of the three counties (Hidalgo, Cameron, Starr) with at least thirty percent (30%) of the total company workforce employed at the local office. County reserves the right to request payrolls and any necessary documentation to confirm that the local office meets these requirements.

Bidders shall carefully examine the plans, specifications and other documents, visit the site of the work, and fully inform themselves as to all conditions and matters which can affect the work or cost thereof. Should the bidder find discrepancies in, or omissions from the plans, specifications or other documents, or should he/she be in doubt as their meaning, he/she should at once notify the Engineer and obtain clarification by addendum prior to submitting any bid.

Bidder hereby certifies that said company carried liability coverage and workers compensation insurance coverage that meets the requirements set forth in this Request for Bids/Proposals when performing work on this project for Hidalgo County.

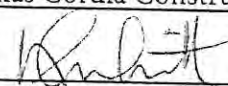
Furthermore, bidder certifies that any subcontractor on the project shall provide the said company with a certificate relating that all employees of the subcontractor also are provided with workers' compensation insurance coverage. Bidder will provide copies of all of these certificates to Hidalgo County during the course of the project for all subcontractors working on the project.

All subcontractors must comply with federally determined prevailing Davis-Bacon and Related Acts wage rate.

Hidalgo County encourages the hiring of minority women subcontractors and/or suppliers whenever and wherever feasible.

The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the owner in verification of the recitals comprising this Statement of Credentials.

Executed this 1st day of July, 2015.

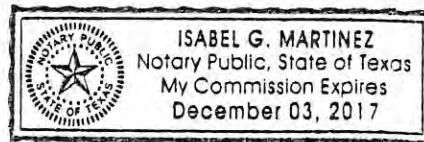
Texas Cordia Construction, LLC
By 
Yara M. Corbitt
Title President

Subscribed and sworn to me this 1st day of July, 2015.

By: [Signature]

Notary Public in and for Hidalgo County, Texas

My commission expires 12/3/17



INFORMATION FOR BIDDERS

1. Receipt and Opening of Bids

The Hidalgo County Pct # 2 (herein called the "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Hidalgo County Purchasing department until **Wednesday, JUNE 24, 2015 at 3:00 p.m.** and then at said office publicly open and read aloud. The envelopes containing the bids must be sealed, addressed to Martha L. Salazar, Hidalgo County Purchasing Agent at 2812 S Business 281, Edinburg, Texas 78539 and designated as Bid for Hidalgo County Pct # 2.

The owner may consider informal any bid not prepared and submitted in accordance with provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof.

2. Preparation of Bid

Each bid must be submitted on the prescribed forms and Certification by Bidder and/or contractor, concerning Labor Standards and Prevailing Wage Requirements. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing Certificates must be fully completed and executed when submitted.

Each bid must be submitted in a sealed envelopes bearing on the outside the name of the bidder, his address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another enveloped addressed as specified in the bid form.

3. Subcontracts

The bidder is specifically advised that any person, firm, or other party to whom is proposed to ward a subcontract under this contract –

- a** Must be acceptable to the Owner after verification of the current eligibility status, and,
- b** Approval of the proposed subcontract award cannot be given by the Owner unless and until the proposed subcontractor has submitted the Certification and/or other evidence showing that it has fully complied with any reporting requirements to which it is or was subject. Although the bidder is not required to attach such Certification by proposed subcontractors to his bid, the bidder is here advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

4. Telegraphic Modification

Any bidder may modify his bid by telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the Owner prior to the

closing time, and provided further, the Owner is satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. The telegraphic communication should not reveal the bid price but should provide the additional or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic modification.

5. Method of Bidding

The Owner invites the following bid(s):

Project Name: **Hidalgo County Precinct No. 2 – Sioux Road Improvements (from I Road to 3,500 feet East of Raul Longoria Road).**

Project Number: **2015-209-06-24-MSS**

Qualifications of Bidder

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 contract to complete the work contemplated therein. Conditional bids will not be accepted.

6. Bid Security

Each bid must be accompanied by certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 5% of the bid. Such checks or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining checks, or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

7. Liquidated Damages for Failure to enter into Contract

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

8. Time of Completion and Liquidated Damages

Bidder must agree to commence on or before a date to be specified in a Written "Notice to Proceed" of the Owner and to fully complete the project within **100 consecutive calendar days** thereafter. Bidder must agree also to pay as liquidated damages, the sum of **\$ 250.00** for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

9. Condition of Work

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with work of any other contractor.

10. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing via e-mail to moises.salazar@co.hidalgo.tx.us or via fax to (956) 292-7612 addressed to Martha L. Salazar, Purchasing Agent, 2802 S. Business Hwy. 281, Edinburg, TX 78539 attn: Moises Salazar, Buyer and to be given consideration must be received at least five days prior to the date fixed for the opening of bids. Any all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will mailed by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

11. Security for Faithful Performance

Simultaneously with his delivery of the executed contract; the contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

12. Power of Attorney

Attorney-in-fact who sign bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

13. Notice of Special Conditions

Attention is particularly called to those parts of the contract documents and specifications which deal with the following;

- a Inspection and testing of materials
- b Insurance requirements
- c Wage rates
- d States allowances

14. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

15. Method of Award – Lowest Qualified Bidder

If at the time this contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract the contract will be awarded on the base bid only. If such bid exceeds such amount, the Owner may reject all bids or may award the contract on the base bid combined with such deductible alternates applied in numerical order in which they are listed in the form of Bid, as produces a net amount which is within the available funds.

16. Obligation of Bidder

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

Supplement to Form HUD-4238-B®
INFORMATION FOR BIDDERS

17. SAFETY STANDARDS AND ACCIDENTS PREVENTION

With respect to all work performed under this contract, the contractor shall:

- 1 Comply with the safety standards provision of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associates General Contractors or America, the requirements of the Occupational Safety and Health Act of 1970 (Public Laws 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, No 75, Saturday, April 17, 1971.
- 2 Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
- 3 Maintain at his office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employee), whom may be injured on the job site. In no case shall employee be permitted to work at a job site before the employer has made a standing arrangement for removal of injured person to a hospital or a doctor's care.

SPECIAL PROVISIONS

1. The County of Hidalgo reserves the right to partially award the contract in order to meet the budget.
2. It shall be the Contractor's responsibility to locate underground utilities, whether shown or not shown on the drawings, sufficiently in advance of operations to preclude damage to same.
3. Water, sewer, or other utility serves shall not be interrupted. Any damages to existing utilities will be Contractor's responsibility.
4. In the event of damage to underground facilities, whether shown or not shown in the drawings, the Contractor shall make the necessary repairs to place the facilities back in service at no increase in the Contractors price and all such repairs shall conform to the requirements of the company or agency servicing the facility
5. The Contractor shall exercise extra care to prevent damage to all other structures in the area including, fence, roads, pipelines, utilities, etc., whether publicly or privately owned.
6. Until acceptance by the Engineer of any part or all of the construction, as provided for in the plans and these specifications, it shall be under the charge and care of the contractor, and he shall take every necessary precaution against injury or damage to any part of the work. The Contractor shall rebuild, repair, restore and make good, at his own expense, all injuries or damage to any portion of the work before its completion and acceptance.
7. In case the Contractor deems extra compensation is due him for proposed work not covered in the contract, the Contractor shall notify the Engineer in writing of his claim for such extra compensation before he begins the work. Failure on the part of the Contractor to give such notification shall constitute a waiver of claim for such extra compensation. The Contractor shall not proceed until a written Change Order is approved by the Owner, Engineer, and Contractor.
8. Prospective bidders should make a careful examination of the projects sites.
9. Contractor shall review his overall method and schedule of construction with the County Prior to construction for proper coordination of inspection.
10. No open trenches or excavation shall be left open overnight.

HIDALGO COUNTY PRECINCT No. 2
PROJECT No. 2015-209-J6-24-MSS
SIOUX ROAD IMPROVEMENTS (FROM "I" RD TO 3,500 FT EAST
ESTIMATOR: RAUL E. SESIN PE., CFM DATE:

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	34.33	STA	PREPARING ROW	THREE HUNDRED	\$300.50	\$6,271.44
				FIFTY		
				Dollars		
				Cents		

BASE BID						
Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	22,125	SY	1 1/2" HMAc TYPE "D"	ten	\$10.00	\$221,250.00
2	21,682	SY	PRIME COAT (MC-30) (0.2 GAL/SY)	zero		
3	443	SY	TACK COAT (SS-1) (0.14 GAL/SY)	two	\$2.00	\$43,364.00
4	21,682	SY	SCARIFY, PROCESS, PREPARE & STABILIZE (2.5% LIME) EXISTING ROAD SECTION TO ACHIEVE PROPOSED BASE	three	\$3.00	\$1,329.00
5	1	LS	EROSION AND SEDIMENT CONTROL STRUCTURAL PRACTICES TO COMPLY WITH COUNTY AND TCEQ REQUIREMENTS FOR STORM WATER POLLUTION PREVENTION	zero	\$3.00	\$65,046.00
6	0.355	LF	REGRADE ROADSIDE DITCH	four thousand nine hundred sixty-five	\$4,965.00	\$4,965.00
7	419	LF	REMOVE AND REPLACE TYPE "A" CURB & GUTTER	zero	\$1.00	\$6,355.00
8	2	EA	TYPE "C-C" INLET WITH CONCRETE APRON	twenty-three	\$23.00	\$9,637.00
9	24	LF	18" RUBBER GASKET RCP CL III STORM DRAIN PIPE	two thousand eight hundred eighty-five	\$2,885.00	\$5,770.00
10	8	LF	REMOVE EXISTING 12" RCP PIPE	zero	\$60.00	\$1,440.00
11	24	LF	STORM TRENCH BEDDING & BACKFILL	seventy-nine	\$79.00	\$632.00
12	24	LF	TRENCH PROTECTION	zero	\$23.00	\$552.00
13	1	EA	SAFETY END TREATMENT FOR 18" PIPE	zero	\$52.00	\$1,135.00
14	1	LS	TRAFFIC CONTROL	one thousand one hundred thirty-five	\$1,135.00	\$1,135.00
15	1	LS	PAVEMENT MARKINGS	four thousand seven hundred forty-four	\$4,744.00	\$4,744.00
16	3	EA	CHEVRON SIGN W/1-8L (18" x 24")	nine thousand four hundred seventy	\$9,470.00	\$9,470.00
					zero	\$550.00
					BID IN FIGURES	
					\$	\$378,587.00

Witnessed



Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	296	LF	REMOVE & REPLACE EXISTING METAL BEAM GUARD FENCE	SEVENTY-TWO ZERO	\$72.00	\$21,312.00
ADD ALTERNATE #1 BID PRICE IN WORDS				BID IN FIGURES		
Twenty-one thousand three hundred twelve zero				\$ 21,312.00		

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	21,682	SY	BIAXIAL GEOGRID 1200	three fifty	3.50	\$75,887.00
ADD ALTERNATE #2 BID PRICE IN WORDS				BID IN FIGURES		
seventy-five thousand eight hundred eighty-seven zero				\$ 75,887.00		

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	21,682	SY	CEMENT STABILIZATION (2%)	one SEVENTY-NINE	\$1.79	\$38,810.78
ADD ALTERNATE #3 BID PRICE IN WORDS				BID IN FIGURES		
seventy-five thousand eight hundred eighty-seven zero				\$ 38,810.78		

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	21,682	SY	CEMENT STABILIZATION (2%)	one SEVENTY-NINE	\$1.79	\$38,810.78
ADD ALTERNATE #3 BID PRICE IN WORDS				BID IN FIGURES		
seventy-five thousand eight hundred eighty-seven zero				\$ 38,810.78		

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	21,682	SY	CEMENT STABILIZATION (2%)	one SEVENTY-NINE	\$1.79	\$38,810.78
ADD ALTERNATE #3 BID PRICE IN WORDS				BID IN FIGURES		
seventy-five thousand eight hundred eighty-seven zero				\$ 38,810.78		

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	21,682	SY	CEMENT STABILIZATION (2%)	one SEVENTY-NINE	\$1.79	\$38,810.78
ADD ALTERNATE #3 BID PRICE IN WORDS				BID IN FIGURES		
seventy-five thousand eight hundred eighty-seven zero				\$ 38,810.78		

Item No.	Estimated Quantity	Unit	Item Description	Unit Bid Price In Words	Unit Price In Figures	Total Extension In Figures
1	21,682	SY	CEMENT STABILIZATION (2%)	one SEVENTY-NINE	\$1.79	\$38,810.78
ADD ALTERNATE #3 BID PRICE IN WORDS				BID IN FIGURES		
seventy-five thousand eight hundred eighty-seven zero				\$ 38,810.78		

LF - LINEAR FEET
EA - EACH
SY - SQUARE YARD(S)
LS - LUMP SUM

COMPANY: Texas Cordia Construction, LLC

PHONE NUMBER: (956) 627-6181

AUTHORIZED SIGNATURE: 

PRINTED NAME: Yara M. Corbitt

TITLE: President

OPENED

3:05 PM 7-1-15

Witnessed

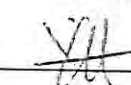


CONTINUATION OF BID PAGE

The undersigned **Bidder** agrees to commence work after written notice to commence work and to substantially complete the work on which he has bid 100 calendar days.

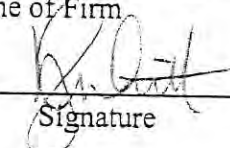
Enclosed with this Proposal is a Cashier's check or Certified Check for _____ Dollars (_____) or a Bid Bond in the Sum of 5% GAB _____ Dollars (5% GAB), which is agreed shall be collected and retained by the **Owner** under the conditions hereof within ten (10) days after the date this proposals is accepted; then otherwise the said bond or check shall be returned to the undersigned upon demand.

Receipts of the following Addenda on these dates shown is acknowledged:

	DATE	ACKNOWLEDGE		DATE	ACKNOWLEDGE
#1	<u>06/16/15</u>	<u></u>	#2	<u>06/29/15</u>	<u></u>
#3	_____	_____	#4	_____	_____

Respectfully submitted,

Texas Cordia Construction, LLC
Name of Firm

By:  07/01/15
Signature Date

President
Title

3149-A Center Pointe Drive
Address

Edinburg, Texas 78539

(956) 627-6181
Telephone Number

**THIS PROPOSAL MUST BE
SIGNED BY AN OFFICER OF
REPRESENTATIVE DULY
AUTHORIZED BY THE BIDDER.**

(Seal, if Bid is by a Corporation)

Attest: _____

BID BONDKNOW ALL BY THESE PRESENTS, That we, Texas Cordia Construction, LLC(hereinafter called the Principal), as Principal, and
of Edinburg, TexasThe Guarantee Company of North America USA (hereinafter called the Surety),as Surety, are held and firmly bound unto Hidalgo County(hereinafter called the Obligee) in the penal sum of Five Percent of the Greatest Amount Bid_____ Dollars (\$ 5% G.A.B.)
for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That WHEREAS, the Principal has submitted or is about to submit a proposal to the Obligee on a contract for

RFB No. 2015-209-06-24-MSS Sioux Road Improvements (from I Road to 3,500 Feet East of Raul Longoria Road)

NOW, THEREFORE, If the said Contract be timely awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing, and give bond, if bond is required, with surety acceptable to the Obligee for the faithful performance of the said Contract, then this obligation shall be void; otherwise to remain in full force and effect.

Signed and sealed this 24th day of June, 2015.Texas Cordia Construction, LLC

Principal

By: [Signature]VP
TitleThe Guarantee Company of North America USABy [Signature]

Justin McQuain, Attorney-in-Fact

[Signature]
Witness



The Guarantee Company of North America USA
Southfield, Michigan

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS: That THE GUARANTEE COMPANY OF NORTH AMERICA USA, a corporation organized and existing under the laws of the State of Michigan, having its principal office in Southfield, Michigan, does hereby constitute and appoint

Scott D. Chapman, Kevin McQuain, Justin McQuain, Rosalyn D. Hassell, Maxine Elaine Lewis, Jeanne M. Buchan, Keith M. Illa, Misty Witt, Cheryl R. Colson
CHS Insurance Services, LLC

its true and lawful attorney(s)-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise.

The execution of such instrument(s) in pursuance of these presents, shall be as binding upon THE GUARANTEE COMPANY OF NORTH AMERICA USA as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at the principal office.

The Power of Attorney is executed and may be certified so, and may be revoked, pursuant to and by authority of Article IX, Section 9.03 of the By-Laws adopted by the Board of Directors of THE GUARANTEE COMPANY OF NORTH AMERICA USA at a meeting held on the 31st day of December, 2003. The President, or any Vice President, acting with any Secretary or Assistant Secretary, shall have power and authority:

1. To appoint Attorney(s)-in-fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof; and
2. To revoke, at any time, any such Attorney-in-fact and revoke the authority given, except as provided below
3. In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.
4. In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner – Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

Further, this Power of Attorney is signed and sealed by facsimile pursuant to resolution of the Board of Directors of the Company adopted at a meeting duly called and held on the 6th day of December 2011, of which the following is a true excerpt:

RESOLVED that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, contracts of indemnity and other writings obligatory in the nature thereof, and such signature and seal when so used shall have the same force and effect as though manually affixed.



IN WITNESS WHEREOF, THE GUARANTEE COMPANY OF NORTH AMERICA USA has caused this instrument to be signed and its corporate seal to be affixed by its authorized officer, this 23rd day of February, 2012.

THE GUARANTEE COMPANY OF NORTH AMERICA USA

STATE OF MICHIGAN
County of Oakland

Stephen C. Ruschak, President & Chief Operating Officer

Randall Musselman, Secretary

On this 23rd day of February, 2012 before me came the individuals who executed the preceding instrument, to me personally known, and being by me duly sworn, said that each is the herein described and authorized officer of The Guarantee Company of North America USA; that the seal affixed to said instrument is the Corporate Seal of said Company; that the Corporate Seal and each signature were duly affixed by order of the Board of Directors of



Cynthia A. Takai
Notary Public, State of Michigan
County of Oakland
My Commission Expires February 27, 2018
Acting in Oakland County

IN WITNESS WHEREOF, I have hereunto set my hand at The Guarantee Company of North America USA offices the day and year above written.

I, Randall Musselman, Secretary of THE GUARANTEE COMPANY OF NORTH AMERICA USA, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by THE GUARANTEE COMPANY OF NORTH AMERICA USA, which is still in full force and effect.



IN WITNESS WHEREOF, I have thereunto set my hand and attached the seal of said Company this 24th day of June

2015

Randall Musselman, Secretary



The Guarantee Company of North America USA
One Towne Square, Suite 1470
Southfield, Michigan 48076
Phone: 248-281-0281 Fax: 248-750-0431

Texas Consumer Notice

1 IMPORTANT NOTICE

To obtain information or make a complaint:

2 You may contact your **agent** at:

3 You may call The Guarantee Company of North America USA's toll-free telephone number for information or to make a complaint at: 1-866-328-0567

4 You may also write to The Guarantee Company of North America USA at:

One Towne Square, Suite 1470

Southfield, Michigan 48076

Web: www.gcna.com

E-mail: Info@gcna.com

Fax: 248-750-0431

5 You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at: 1-800-252-3439

6 You may write the Texas Department of Insurance:

P.O. Box 149104

Austin, TX 78714-91 04

Fax: (512) 475-1771

Web: <http://www.tdi.state.tx.us>

E-mail: ConsumerProtection@tdi.state.tx.us

7 PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should contact the (agent) (company) (agent or the company) first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

8 ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener informacion o para someter una q ueja:

Puede comunicarse con su **agent** al

Usted puede llamar al numero de telefono gratis de The Guarantee Company of North America USA's para informacion o para someter una queja al: 1-866-328-0567

Usted tambien puede escribir a to The Guarantee Company of North America USA:

One Towne Square, Suite 1470

Southfield, Michigan 48076

Web: www.gcna.com

E-mail: Info@gcna.com

Fax: 248-750-0431

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al: 1 - 800-252-3439

Puede escribir al Departamento de Seguros de Texas:

P.O. Box 149104

Austin, TX 78714-91 04

Fax: (512) 475-1771

Web: <http://www.tdi.state.tx.us>

E-mail: ConsumerProtection@tdi.state.tx.us

DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el (agente) (la compania) (agente o la compania) primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TD I).

UNA ESTE AVISO A SU POLIZA: Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adj unto.

THE STATE OF TEXAS §
 §
COUNTY OF HIDALGO §

CONSTRUCTION CONTRACT
C-15-209-07-21

This Agreement, entered into this 21st day of July, 2015 by and between **Hidalgo County** (hereinafter called the "OWNER," and, Texas Cordia Construction, LLC (a Texas corporation), of County of Hidalgo, and State of Texas, hereinafter called "CONTRACTOR".

WITNESSETH

That for and in consideration of the payments and agreement hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

**Hidalgo County Precinct No. 2 - "Sioux Road Improvements
(from I Road to 3,500 feet East of Raul Longoria Road)"**

Hereinafter called the project, for the sum of **Three Hundred Seventy Eight Thousand Five Hundred Eighty Seven Dollars (\$378,587.00)** and all extra work in connection therewith, under the terms and stated in the General and Special Conditions of the Contract; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the Technical Specifications, the General Conditions and Special Conditions printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by County of Hidalgo, Raul E. Sesin, P.E., entitled the Engineer, and as enumerated in Paragraph 1.01.A.12 of the General Conditions, all of which are made a part hereof and collectively evidence and constitute the contract.

The CONTRACTOR hereby agrees to commence work under this contract on or after a date to be specified in written "Notice to Proceed" of the OWNER and to fully complete the project within **100 consecutive calendar days thereafter**. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of \$ **250.00** for each consecutive calendar day thereafter.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in the General Conditions of the contract, and to make payments on account thereof as provided in Paragraphs 14.02.C and 14.07.C of the General Conditions.

IN WITNESS WHEREOF, the parties to these present have executed this contract in five (5) counterparts, each of which shall be deemed an original, in year and day first above mentioned.

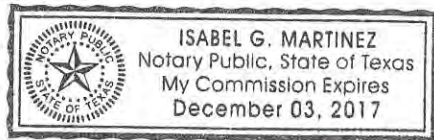
APPROVED BY COMMISSIONERS COURT ON: _____, 2015.

CONTRACTOR: Texas Cordia Construction, LLC
Print Name & Title: Yara M. Corbitt, President
Name of Firm: Texas Cordia Construction, LLC
Address: 3149-A Center Pointe Drive
Edinburg, TX 78539
Fed I.D. #/SS #: 45-2590990

STATE OF TEXAS

COUNTY OF HIDALGO

This instrument was acknowledged before me on this the 21st day of July,
2015, by Yara M. Corbitt, President Of and on behalf of Texas Cordia Construction, LLC
(Title) (A corporation)



[Signature]
Notary Public-Signature

APPROVED AS TO FORM:
Atlas & Hall, L.L.P.

BY: _____

ATTEST:

COUNTY OF HIDALGO:

Arturo Guajardo, Jr., County Clerk

Ramon Garcia, County Judge

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of Texas.....)

County of Hidalgo.....)

Yara M. Corbitt, being first duly sworn,
deposes and says that:

(1) He is President, of
Texas Cordia Construction, LLC, the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of this attached bid and of all pertinent circumstances respecting such bid;

(3) Such bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representative:, employees or parties in interest, including this affiant, has in any way colluded, conspired a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication of conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element 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 Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

President

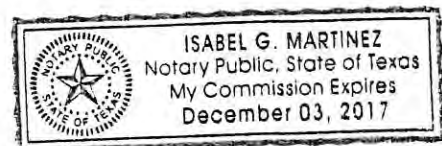
(Title)

Subscribed and sworn to before me on this 1st

Day of July, 2015

Administrative Assistant

Title



PAYMENT BOND

(To be used in Texas under V.A.T.S. 5160)

THE STATE OF TexasCOUNTY OF Hidalgo

KNOW ALL MEN BY THESE PRESENTS: That we (1) Texas Cordia Construction, LLC,
 a (2) Limited Liability Company, hereinafter called
 Principal and (3) The Guarantee Company of North America USA of
Michigan, hereinafter called the
 Surety, are held and firmly bound unto (4) Hidalgo County of
Texas, hereinafter called Owner, and unto all persons, firms, and corporations
 who may furnish materials, for, or perform labor upon the building or improvements hereinafter
 referred to the penal sum of ^{Three Hundred Seventy Eight Thousand} ~~Five Hundred Eighty Seven & No/100~~ 378,587.00 Dollars in lawful money
 of the United States to be paid in (5) Hidalgo County, Texas, for the payment of which
 sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and
 successors, jointly and severally, firmly be these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain
 contract with (6) Hidalgo County, the Owner, dated the 21st day of July, A.D. 2015,
 a copy of which is hereto attached and made a part hereof for the construction of:

HIDALGO COUNTY PRECINCT 2
"SIOUX ROAD IMPROVEMENTS
(from I Road to 3,500 feet East of Raul Longoria Road)"

These footnotes refer to numbers in body of contract above:

Date of Bond must not be prior to date of contract

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership or an Individual, as case may be
- (3) Correct name of Surety
- (4) Correct name of Owner
- (5) County and State
- (6) Owner

NOW, THEREFORE, the condition of this obligation is such that, if the -1- Principal shall promptly make payment to all claimants as defined in Article 5160 Revised Civil Statutes of Texas, 1925, as amended by House Bill 344, Act 56th Legislature, Regular Session, 1925 effective April 27, 1959, supplying labor and materials in the prosecution of the work provided for in said Contract, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

This bond is made and entered into solely for the prosecution of all claimants supplying labor and material in the prosecution of the work provided for in said Contract, and all such claimants shall have a direct right of action under the bond as provided in Article 5160, Revised Civil Statutes 1925, as amended by House Bill 344, Acts 56th Legislature, Regular Session, 1959
 PROVIDED FURTHER, that if any legal action be filed upon this bond, venue shall lie in Hidalgo County, State of Texas, and 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 specification accompanying the same shall in any way affect its

IN WITNESS WHEREOF, this instrument is executed in six counterparts, each one of which shall be deemed an original, this the 21st day of July, A.D., 2015.

ATTEST:

(Principal) Secretary

(Seal)

Witness as to Principal

3149-A Center Pointe Dr., Edinburg, TX 78539
(Address)

Principal Texas Cordia Construction, LLC

By _____

(Address) 3149-A Center Pointe Dr., Edinburg, TX 78539

Telephone Number: 956-627-6181

The Guarantee Company of North America USA
Surety

ATTEST:

(Surety) Secretary Stacy Owens

(Seal)

Witness as to Surety Kimberly Stanley

25025 I-45 N., Ste. 525, The Woodlands, TX 77380
(Address)

By_

Justin McQuain, Attorney-in-Fact

(Address) 350 Glenborough Dr., Ste. 138, Houston, TX 77067

NOTE: If Contractor is partnership all Partners should execute bond

Telephone Number: 832-446-3350



The Guarantee Company of North America USA
Southfield, Michigan

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS: That **THE GUARANTEE COMPANY OF NORTH AMERICA USA**, a corporation organized and existing under the laws of the State of Michigan, having its principal office in Southfield, Michigan, does hereby constitute and appoint

Scott D. Chapman, Kevin McQuain, Justin McQuain, Rosalyn D. Hassell, Maxine Elaine Lewis, Jeanne M. Buchan, Keith M. Illa, Misty Witt,
Cheryl R. Colson
CHS Insurance Services, LLC

its true and lawful attorney(s)-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise.

The execution of such instrument(s) in pursuance of these presents, shall be as binding upon **THE GUARANTEE COMPANY OF NORTH AMERICA USA** as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at the principal office.

The Power of Attorney is executed and may be certified so, and may be revoked, pursuant to and by authority of Article IX, Section 9.03 of the By-Laws adopted by the Board of Directors of **THE GUARANTEE COMPANY OF NORTH AMERICA USA** at a meeting held on the 31st day of December, 2003. The President, or any Vice President, acting with any Secretary or Assistant Secretary, shall have power and authority:

1. To appoint Attorney(s)-in-fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof; and
2. To revoke, at any time, any such Attorney-in-fact and revoke the authority given, except as provided below
3. In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.
4. In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner – Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

Further, this Power of Attorney is signed and sealed by facsimile pursuant to resolution of the Board of Directors of the Company adopted at a meeting duly called and held on the 6th day of December 2011, of which the following is a true excerpt:

RESOLVED that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, contracts of indemnity and other writings obligatory in the nature thereof, and such signature and seal when so used shall have the same force and effect as though manually affixed.



IN WITNESS WHEREOF, **THE GUARANTEE COMPANY OF NORTH AMERICA USA** has caused this instrument to be signed and its corporate seal to be affixed by its authorized officer, this 23rd day of February, 2012.

THE GUARANTEE COMPANY OF NORTH AMERICA USA

Stephen C. Ruschak

Randall Musselman

STATE OF MICHIGAN
County of Oakland

Stephen C. Ruschak, President & Chief Operating Officer

Randall Musselman, Secretary

On this 23rd day of February, 2012 before me came the individuals who executed the preceding instrument, to me personally known, and being by me duly sworn, said that each is the herein described and authorized officer of The Guarantee Company of North America USA; that the seal affixed to said instrument is the Corporate Seal of said Company; that the Corporate Seal and each signature were duly affixed by order of the Board of Directors of



Cynthia A. Takai
Notary Public, State of Michigan
County of Oakland
My Commission Expires February 27, 2018
Acting in Oakland County

IN WITNESS WHEREOF, I have hereunto set my hand at The Guarantee Company of North America USA offices the day and year above written.

Cynthia A. Takai

I, Randall Musselman, Secretary of **THE GUARANTEE COMPANY OF NORTH AMERICA USA**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by **THE GUARANTEE COMPANY OF NORTH AMERICA USA**, which is still in full force and effect.



IN WITNESS WHEREOF, I have thereunto set my hand and attached the seal of said Company this 21st day of July, 2015

Randall Musselman

Randall Musselman, Secretary

PERFORMANCE BOND
(To be used in Texas under V.A.T.S. 5160)

THE STATE OF TexasCOUNTY OF Hidalgo

KNOW ALL MEN BY THESE PRESENTS: That we (1) Texas Cordia Construction, LLC, a (2) Limited Liability Company OF Edinburg, Texas, hereinafter called Principal and (3) The Guarantee Company of North America USA of Southfield, State of Michigan, hereinafter called the Surety, are held and firmly bound unto (4) Hidalgo County of Texas, hereinafter called Owner, in the penal sum of Three Hundred Seventy Eight Thousand Five Hundred Eighty Seven & No/100 378,587.00 Dollars in lawful money of the United States to be paid in (5) Hidalgo County, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly be these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with (6) Hidalgo County, the Owner, dated the 21st day of July, A.D. 2015, a copy of which is hereto attached and made a part hereof for the construction of:

HIDALGO COUNTY PRECINCT 2
"SIOUX ROAD IMPROVEMENTS

(from I Road to 3,500 feet East of Raul Longoria Road)

hereinafter called the "Work"

These footnotes refer to the numbers in body of contract above:

Date of Bond must not be prior to date of contract

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership or an Individual, as case may be
- (3) Correct name of Surety
- (4) Correct name of Owner
- (5) County and State
- (6) Owner

(Texas Performance Bond) – Page 2.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform the work in accordance with the plans, specifications, and contract documents during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that if any legal action be filed upon this bond, venue shall lie in Hidalgo County, State of Texas, and 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 work or to the specifications.

IN WITNESS WHEREOF, this instrument is executed in six counterparts, each one of which shall be deemed an original, this the 21st day of July, 2015 A.D.

ATTEST:

[Signature]
(Principal) Secretary

(Seal)

Witness as to Principal

3149-A Center Pointe Dr., Edinburg, TX 78539
(Address)

Principal Texas Cordia Construction, LLC

By [Signature]

(Address) 3149-A Center Pointe Dr., Edinburg, TX 78539

Telephone Number: 956-627-6181

ATTEST:

[Signature]
(Surety) Secretary Stacy Owens

(Seal)

[Signature]
Witness as to Surety

Kimberly Stanley

25025 I-45 N., Ste. 525, The Woodlands, TX 77380
(Address)

The Guarantee Company of North America USA

By [Signature]

Justin McQuain, Attorney-in-Fact

(Address) 350 Glenborough Dr., Ste. 138, Houston, TX 77067

Telephone Number: 832-446-3350

NOTE: If Contractor is a partnership, all partners should execute bond.



The Guarantee Company of North America USA
Southfield, Michigan

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS: That **THE GUARANTEE COMPANY OF NORTH AMERICA USA**, a corporation organized and existing under the laws of the State of Michigan, having its principal office in Southfield, Michigan, does hereby constitute and appoint

Scott D. Chapman, Kevin McQuain, Justin McQuain, Rosalyn D. Hassell, Maxine Elaine Lewis, Jeanne M. Buchan, Keith M. Illa, Misty Witt,
Cheryl R. Colson
CHS Insurance Services, LLC

its true and lawful attorney(s)-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise.

The execution of such instrument(s) in pursuance of these presents, shall be as binding upon **THE GUARANTEE COMPANY OF NORTH AMERICA USA** as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at the principal office.

The Power of Attorney is executed and may be certified so, and may be revoked, pursuant to and by authority of Article IX, Section 9.03 of the By-Laws adopted by the Board of Directors of **THE GUARANTEE COMPANY OF NORTH AMERICA USA** at a meeting held on the 31st day of December, 2003. The President, or any Vice President, acting with any Secretary or Assistant Secretary, shall have power and authority:

1. To appoint Attorney(s)-in-fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof; and
2. To revoke, at any time, any such Attorney-in-fact and revoke the authority given, except as provided below
3. In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.
4. In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner – Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

Further, this Power of Attorney is signed and sealed by facsimile pursuant to resolution of the Board of Directors of the Company adopted at a meeting duly called and held on the 6th day of December 2011, of which the following is a true excerpt:

RESOLVED that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, contracts of indemnity and other writings obligatory in the nature thereof, and such signature and seal when so used shall have the same force and effect as though manually affixed.



IN WITNESS WHEREOF, **THE GUARANTEE COMPANY OF NORTH AMERICA USA** has caused this instrument to be signed and its corporate seal to be affixed by its authorized officer, this 23rd day of February, 2012.

THE GUARANTEE COMPANY OF NORTH AMERICA USA

Stephen C. Ruschak, President & Chief Operating Officer

Randall Musselman, Secretary

STATE OF MICHIGAN
County of Oakland

On this 23rd day of February, 2012 before me came the individuals who executed the preceding instrument, to me personally known, and being by me duly sworn, said that each is the herein described and authorized officer of The Guarantee Company of North America USA; that the seal affixed to said instrument is the Corporate Seal of said Company; that the Corporate Seal and each signature were duly affixed by order of the Board of Directors of



Cynthia A. Takai
Notary Public, State of Michigan
County of Oakland
My Commission Expires February 27, 2018
Acting in Oakland County

IN WITNESS WHEREOF, I have hereunto set my hand at The Guarantee Company of North America USA offices the day and year above written.

I, Randall Musselman, Secretary of **THE GUARANTEE COMPANY OF NORTH AMERICA USA**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by **THE GUARANTEE COMPANY OF NORTH AMERICA USA**, which is still in full force and effect.



IN WITNESS WHEREOF, I have thereunto set my hand and attached the seal of said Company this 21st day of July, 2015

Randall Musselman, Secretary



The Guarantee Company of North America USA

One Towne Square, Suite 1470

Southfield, Michigan 48076

Phone: 248-281-0281 Fax: 248-750-0431

Texas Consumer Notice

1 IMPORTANT NOTICE

To obtain information or make a complaint:

2 You may contact your **agent** at:

3 You may call The Guarantee Company of North America USA's toll-free telephone number for information or to make a complaint at: 1-866-328-0567

4 You may also write to The Guarantee Company of North America USA at:

One Towne Square, Suite 1470

Southfield, Michigan 48076

Web: www.gcna.com

E-mail: Info@gcna.com

Fax: 248-750-0431

5 You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at: 1-800-252-3439

6 You may write the Texas Department of Insurance:

P.O. Box 149104

Austin, TX 78714-91 04

Fax: (512) 475-1771

Web: <http://www.tdi.state.tx.us>

E-mail: ConsumerProtection@tdi.state.tx.us

7 PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should contact the (agent) (company) (agent or the company) first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

8 ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Puede comunicarse con su **agent** al

Usted puede llamar al numero de telefono gratis de The Guarantee Company of North America USA's para informacion o para someter una queja al: 1-866-328-0567

Usted tambien puede escribir a to The Guarantee Company of North America USA:

One Towne Square, Suite 1470

Southfield, Michigan 48076

Web: www.gcna.com

E-mail: Info@gcna.com

Fax: 248-750-0431

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al: 1 - 800-252-3439

Puede escribir al Departamento de Seguros de Texas:

P.O. Box 149104

Austin, TX 78714-91 04

Fax: (512) 475-1771

Web: <http://www.tdi.state.tx.us>

E-mail: ConsumerProtection@tdi.state.tx.us

DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el (agente) (la compania) (agente o la compania) primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

UNA ESTE AVISO A SU POLIZA: Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

EXHIBIT "C"

Insurance Requirements

The Bidder awarded the contract shall furnish proof of insurance, which will also include any subcontractor that is subcontracted by the bidder in at least the following limits, to be in place prior to providing any services under this Contract and to continue at all times in force in effect during the term of this Contract:

1. A Five Hundred Thousand Dollar (\$500,000.00) Comprehensive General Liability insurance policy providing additional coverage to all underlying liabilities of County.
2. Automobile liability insurance policy with limits of at least Three Hundred Thousand Dollars (\$300,000.00) per person and Five Hundred Thousand Dollars (\$500,000.00) per occurrence. Coverage should include injury to or death of persons and property damage claims with limits up to Five Hundred Thousand (\$500,000.00) arising out of the services provided to County hereunder.
3. Uninsured/Underinsured motorist coverage in an amount equal to the bodily injury limits set forth immediately above;
4. Workers compensation insurance in amounts established by Texas law, unless the Bidder is specifically exempted from the Texas Workers Compensation Act, Texas Labor Code Chapter 401, et. seq.

Certificates of insurance naming County as an additional insured shall be submitted to County for approval prior to any services being performed by Contractor. Each policy of insurance required hereunder shall extend for a period equivalent to, or longer than the term of the Contract, and any insurer hereunder shall be required to give at least thirty (30) days written notice to the County prior to the cancellation of any such coverage on the termination date, or otherwise. This Contract shall be automatically suspended upon the cancellation, or other termination, of any required policy of insurance hereunder, and such suspension shall continue until evidence adequate replacement coverage is provided to County. If replacement coverage is not provided within thirty (30) days following suspension of the Contract, this Contract shall automatically terminate.

Insurance Requirement Acknowledgment

I, Yara M. Corbitt, authorized representative for Texas Cordia Construction, LLC,
Company/Vendor

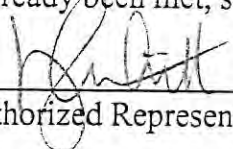
hereby acknowledge receipt of the County's required insurance limits. Said requirements:

will be acquired within 10 working days after notification from Purchasing Department of bid awarded by the Hidalgo County Commissioners' Court;

will acquire additional amounts required to meet the County's requirements within 10 working days after notification from Purchasing Department of bid award by the Hidalgo County Commissioners' Court; currently carry the following:

Automobile Liability: \$ _____ General Liability: \$ _____

☒ have already been met, see attached copy of insurance certificate.



Authorized Representative

07/01/15

Date

Notice to Bidder:

A certificate of insurance for the required insurance limits shall be provided to the Purchasing Department's Contract Managers in order to qualify for award of bid and to execute a contract between your Company and the County

Failure to provide Certificates of Insurance to the Purchasing Department's Contract Managers will cause the bid award to be rescinded and re-awarded to next lowest bidder. Certificates of Insurance will be monitored and verified on a **quarterly basis** to ensure coverage policy is in place. It is the Company's obligation to maintain the appropriate insurance coverage throughout the term of the contract.

THIS FORM MUST ACCOMPANY BID PACKET

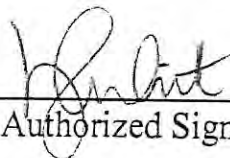
PROJECT REQUIREMENTS ACKNOWLEDGMENT

This is to certify that I, Yara M. Corbitt, possess all of the APPLICABLE:

1. Licenses: Texas Board of Professional Engineer (TX #100129).
2. Bonds: CHS Surety (Bid Bond, Performance & Payment Bond).
3. Certificates: Safety Reqs..
4. Permits: _____.
5. Other: _____.

necessary to carry out the required project. Furthermore, I am providing copies of the required documentation so that, if my company is awarded this bid, I may be eligible to enter into a contract with Hidalgo County and proceed to complete the project in a timely manner.

* Any licenses, bonds, certificates, permits, etc. which are required must be presented as part of the bid packet in order to expedite the bid evaluation process. Failure to provide said documentation will result in the disqualification of your bid.



Authorized Signature

07/01/15

Date

Texas Cordia Construction, LLC

Company

3149-A Center Pointe Drive

Address

Edinburg, Texas 78539

City, State, Zip



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
7/21/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Brown & Brown Lone Star Insurance Services Inc 1717 North Sam Houston Pkwy #115 Houston TX 77038		CONTACT NAME: PHONE (A/C, No. Ext): 281-260-2000 FAX (A/C, No.): E-MAIL ADDRESS:		
INSURED TEXAS25 Texas Cordia Construction, LLC Cordia Sue, LLC 3149 A Center Pointe Dr Edinburg TX 78539		INSURER(S) AFFORDING COVERAGE		NAIC #
		INSURER A: Texas Mutual Insurance Company		22945
		INSURER B: Travelers Casualty In Co of Am		19046
		INSURER C: Indian Harbor Insurance Co.		36940
		INSURER D: America First Insurance Co		12696
		INSURER E:		
INSURER F:				

COVERAGES**CERTIFICATE NUMBER:** 1374169087**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	GENERAL LIABILITY ☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC	Y	Y	ESG300015601	10/11/2014	10/11/2015	EACH OCCURRENCE	\$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$50,000
							MED EXP (Any one person)	\$excluded
							PERSONAL & ADV INJURY	\$1,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMP/OP AGG	\$2,000,000
								\$
B	AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ☒ NON-OWNED AUTOS ☒ UM	Y	Y	BA1F59965A	10/11/2014	10/11/2015	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
							UM limit	\$1,000,000
C	UMBRELLA LIAB ☐ OCCUR ☒ EXCESS LIAB ☐ CLAIMS-MADE DED ☐ RETENTION \$ ☐	Y	Y	SXS0044698	10/11/2014	10/11/2015	EACH OCCURRENCE	\$2000000
							AGGREGATE	\$2,000,000
								\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y	Y	TSF0001268917	5/9/2015	5/9/2016	WC STATU-TORY LIMITS	OTH-ER
							E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE - EA EMPLOYEE	\$1,000,000
							E.L. DISEASE - POLICY LIMIT	\$1,000,000
D	Equipment Leased or Rented			IM8969882	11/27/2014	11/27/2015	Limit per item	\$100,000
							Limit per occurrence	\$500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Auto & General Liability - The policies include a blanket automatic additional insured endorsement that provides additional insured status to the certificate holder only when there is a written contract between the named insured and the certificate holder that requires such status.

Auto, General Liability & WC - The policies include a blanket waiver of subrogation endorsement that waives the underwriters rights of subrogation to the certificate holder only when there is a written contract between the named insured and the certificate holder that requires such status.

See Attached...

CERTIFICATE HOLDER**CANCELLATION**Hidalgo County
2802 S. Bus. Hwy. 281
Edinburg TX 78539

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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**ADDITIONAL REMARKS SCHEDULE**

Page 1 of 1

AGENCY Brown & Brown Lone Star Insurance Services Inc		NAMED INSURED Texas Cordia Construction, LLC Cordia Sue, LLC 3149 A Center Pointe Dr Edinburg TX 78539
POLICY NUMBER		
CARRIER	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

Project : Sioux Road Improvements
(from I Road to 3,500 feet East of Raul Longoria Road)
BID NO.: 2015-209-06-24-MSS

Title 29 - LABOR

Subtitle A - Office of the Secretary of Labor

PART 3 - CONTRACTORS AND SUBCONTRACTORS ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

- Sec.
- 3.1 Purpose and scope
 - 3.2 Definitions
 - 3.3 Weekly statement with respect to payment of wages
 - 3.4 Submission of weekly statements and the preservation and inspection of weekly payroll records.
 - 3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.
 - 3.6 Payroll deductions permissible with the approval of the Secretary of Labor.
 - 3.7 Applications for the approval of the Secretary of Labor
 - 3.8 Action by the Secretary of Labor upon applications.
 - 3.9 Prohibited payroll deductions.
 - 3.10 Methods of payment of wages.
 - 3.11 Regulations part of contract.

AUTHORITY: The provisions of this Part 3 issued under R.S. 16 1, sec. 2, 48 Stat. §48; Reorg. Plan No. 14 of 1950, 64 Stat. 1267, 5 U.S.C. Appendix; 5 U.S.C. 301; 40 U.S.C. 276c.

SOURCE: The provisions of this Part 3 appear at 29 F.R. 97, Jan. 4, 1964, unless otherwise noted.

Section 3.1 Purpose and Scope.

This part prescribes "anti-kickback" regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with Federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization

Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

Section 3.2 Definitions.

As used in the regulations in this part:

(a) The terms "building" or "work" generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all @s, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials,

Copeland Act Regulations

articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a "building" or "work" within the meaning of the regulations in this part.

(b) The terms construction," 4; prosecution," @'completion," or repair" mean all types of work done on a particular building or work at the site thereof, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

(c) The terms "public building" or "public work" include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal agency is a contracting party, regardless of whether title thereof is in a Federal agency.

(d) The term "building or work financed in whole or in part by loans or grants from the United States" includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directive or indirectly from funds provided by loans or grants by a Federal agency. The term includes building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by loans or grants from the United States is "employed" and receiving 44 wages," regardless of any contractual relationship alleged to exist between him and the real employer.

(f) The term "any affiliated person" includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary or otherwise, and an officer or agent of such corporation.

(g) The term "Federal agency" means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentality's of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and

(a) Each weekly statement required under §3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or

instrumentality's.

(29 FR 97, Jan. 4, 1964, as amended at 33 FR 32575, Nov. 27, 1973)

Section 3.3 Weekly statement with respect to payment of wages.

(a) As used in this section, the term "employee" shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.

(b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by 29 CFR Parts 3 and 5 during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer of employee of the contractor or subcontractor who supervises the payment of wages, and shall be on form @ 348, "Statement of Compliance," or on an identical form on the back of @ 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Sample copies of @ 347 and @ 348 may be obtained from the Government contracting or sponsoring agency, and copies of these forms may be purchased at the Government Printing Office.

(c) The requirements of this section shall not apply to any contract of \$2,000 or less.

(d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

(29 F.R. 95, Jan. 4, 19(A, as —tied at 33 F.R. 10186, July 17,1968)

Copeland Act Regulations

Section 3.4 Submission of weekly statements and the preservation and inspection of weekly payroll records.

State agency in charge at the site of the building or work, or if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or

subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

(b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

Section 3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

(a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.

(b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A "bona fide prepayment of wages" is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.

(c) Any deduction of amounts required by court process to be paid to another, unless, the deduction is in favor of the contractor, subcontractor or any affiliated person, or when collusion or collaboration exists.

(d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions, or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness,

(k) Any deduction for the cost of safety equipment of nominal value purchased by the

or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents:

Provided, however, That the following standards are met: (1) The deduction is not otherwise prohibited by law; (2) it is either: (i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or (ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; (3) no profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and (4) the deductions shall serve the convenience and interest of the employee. (e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.

(f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.

(g) Any deduction voluntarily authorized by the employee for the making of contributions to

Copeland Act Regulations

governmental or quasi-governmental agencies, such as the American Red Cross.

(h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.

(i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: Provided, however, That a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.

(j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and Part 531 of this title. When such a deduction is made the additional records required under §516.27(a) of this title shall be kept.

employee as his own property for his personal protection in his work, such as safety shoes, safety

glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.
(36 F.R. 9770, May 28, 1971.)

Section 3.6 Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any

deduction not permitted under §3.5. The Secretary may grant permission whenever he finds that:

(a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit

directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;

(b) The deduction is not otherwise prohibited by law;

(c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and

(d) The deduction serves the convenience and interest of the employee.

Section 3.7 Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under §3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

(a) The application shall be in writing and shall be addressed to the Secretary of Labor.

(b) The application need not identify the

contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of §3.6, and specifies any conditions which have changed in regard to the payroll deductions.

(36 F.R. 9770, May 29, 1971.)

(c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of §3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.

Copeland Act Regulations

(d) The application shall include a description of the proposed deduction, the purpose to be served there by, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.

(e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant. -

Section 3.8 Action by the Secretary of Labor upon applications.

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of §3.6; and shall notify the applicant in writing of his decision.

Section 3.9 Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which **are** not found to be permissible under §3.6 are prohibited.

Section 3.10 Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

Section 3.11 Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see §5.5(a) of this subtitle.

STANDARD
GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General Contractors of America

Construction Specifications Institute

TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 - DEFINITIONS AND TERMINOLOGY	6
1.01 <i>Defined Terms</i>	6
1.02 <i>Terminology</i>	8
ARTICLE 2 - PRELIMINARY MATTERS	9
2.01 <i>Delivery of Bonds</i>	9
2.02 <i>Copies of Documents</i>	9
2.03 <i>Commencement of Contract Times; Notice to Proceed</i>	9
2.04 <i>Starting the Work</i>	9
2.05 <i>Before Starting Construction</i>	9
2.06 <i>Preconstruction Conference</i>	10
2.07 <i>Initial Acceptance of Schedules</i>	10
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	10
3.01 <i>Intent</i>	10
3.02 <i>Reference Standards</i>	10
3.03 <i>Reporting and Resolving Discrepancies</i>	10
3.04 <i>Amending and Supplementing Contract Documents</i>	11
3.05 <i>Reuse of Documents</i>	11
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS	11
4.01 <i>Availability of Lands</i>	11
4.02 <i>Subsurface and Physical Conditions</i>	12
4.03 <i>Differing Subsurface or Physical Conditions</i>	12
4.04 <i>Underground Facilities</i>	13
4.05 <i>Reference Points</i>	13
4.06 <i>Hazardous Environmental Condition at Site</i>	14
ARTICLE 5 - BONDS AND INSURANCE	15
5.01 <i>Performance, Payment, and Other Bonds</i>	15
5.02 <i>Licensed Sureties and Insurers</i>	15
5.03 <i>Certificates of Insurance</i>	15
5.04 <i>CONTRACTOR's Liability Insurance</i>	15
5.05 <i>OWNER's Liability Insurance</i>	16
5.06 <i>Property Insurance</i>	16
5.07 <i>Waiver of Rights</i>	17
5.08 <i>Receipt and Application of Insurance Proceeds</i>	18
5.09 <i>Acceptance of Bonds and Insurance; Option to Replace</i>	18
5.10 <i>Partial Utilization, Acknowledgment of Property Insurer</i>	18
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES	18
6.01 <i>Supervision and Superintendence</i>	18
6.02 <i>Labor; Working Hours</i>	19
6.03 <i>Services, Materials, and Equipment</i>	19
6.04 <i>Progress Schedule</i>	19
6.05 <i>Substitutes and "Or-Equals"</i>	19
6.06 <i>Concerning Subcontractors, Suppliers, and Others</i>	21

6.07 Patent Fees and Royalties	21
6.08 Permits	22
6.09 Laws and Regulations	22
6.10 Taxes	22
6.11 Use of Site and Other Areas	22
6.12 Record Documents	22
6.13 Safety and Protection	23
6.14 Safety Representative	23
6.15 Hazard Communication Programs	23
6.16 Emergencies	23
6.17 Shop Drawings and Samples	24
6.18 Continuing the Work	25
6.19 CONTRACTOR's General Warranty and Guarantee	25
6.20 Indemnification	25
ARTICLE 7 - OTHER WORK	26
7.01 Related Work at Site	26
7.02 Coordination	26
ARTICLE 8 - OWNER'S RESPONSIBILITIES	27
8.01 Communications to Contractor	27
8.02 Replacement of ENGINEER	27
8.03 Furnish Data	27
8.04 Pay Promptly When Due	27
8.05 Lands and Easements; Reports and Tests	27
8.06 Insurance	27
8.07 Change Orders	27
8.08 Inspections, Tests, and Approvals	27
8.09 Limitations on OWNER's Responsibilities	27
8.10 Undisclosed Hazardous Environmental Condition	27
8.11 Evidence of Financial Arrangements	27
ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION	27
9.01 OWNER'S Representative	27
9.02 Visits to Site	28
9.03 Project Representative	28
9.04 Clarifications and Interpretations	28
9.05 Authorized Variations in Work	28
9.06 Rejecting Defective Work	29
9.07 Shop Drawings, Change Orders and Payments	29
9.08 Determinations for Unit Price Work	28
9.09 Decisions on Requirements of Contract Documents and Acceptability of Work	28
9.10 Limitations on ENGINEER's Authority and Responsibilities	28
ARTICLE 10 - CHANGES IN THE WORK; CLAIMS	29
10.01 Authorized Changes in the Work	29
10.02 Unauthorized Changes in the Work	29
10.03 Execution of Change Orders	30
10.04 Notification to Surety	30
10.05 Claims and Disputes	30
ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK	30
11.01 Cost of the Work	30

11.02 Cash Allowances	32
11.03 Unit Price Work	33
ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES	33
12.01 Change of Contract Price	33
12.02 Change of Contract Times	34
12.03 Delays Beyond CONTRACTOR's Control	34
12.04 Delays Within CONTRACTOR's Control	34
12.05 Delays Beyond OWNER's and CONTRACTOR'S Control	34
12.06 Delay Damages	34
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK	34
13.01 Notice of Defects	34
13.02 Access to Work	34
13.03 Tests and Inspections	35
13.04 Uncovering Work	35
13.05 OWNER May Stop the Work	35
13.06 Correction or Removal of Defective Work	36
13.07 Correction Period	36
13.08 Acceptance of Defective Work	36
13.09 OWNER May Correct Defective Work	36
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION	37
14.01 Schedule of Values	37
14.02 Progress Payments	37
14.03 CONTRACTOR's Warranty of Title	38
14.04 Substantial Completion	39
14.05 Partial Utilization	39
14.06 Final Inspection	39
14.07 Final Payment	40
14.08 Final Completion Delayed	40
14.09 Waiver of Claims	41
ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION	41
15.01 OWNER May Suspend Work	41
15.02 OWNER May Terminate for Cause	41
15.03 OWNER May Terminate For Convenience	41
15.04 CONTRACTOR May Stop Work or Terminate	42
ARTICLE 16 - DISPUTE RESOLUTION	42
16.01 Methods and Procedures	42
ARTICLE 17 - MISCELLANEOUS	43
17.01 Giving Notice	43
17.02 Computation of Times	43
17.03 Cumulative Remedies	43
17.04 Survival of Obligations	43
17.05 Controlling Law	43

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

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

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *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 Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include 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 Notice to Proceed, 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 Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

18. *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.

19. *ENGINEER*--The individual or entity named as such in the Agreement.

20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

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

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

49. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

1.02 Terminology

A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

B. Day

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it 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 ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. Furnish, Install, Perform, Provide

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other

specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.

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

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02* Copies of Documents

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times com-

mence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

*See Supplementary Conditions

2.05* *Before Starting Construction*

A. *CONTRACTOR's Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, 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, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and
3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into

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

* C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

2.06 *Preconstruction Conference*

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, 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 and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

*See Supplementary Conditions

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01* *Intent*

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

3.02 *Reference Standards*

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or

performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price of Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

4.05* *Reference Points*

A. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. 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:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or

*See Supplementary Conditions

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition;

(ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05.

OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or

Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

*See Supplementary Conditions

ARTICLE 5 - BONDS AND INSURANCE

5.01* *Performance, Payment, and Other Bonds*

A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.

B.* All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Compa-

nies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.

5.04* *CONTRACTOR's Liability Insurance*

A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to

perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;
4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;
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; and
6. 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.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

*See Supplementary Conditions

1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

5.05 *OWNER's Liability Insurance*

A.* In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

5.06* *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property

insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

*See Supplementary Conditions

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;

5. allow for partial utilization of the Work by OWNER;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with

30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B.* OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C.* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.

D.* OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, 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.

E.* If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

5.07 *Waiver of Rights*

A.* OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other

individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused.

None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

*See Supplementary Conditions

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to

paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08* *Receipt and Application of Insurance Proceeds*

A.* Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. 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 Amendment.

B.* OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

5.09* *Acceptance of Bonds and Insurance; Option to Replace*

A.* If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the

certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with

*See Supplementary Conditions

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 OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of

construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto 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 or received from the superintendent shall be binding on CONTRACTOR.

6.02 *Labor; Working Hours*

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the

Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site 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 (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly

run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. *"Or-Equal" Items:* If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be

considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items*

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify

that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. Substitute Construction Methods or Procedures:

If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. Engineer's Evaluation: ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a

substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. Special Guarantee: OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. ENGINEER's Cost Reimbursement: ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. CONTRACTOR's Expense: CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement

for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, 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 individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

F. 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.

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRAC-

TOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 *Patent Fees and Royalties*

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If 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. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for

the prosecution of the Work which are applicable at the time of 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.

6.09 *Laws and Regulations*

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the 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.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

6.10* *Taxes*

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

6.11* *Use of Site and Other Areas*

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

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations,

*See Supplementary Conditions

and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with 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.

6.13 *Safety and Protection*

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other 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 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for 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 in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR is obligated to act to prevent 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 or are required as a result thereof. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17* *Shop Drawings and Samples*

A.* CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. 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 show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B.* CONTRACTOR shall also submit six (6) Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

D. *Submittal Procedures*

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or

*See Supplementary Conditions

Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. *ENGINEER's Review*

1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals

will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for 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.

3. 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 called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. *Resubmittal Procedures*

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 *Continuing the Work*

A. 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, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 *CONTRACTOR's General Warranty and Guarantee*

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or

2. normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;

2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;

4. use or occupancy of the Work or any part thereof by OWNER;

5. any acceptance by OWNER or any failure to do so;

6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;

7. any inspection, test, or approval by others; or

8. any correction of defective Work by OWNER.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. 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

2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A 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, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and

other consultants and subcontractors of each and any of them arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

ARTICLE 7 - OTHER WORK

7.01 Related Work at Site

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other 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 other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering 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.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 *Replacement of ENGINEER*

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 *Furnish Data*

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

8.04 *Pay Promptly When Due*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

*See Supplementary Conditions

8.06* *Insurance*

A.* OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 *Limitations on OWNER's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *OWNER'S Representative*

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

9.02 *Visits to Site*

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and

observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03* *Project Representative*

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee,

*See Supplementary Conditions

the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Clarifications and Interpretations*

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents.

ments. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.

9.05 *Authorized Variations in Work*

A. 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 Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.

9.06 *Rejecting Defective Work*

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 *Determinations for Unit Price Work*

A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

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

A. 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, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

*See Supplementary Conditions

9.10 *Limitations on ENGINEER's Authority and Responsibilities*

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such

authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

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

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

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants. See Article 18.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. 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 by a Written Amendment, a Change Order, or a Work Change Directive. 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).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; 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 as provided in paragraph 6.18.A.

10.04 *Notification to Surety*

A. 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 Times) 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. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days

after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work

shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of

CONTRACTOR's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

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

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.f or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not

limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

11.02 *Cash Allowances*

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of

Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
2. there is no corresponding adjustment with respect any other item of Work; and
3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01* Change of Contract Price

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B.* The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or
2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or
3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee:* The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;

b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

*See Supplementary Conditions

d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Times (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones)

will be determined in accordance with the provisions of this Article 12.

12.03 *Delays Beyond CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 *Delays Within CONTRACTOR's Control*

A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 *Delays Beyond OWNER's and CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or

2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility

owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

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

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02* *Access to Work*

A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.03* *Tests and Inspections*

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B.* OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E 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.

13.04 *Uncovering Work*

A. 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.

B. 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 pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. 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 Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

*See Supplementary Conditions

13.05 *OWNER May Stop the Work*

A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, 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, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.07 *Correction Period*

A. 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, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or

d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.

D. Reduction in Payment

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

c. there are other items entitling OWNER to a set-off against the amount recommended; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 *CONTRACTOR's Warranty of Title*

A. 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.

14.04 *Substantial Completion*

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly 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. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion,

ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

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 that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) 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. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. *Review of Application and Acceptance*

1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract 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 for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.08 *Final Completion Delayed*

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not

fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

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 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *OWNER May Suspend Work*

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by 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 adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.

15.02 *OWNER May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, 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 all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. 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.

15.03 *OWNER May Terminate For Convenience*

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. for reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *CONTRACTOR May Stop Work or Terminate*

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon

seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION*

16.01 *Methods and Procedures*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions.

If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17 - MISCELLANEOUS*

17.01 *Giving Notice*

A. 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.

17.02 *Computation of Times*

A. 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.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract 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.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

SUPPLEMENTAL GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemental, remain in full force and effect.

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

SC-6.10 Delete paragraph 6.10 in its entirety and insert the following in its place:

The owner qualifies for the state and local tax exemption in the purchase of certain materials and equipment the Contractor shall utilize the form provided herewith in exhibit "D".

SC-11.01 Delete paragraph 11.01 in its entirety.

SC-11.02 Delete paragraph 11.02 in its entirety.

SC-12.01B.25 & B.3. Delete paragraph 12.01B.2 & B.3 in its entirety.

SC-12.01.C.2 Delete paragraph 12.01.C.2 in its entirety.

SC-14.02.C.1 Replace "ten days" with "thirty days" to read as follows:

Thirty days after presentation of the application for payment to OWNER with ENGINEERS recommendation, the amount recommended will (subject to provisions of paragraph 14.02.D) become due, and when due will be paid by the OWNER to CONTRACTOR.

SC Article 16 Add the following language at the end of the paragraph of Article 16:

There are no dispute resolution methods and procedures set forth in the Supplemental Conditions:

GENERAL PREVAILING WAGE LEGAL REQUIREMENTS

The Contractor's attention is called to Texas Government Code Chapter 2258, which must be complied with attached herewith as Exhibit "C"

General Notes

GENERAL NOTES:

1. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE HIDALGO COUNTY PRECINCT No. 2 AND THE CITY OF SAN JUAN.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT RICHARD GARCIA WITH NORTH ALAMO WATER SUPPLY CORP. 48 HOURS PRIOR TO COMMENCEMENT OF WORK @ (956) 383-1618 TO COORDINATE AND MEET ANY ADDITIONAL REQUIREMENTS AND/OR SPECIFICATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT MR. RAMIRO RAMIREZ WITH THE CITY OF SAN JUAN 48 HOURS PRIOR TO COMMENCEMENT OF WORK @ (956) 223-2200 TO COORDINATE AND MEET ANY ADDITIONAL REQUIREMENTS AND/OR SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT TxDOT 48 HOURS PRIOR TO COMMENCEMENT OF WORK @ (956) 702-6101 FOR THE SPOTTING OF TRAFFIC SIGNAL LOOP DETECTORS AND TO MEET ANY ADDITIONAL REQUIREMENTS AND/OR SPECIFICATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL DIG-TESS 48 HOURS PRIOR TO COMMENCEMENT OF WORK FOR UTILITY SPOTTING @ (1-800-DIG-TESS).
6. THE CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES FOR VERIFICATION OF LOCATION OF EXISTING FACILITIES PRIOR TO BEGINNING ANY EXCAVATION.
7. LOCATIONS OF UNDERGROUND FACILITIES ARE FROM BEST INFORMATION AVAILABLE. NEITHER THE OWNER OR ENGINEER, WARRANT THE ACCURACY OF THE INFORMATION PROVIDED. ANY DEVIATIONS SHALL BE CALLED TO THE ENGINEER'S ATTENTION IMMEDIATELY.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CORRESPONDING UTILITY CORPORATION IN REGARDS TO THE RELOCATION OF ANY CONFLICTING UTILITIES.
9. THE CONTRACTOR SHALL REMOVE ALL FENCES LOCATED WITHIN THE EASEMENTS AND RIGHT OF WAY, INTERFERING WITH CONSTRUCTION OPERATION AND PROVIDE TEMPORARY FENCING DURING CONSTRUCTION. REMOVED FENCES SHALL BE REPLACED WITH A NEW FENCE OR UNDAMAGED ORIGINAL FENCING. REMOVAL AND REPLACEMENT OF EXISTING AND TEMPORARY FENCES SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.
10. ANY DAMAGES TO FENCES, WALKS, OR PRIVATE PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

11. THE CONTRACTOR SHALL AT ALL TIME PROVIDE ACCESS TO EXISTING RESIDENCES.
12. THE CONTRACTOR IS TO MAINTAIN ALL EQUIPMENT AND TRANSPORTATION OF SAID EQUIPMENT WITHIN THE EXISTING RIGHT-OF-WAYS OF THE CITY, COUNTY OR STATE.
13. NO OPEN EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. ALL EXCAVATIONS WHICH CANNOT BE BACKFILLED OVERNIGHT SHALL BE COVERED, AS A MINIMUM, WITH STEEL PLATING WHEN IN PAVED AND UNPAVED AREAS SUBJECT TO VEHICULAR LOADING; $\frac{3}{4}$ PLYWOOD, WOOD PLANKING WITH O.S.H.A. ORANGE PLASTIC EXPANDED MESH BARRIER AROUND PERIMETER IN UNPAVED AREAS NOT SUBJECT TO VEHICULAR LOADING, OR AS APPROVED BY THE ENGINEER.
14. THE PREPARATION OF THESE PLANS REFLECTS INFORMATION, PROVIDED BY OTHERS, ON THE APPROXIMATE LOCATION AND EXISTENCE OF EXISTING UTILITY AND ADJACENT PHYSICAL FEATURES. HOWEVER, THEY DO NOT IMPLY OR AFFIRM THAT ALL UTILITIES OR PHYSICAL FEATURES ARE SHOWN. GENERALLY, UTILITY SERVICE CONNECTIONS ARE NOT INDICATED ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATIONS OF THE OWNER IMMEDIATELY UPON ENCOUNTERING UNFORESEEN CONFLICTS.
15. THE APPROXIMATE LOCATIONS OF KNOWN EXISTING UTILITIES ARE SHOWN, CONTRACTOR SHALL DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATIONS IN THE FIELD PRIOR TO COMMENCING WORK. CONTRACTOR TO BE FULLY RESPONSIBLE FOR DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE EXISTING UTILITIES.
16. PUBLIC AND PRIVATE UTILITY LINES AND CUSTOMER SERVICE LINES MAY EXIST THAT ARE NOT SHOWN ON THE CONSTRUCTION DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE, MAINTAIN AND PROTECT THE INTEGRITY OF THESE LINES. HAND EXCAVATION MAY BE REQUIRED. THE CONTRACTOR SHALL RESTORE RELOCATED OR DIVERTED UTILITY TO ITS ORIGINAL CONDITION AND LOCATION WHEN APPLICABLE UPON COMPLETION OF CONSTRUCTION. SAID RESTORATION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.
17. WHERE NEW WATER LINES AND SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC 317 (DESIGN OF SEWAGE SYSTEMS) OR 30 TAC 290 (WATER HYGIENE).

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

18. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER AND SEWER CONNECTIONS TO ALL HOMES AND BUSINESSES IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF INTERRUPTIONS IN SERVICE FOR CONNECTIONS TO BE REINSTALLED. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNIGHT. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES TO SAID SERVICES.
19. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ANY SURFACE IRREGULARITIES, AS DIRECTED BY THE ENGINEER, CAUSED BY THE CONTRACTOR'S WORKING OPERATIONS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF PROPOSED FACILITIES AT ALL TIMES DURING CONSTRUCTION.
21. THE CONTRACTOR SHALL CLEAR THE CURB AND GUTTER FROM DEBRIS AND/OR VEGETATION TO PROVIDE POSITIVE FLOW TO THE DRAINAGE STRUCTURES. THIS WORK SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM UNLESS STATED OTHERWISE.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING AREA BETWEEN THE BACK OF CURB/EDGE OF PAVEMENT, ROAD SIDE DITCH AND RIGHT-OF-WAY TO HAVE POSITIVE FLOW TO THE PROPOSED AND/OR EXISTING DRAINAGE SYSTEM. THIS INCLUDES THE ENTIRE LENGTH OF THE ROAD WITHIN THE PROJECT LIMITS. SAID GRADING SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.
23. ROADSIDE DITCHES SHALL BE REGRADED TO PROVIDE POSITIVE FLOW TO THE EXISTING AND PROPOSED DRAINAGE STRUCTURES. REGRADED ALONG THE ROADSIDE DITCH SHALL BE FROM CULVERT TO CULVERT.
24. THE CONTRACTOR SHALL CLEANUP AND RESTORE THE AREA OF OPERATIONS TO A CONDITION AS GOOD AS OR BETTER THAN THAT WHICH EXISTED PRIOR TO INSTALLATION OF ALL ITEMS TO BE CONSTRUCTED.
25. COUNTY WILL PROVIDE CONTROL POINTS (BENCHMARK AND PROPERTY CORNERS) FOR THE WORK TO BE PERFORMED BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION STAKING, INCLUDING BUT NOT LIMITED TO HORIZONTAL & VERTICAL GRADE CUTS FOR CURB & GUTTER, ROADWAY, STORM DRAIN PIPE, ROADSIDE DITCHES, DRIVEWAY CULVERTS AND DITCH WORK. THE BASE SHALL BE GRADED AS PER THE PROPOSED CROSS SLOPE.
26. THE CONTRACTOR SHALL PROVIDE STORM WATER POLLUTION PREVENTION PLAN (SWP3) PRIOR TO COMMENCEMENT OF CONSTRUCTION AS REQUIRED BY HIDALGO COUNTY AND OR TCEQ.

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

27. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES DURING THE INSTALLATION OF THE STRUCTURES, DRAINAGE, UTILITY, IRRIGATION AND ROAD IMPROVEMENTS. DEWATERING OF THE TRENCH MAY BE REQUIRED DURING THE INSTALLATION OF THE DRAINAGE, UTILITY AND IRRIGATION FACILITIES/STRUCTURES. SAID DEWATERING SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.
28. THE CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION AND SUBMITTAL OF THE TRENCH EXCAVATION PROTECTION PLAN. CONTRACTOR SHALL SUBMIT CONSTRUCTION DETAILS AND DESIGN CALCULATIONS BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS BEFORE CONSTRUCTING THE SHORING AND/OR UTILIZING A TRENCH PROTECTION SYSTEM (BOX). THE ENGINEER RESERVES THE RIGHT TO REJECT DESIGNS NOT MEETING THE REQUIREMENTS OF SECTION ITEM 402 AND 403.
29. THE EXISTING ROAD SECTION SHALL BE SCARIFIED, STABILIZED, PREPARED AND GRADED TO ACHIEVE THE PROPOSED BASE AS PER THE PROPOSED ROAD CROSS SECTION. THE PRODUCT OF THE CRUSHED ASPHALT PAVEMENT (MAX 2" PIECES IN SIZE) AND SALVAGE CALICHE SHALL BE TREATED WITH TWO (2) PERCENT LIME BY DRY WEIGHT OF SALVAGE MATERIAL. TREATED SALVAGE MATERIAL SHALL BE DISTRIBUTED TO ACHIEVE THE PROPOSED BASE. THE BASE SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY AND SHALL BE GRADED TO THE CROSS-SLOPE AS PER THE PROPOSED ROAD CROSS-SECTION DETAILS. ANY PREPARATION, STABILIZATION, COMPACTION AND GRADING FOR THE DIFFERENCE BETWEEN THE PROPOSED AND EXISTING ROAD SECTIONS SHALL BE SUBSIDIARY TO THE UNIT BID PRICES FOR THE SCARIFICATION AND PREPARATION OF EXISTING ROAD SECTION (SEE CORE REPORT FOR THE THICKNESS OF THE EXISTING PAVEMENT SECTION).
30. ALL DEBRIS, VEGETATION AND SURPLUS MATERIAL, EXCEPT ROADWAY SECTION, RESULTING FROM DEMOLITION AND/OR CLEARING OF THE RIGHT-OF-WAY AND PROJECT LOCATION, IN PREPARATION OF PROPOSED IMPROVEMENTS, ALONG WITH ANY DEBRIS AND/OR VEGETATION REMOVED FROM THE ROADSIDE DITCH AND CURB AND GUTTER, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF AT A SITE ACCEPTABLE TO HIDALGO COUNTY PRECINCT NO 2. THE CONTRACTOR SHALL PROVIDE A LETTER STATING SO. THE SAID CLEARING AND DISPOSAL SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM UNLESS STATED SO. NO EXCESS EXCAVATED MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINAGE WAYS WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNER AND THE HIDALGO COUNTY PRECINCT NO 2. IF THE CONTRACTOR PLACES EXCESS MATERIAL IN THE AREAS WITHOUT WRITTEN PERMISSION, HE WILL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM SUCH FILL AND CONTRACTOR SHALL REMOVE THE MATERIAL AT OWN COST.

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING WATER VALVES AND MANHOLES TO MATCH PROPOSED FINISH GRADE OF ROADWAY. CONCRETE APRONS SHALL BE INSTALLED TO MATCH TOPS WITH PAVEMENT GRADE. THIS WORK SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM UNLESS STATED OTHERWISE.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT/RELOCATION OF ALL REGULATORY SIGNS REMOVED DUE TO CONSTRUCTION OPERATIONS WITH THE SAME SIGN ON FIXED SUPPORT(S) IMMEDIATELY UPON ITS REMOVAL. APPROVAL BY THE ENGINEER IS NECESSARY BEFORE REMOVING ANY REGULATORY ROADWAY SIGN(S). FLAGGERS ARE REQUIRED TO BE AVAILABLE TO DIRECT TRAFFIC DURING SIGN INTERMEDIATE DOWN TIME. RELOCATION OF ANY DIRECTIONAL SIGN ASSEMBLIES REMOVED DURING CONSTRUCTION OPERATIONS, IMMEDIATELY UPON THEIR REMOVAL, IS REQUIRED. ALL SIGNING, BARRICADING AND TRAFFIC CONTROL SHALL CONFORM TO THE LATEST VERSION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". IN NO CASE WILL A SIGN BE REMOVED WITHOUT A REPLACEMENT SIGN AND SUPPORT(S) BEING READILY AVAILABLE AND A LOCATION ESTABLISHED. REMOVAL AND RELOCATION OF THESE SIGNS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED ON THE PROPOSAL.
33. PAVEMENT SURFACE PREPARATION FOR MARKINGS AND MARKERS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED ON THE PROPOSAL.
34. PERMANENT PAVEMENT MARKINGS FOR THIS PROJECT SHALL BE 0.100 INCHES (100 MIL) THICK THERMOPLASTIC. ANY PERMANENT PAVEMENT MARKINGS OR NON-REMOVAL WORK ZONE PAVEMENT MARKINGS LACKING REFLECTIVITY IN ACCORDANCE WITH TEST METHOD TEX 828-B, WILL NOT BE PAID FOR AS PER COUNTY POLICY. THE ROADWAY WILL BE RE-STRIPED AT NO ADDITIONAL COMPENSATION.
35. THE BEADS USED ON THIS PROJECT SHALL MEET THE REQUIREMENTS OF TxDOT MATERIALS SPECIFICATION DMS-8290, GLASS TRAFFIC BEADS TEXAS TYPE II & III. USE A 50% TYPE II/ 50% TYPE III MIX UTILIZING A DOUBLE DROP SYSTEM WITH TYPE III BEADS DROPPED FIRST.
36. THE CONTRACTOR SHALL COORDINATE AN ONSITE MEETING BETWEEN ALL PARTIES INVOLVED, PRIOR TO COMMENCING ANY STRIPING OPERATION. SAID MEETING WILL BE REQUIRED TO REVIEW ANY REQUIREMENTS AND TO ENSURE QUALITY WORK.

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

37. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN ON ALL STREET AND ROAD CROSSINGS FOR APPROVAL BY HIDALGO COUNTY PRECINCT No. 2 AND PROJECT ENGINEER PRIOR TO COMMENCEMENT OF WORK. ALL CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC AS PROVIDED FOR IN THE SPECIFICATIONS, TxDOT STANDARDS, TEXAS M.U.T.C.D. AND/OR AS DIRECTED. THE CONTRACTOR SHALL INSTALL THE APPROPRIATE ALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE CURRENT EDITION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
38. ALL NEW SIGNING SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
39. THE CONTRACTOR SHALL RELOCATE OR RECONSTRUCT ALL MAIL BOXES TO BE 1' BEHIND BACK OF CURB OR 3' BEHIND EDGE OF PAVEMENT. MAIL BOXES SHALL BE REPLACED TO THE SAME EXISTING CONDITIONS OR BETTER. SAID RELOCATION OF MAIL BOXES SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.
40. THE CONTRACTOR SHALL EXERCISE DILIGENCE IN THE APPLICATION OF PRIME COAT/ TACK COAT BY THE USE OF FLAGGING AND ROLLING PROCEDURES TO KEEP FROM SPRAYING OR SPLATTERING THE TRAVELING PUBLIC WITH ASPHALT MATERIAL, BLADING MAY ALSO BE NECESSARY TO CLEAN DIRT AND GRASS FROM PAVEMENT EDGES AND TURNOUT AREAS. THE COST OF THIS BLADING WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST.
41. AS NOTED ON THE PLAN AND PROFILES, THE ROAD SECTION ALONG THE TRAFFIC SIGNAL INTERSECTIONS MAY HAVE LOOP DETECTORS PRESENT. THESE AREAS ARE TO BE OVERLAID WITH A TACK COAT AND HMAC ONLY; THERE SHALL BE NO SCARIFICATION IN ORDER NOT TO DAMAGE THE LOOP DETECTORS. ANY POT HOLES IN THIS AREA WILL NEED TO BE FILLED AND REPAIRED BEFORE THE OVERLAY. THE POT HOLE REPAIR SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.
42. THE CONTRACTOR SHALL INSTALL LOOP DETECTORS TO REPLACE THOSE DAMAGED OR DESTROYED DUE TO CONSTRUCTION OPERATIONS. BEFORE OPERATIONS BEGIN, ALL EXISTING LOOP DETECTOR SHALL BE NOTED AND THEIR CONFIGURATION AND ORIENTATION OBTAINED FOR REPLACEMENT WITH THE SAME SIZE LOOP DETECTORS. IF DAMAGED, THE LOOP DETECTORS SHALL BE REINSTALLED AT NO ADDITIONAL COMPENSATION.

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

43. ANY DEVIATION OF LOCATION FOR PROPOSED LOOP DETECTOR WORK SHALL BE AS APPROVED BY THE ENGINEER. INSTALL LOOP VEHICLE DETECTORS IN ACCORDANCE WITH TXDOT LOOP DETECTOR STANDARDS. ALL LOOP DETECTORS SHALL BE RECTANGULAR, CONTRACTOR SHALL USE 2/C #14 AWG SHIELDED FOR LOOP LEAD-INS AND #14 AWG FOR LOOP WIRE IN PAVEMENT. SPLICES FOR LOOP WIRE WILL BE PERMITTED ONLY AT GROUND BOXES OR POLE BASE WITH APPROVED WEATHERPROOF SPLICE KITS. A MINIMUM LENGTH OF 2 FEET FOR EACH CABLE SHALL BE LEFT IN EACH GROUND BOX.
44. ALL WIRING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
45. IF ALTERNATE BID NO. 1 IS AWARDED THE CONTRACTOR SHALL REMOVE AND REPLACE THE METAL BEAM GUARD FENCE AND GUARDRAIL AS NOTED IN THE PLANS.

General Notes

Pct. 2 – Sioux Rd Improvements

(from I Rd to 3500 ft. East of Raul Longoria Rd)

Technical Specifications

TECHNICAL SPECIFICATIONS

ABBREVIATIONS AND DEFINITIONS	SECTION 00101
PRELIMINARY MATTERS.....	SECTION 00102
TESTING LABORATORY SERVICES	SECTION 00104
AVAILABILITY OF LANDS, PHYSICAL	
CONDITIONS & REFERENCE POINTS	SECTION 00105
SUSPENSION OF WORK AND TERMINATION	SECTION 00106
WORK BY OTHERS	SECTION 00107
CONTRACTOR'S RESPONSIBILITIES	SECTION 00108
SOILS AND SUBSURFACE INVESTIGATION.....	SECTION 00113
PREPARATION OF RIGHT OF WAY	SECTION 02101
CLEARING & GRUBBING	SECTION 02102
SUBGRADE PREPARATION	SECTION 02210
TRENCH EXCAVATION, BACKFILL & COMPACTION.....	SECTION 02221
UNCLASSIFIED STREET EXCAVATION.....	SECTION 02225
EXCAVATION	SECTION 02230
REMOVAL OF CONCRETE.....	SECTION 02238
LIME STABILIZATION	SECTION 02240
STORM SEWER.....	SECTION 02571
CORRUGATED PVC STORM SEWER PIPE	SECTION 02573
STORM SEWER APPURTENANCES	SECTION 02580
FLEXIBLE BASE.....	SECTION 02601
PRIME COAT	SECTION 02610
HOT MIX ASPHALT CONCRETE PAVEMENT	SECTION 02612

TACK COAT.....	SECTION 02620
CONCRETE CURB AND GUTTER AND VALLEY GUTTER.....	SECTION 02660
FLAT WHEEL ROLLING.....	SECTION 02780
PNEUMATIC TIRE ROLLING	SECTION 02782
PROOF ROLLING.....	SECTION 02786
HIGH PERFORMANCE (HP) POLYPROPYLENE STORM PIPE.....	SECTION 02790
CAST IN PLACE CONCRETE	SECTION 03300
CONCRETE ADMIXTURES.....	SECTION 03320
REINFORCED STEEL	SECTION 03330
CONSTRUCTION TRAFFIC CONTROL.....	SECTION 09100
TRENCH PROTECTION SYSTEM.....	SECTION ITEM 402
CONCRETE STRUCTURES.....	SECTION ITEM 420
PORTLAND CEMENT CONCRETE	SECTION ITEM 421
REINFORCED CONCRETE PIPE	SECTION ITEM 464
TEMPORARY EROSION, SEDIMENTATION & ENVIRONMENTAL CONTROLS...	SECTION ITEM 506

SECTION 00101

ABBREVIATIONS AND DEFINITIONS

PART 1 - ABBREVIATIONS

1.01 Wherever the following abbreviations or symbols are used, they are to be construed the same as the respective expressions represented:

AASHTO American Association of State Highway and Transportation Officials

AB	Aggregate Base
AC	Asphalt Concrete
ACB	Asphalt Concrete Institute
ACI	American Concrete Institute
ACP	Asbestos Cement Pipe
ACPA	American Concrete Pipe Association
AD	Assessment District
AGC	Associated General Contractors of America, Inc.
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
APWA	American Public Work Association
AREA	American Railway Engineers Association
ASME	American Society of Mechanical Engineers
ASCE	American Society of Civil Engineers
Asph	Asphalt
ASTM	American Society for Testing and Materials
AWG	American Wire Gage (Nonferrous Wire)
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BC	Beginning of Curb or Back of Curb
BCR	Beginning of Curve Return or Back of Curb Radius
BM	Bench Mark
BWG	Birmingham Wire Gage (Iron and Steel Wire)
CB	Catch Basin
C.C. or C/C	Center to Center
Cem.	Cement
CF	Curb Face
CI	Cast Iron
CIP	Cast-Iron Pipe
CIPP	Cast-in-Place Pipe
C.L. or CL	Center Line
CMP	Corrugated Metal Pipe
CMPA	Corrugated Metal Pipe Arch
CO	Clean Out
Col	Column

Conc.....	Concrete
Const.....	Construct
DF.....	Douglas Fir
DG.....	Decomposed Granite
DMH.....	Drop Manhole
D/W.....	Driveway
EC.....	End of Curve
EL. or Elev.....	Elevation
Ex. or Exist.	Existing
F & C.....	Frame and Cover
FH.....	Fire Hydrant
FL.....	Flow Line
Fl. El.....	Floor Elevation
FS.....	Federal Specification of Finished Surface
FHWA.....	Federal Highway Administration, Department of Transportation
Galv.....	Galvanized
GL.....	Ground Line
Gr.....	Grade
H.....	Height or High
HC.....	House Connection Sewer
Hor.....	Horizontal
ID.....	Inside Diameter
Inv.....	Invert
IP.....	Iron Pipe
ITE.....	Institute of Transportation Engineers
Lin.....	Liner
LL.....	Liquid Limit
Long.....	Longitudinal
Max.	Maximum
MH.....	Manhole
M.....	Thousand
m.....	meter or middle
Min.	Minutes or Minimum
Mon.....	Monolithic or Monument
MTD.....	Multiple Tile Duct
NEC.....	National Electrical Code
NEMA.....	National Electrical Manufacturers Association
NFPA.....	National Fire Protection Association
NGS.....	National Geodetic Survey
OC.....	On Center
OD.....	Outside Diameter
PC.....	Point of Curvature
PCC.....	Point of Compound Curve or Portland Cement Concrete
PI.....	Point of Intersection or Plasticity Index
PL.....	Property Line or Plastic Limit
PP.....	Power Pole
ppm.....	Parts per Million
PRC.....	Point of Reverse Curve
Prop.....	Proposed or Property
psf.....	Point of Tangency

psi	Pavement
PT	Polyvinylchloride Pipe
Q	Rate of Flow
R	Radius
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
Rdwy	Roadway
Ret.Wall	Retaining Wall
RGRCP	Rubber Gasket-Reinforced Concrete Pipe
s.	Slope
SAE	Society of Automotive Engineer
San.....	Sanitary
SCCP	Steel Cylinder Concrete Pipe
SD	Storm Drain
Sdl.....	Saddle
Sect.	Section
Spec.	Specification
San. S	Sanitary Sewer
St.	Street
Sta.	Station
Std.....	Standard
T	Tangent Distance
TH	Test Hole
THM	Trap Manhole
UL	Underwriters' Laboratories, Inc.
USA.....	United States of America Standards Institute, Inc.
V.....	Velocity
VC	Vertical Curve
VCP	Vitrified Clay Pipe
VCPI.....	Vertical Curve Point of Intersection
Vert.	Vertical
W.I.	Wrought Iron

1.02 All abbreviations and symbols used on plans for structural steel construction shall conform to those given in the Steel Construction Manual of the American Institute of Steel Construction.

PART 2 - DEFINITIONS

2.01 Agreement-- The written agreement which constitutes a contract between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement.

2.02 Application for Payment-- The form furnished by ENGINEER which is to be used by CONTRACTOR in requesting progress payments and which is to include the schedule of values required by paragraph 14.1 and an affidavit of CONTRACTOR that progress payments theretofore received on account of the Work have been applied by CONTRACTOR to discharge in full all of CONTRACTOR'S obligations reflected in prior Applications for Payment.

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

2.04 Bidder-- Any person, firm, or corporation submitting a Bid for the Work.

2.05 Bonds-- bid, performance, and payment bonds and other instruments of security, furnished by CONTRACTOR and his surety in accordance with the Contract Documents.

2.06 Change Order-- A written order to CONTRACTOR signed by COUNTY authorizing an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

2.07 CITY -- A public body or authority or the contracting agency for whom the work is to be performed.

2.08 Contract Documents-- The Agreement, Addenda (whether issued prior to the opening of Bids or the execution of the Agreement), Instructions to Bidders, CONTRACTOR's Bid, the Bonds, the Certificate of Insurance, the Notice of Award, Notice to Proceed, these COUNTY of McAllen Standard Specifications, Plans and Drawings, and all Modifications.

2.09 Contract Price-- The total monies payable to CONTRACTOR under the Contract Documents.

2.10 Contract Time-- The number of days stated in the Agreement for the completion of the Work, computed as provided in paragraph 17.2.

2.11 Contracting Agency-- (See COUNTY)

2.12 CONTRACTOR-- The person, firm, or corporation with whom OWNER has executed the Agreement.

2.13 Day-- A calendar day of twenty-four hours measured from midnight to the next midnight.

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

2.15 ENGINEER-- The OWNER'S employee or agent responsible for the engineering design and construction inspection and supervision, acting directly or through duly authorized representatives.

2.16 Field Order-- A written order issued by ENGINEER which clarifies or interprets the Contract Documents in accordance with paragraph 9.3 or order minor changes in the Work in accordance with paragraph 10.2.

2.17 General Conditions -- Conditions which apply to all projects and which can be modified by Special conditions.

2.18 General Provisions-- A term having the same meaning as the term General Conditions.

2.19 Modification-- (a) A written amendment to the Contract Documents signed by both parties, (b) a Change Order, (c) a written clarification or interpretation issued by ENGINEER in accordance with paragraph 9.3, or (d) a written order for a minor change or alteration in the Work issued by ENGINEER pursuant to paragraph 10.2. A Modification may only be issued after execution of the Agreement.

2.20 Notice of Award-- The written notice by OWNER to the apparent successful Bidder stating that, upon compliance with the conditions precedent to be fulfilled by him within the time specified, OWNER will execute and deliver the Agreement to him.

2.21 Notice to Proceed-- A written notice given by COUNTY 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 his obligations under the Contract Documents.

2.22 Project-- The entire construction to be performed as provided in the Contract Documents.

2.23 Reference Specifications, Test Methods, and Applicable Codes-- All standard specifications and test methods of any society, association, or organization herein referred to are hereby made a part of these Contract Documents the same as if written in full. (Any reference to a paragraph or subparagraph within a section shall include all general provisions of the section to which reference is made.) Reference to such standards refer to the latest published issues as of the date of publication issues as of the date of Invitation to Bid. Reference to local or state codes and laws shall mean the latest adopted and published codes as of the date of the Invitation to Bid.

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

2.25 Service Connections-- Service Connections shall be construed to mean all or any portion of the pipe, conduit, cable, or duct which connects a utility main or distribution line to a building, home, residence, or property.

2.26 Shop Drawings-- All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by CONTRACTOR, a Subcontractor, manufacturer, supplier, or distributor and which illustrate the equipment, material, or some portion of the Work.

2.27 Special Conditions-- Conditions which are written for a specific project and which modify any section or paragraph of the General Conditions.

2.28 Specifications, also Technical Specifications-- Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work. When Section Items 400, 402, 403, 420, 421, 440, 462, 464 make reference to the following Item numbers 132, 360, 404, 420, 424, 426, 427, 431, 437, 438, 441, 446, 448, 50, 522, 524, 526, 575, the CONTRACTOR shall use Texas Department of Transportation (TxDOT) Standard Specifications for Construction of Highways, Streets and Bridges Latest Edition for Specifications of the aforementioned Item Numbers.

2.29 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.

2.30 Substantial Completion-- The date as certified by ENGINEER when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it was intended; or if there be no such certification, the date when final payment is due in accordance with paragraph 14.13.

2.31 Supplementary Specifications-- which are written to modify any section or paragraph of the Technical Specifications of this document.

2.32 Utility--Overhead or underground wires, pipe lines, conduits, ducts, or structures, operated and maintained in or across a public right-of-way or easement or private easement.

- A. Public Utility--Owned and operated by a municipality or another political subdivision of the State.
- B. Private Utility--Owned and operated by a private company or corporation.

2.33 Work-- Any and all obligations, duties, and responsibilities necessary to the successful completion of the Project assigned to or undertaken by CONTRACTOR under the Contract Documents, including all labor, materials, equipment, and other incidentals, and the furnishing thereof.

***** END OF SECTION *****

PRELIMINARY MATTERS

PART 1 - EXECUTION OF AGREEMENT:

1.01 At least four (4) counterparts of the Agreement and such other Contract Documents as practicable will be executed and delivered by CONTRACTOR to COUNTY within fifteen days of the Notice of Award; and COUNTY will execute and deliver one counterpart to CONTRACTOR within ten days of receipt of the executed Agreement from CONTRACTOR. COUNTY will identify those portions of the Contract Documents not so signed and such identification will be binding on all parties. COUNTY, CONTRACTOR, and Project ENGINEER shall receive and executed counterpart of the Contract Documents and additional conformed copies as required.

PART 2 - DELIVERY OF BONDS

2.01 When he delivers the executed Agreements to COUNTY, CONTRACTOR shall also deliver to OWNER such Bonds as he may be required to furnish in accordance with the contract documents.

PART 3 - CONTRACT DOCUMENTS

3.01 COUNTY shall furnish to CONTRACTOR up to three (3) copies, unless otherwise provided in the Special 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.

PART 4 - CONTRACTOR'S ACKNOWLEDGMENT

4.01 CONTRACTOR represents that he has familiarized himself with and assumes full responsibility for having familiarized himself with the nature and extent of the CONTRACT DOCUMENTS, Work, locality, and will all local conditions and federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect performance of the Work and represents that he has correlated his study and observations with the requirement of the Contract Documents.

4.02 CONTRACTOR also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as he deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.

PART 5 - COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED

5.01 The Contract Time will commence to run on the thirteenth day after the day on which the executed Agreement is delivered by COUNTY to CONTRACTOR or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the nineteenth day after the day on which COUNTY delivers the executed Agreement to CONTRACTOR. A Notice to Proceed may be given at any time within thirty days after the day on which COUNTY delivers the executed Agreement to CONTRACTOR.

PART 6 - PRE-COMMENCEMENT ACTIVITIES

6.01 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. He shall at once report in writing to ENGINEER any conflict, error or discrepancy which he may discover; however, he shall not be liable to ENGINEER for his failure to discover any conflict, error, or discrepancy in the Drawings or Specifications.

6.02 Within ten days after delivery of the executed Agreement by COUNTY to CONTRACTOR, CONTRACTOR shall submit to ENGINEER for approval an estimated progress schedule indicating the starting and completion dates of the various stages of the Work and a preliminary schedule of Shop Drawing submissions.

6.03 Before starting the work at the site, CONTRACTOR shall furnish ENGINEER certificates of insurance as required in the Contract Documents. Within twenty days after delivery of the executed Agreement by COUNTY to CONTRACTOR, but before starting the Work at the site, a conference will be held to review the above schedules, to establish procedures for handling Shop Drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the Project. Present at the conference will be ENGINEER, Project Engineer, Project Inspector, CONTRACTOR and his Superintendent.

PART 7 - COMMENCEMENT

7.01 CONTRACTOR shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No Work shall be done at the site prior to the date on which the Contract time commences to run.

***** END OF SECTION *****

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 The Contractor shall be responsible for providing materials which meet the requirements indicated. For manufactured materials such as reinforcing steel, expansion joint materials, concrete pipe, cement, miscellaneous steel, cast iron materials, etc., the CONTRACTOR will be required to furnish a manufacturer's certificate that the material meets the requirements specified for this project.

1.02 The COUNTY shall monitor all materials incorporated into the project and their placement by testing at the COUNTY's expense. The COUNTY does not guarantee the accuracy or validity of the data nor does the COUNTY assume any responsibility for the CONTRACTOR'S interpretation of the data. Materials or work which do not meet the specifications shall be removed or modified.

1.03 All retesting for work rejected on the basis of the initial test results will be at the expense of the CONTRACTOR and the extent of the retesting shall be determined by the ENGINEER. The ENGINEER may require additional testing for failing tests and may require two passing retests acceptance will be made by the COUNTY.

1.04 The testing laboratory will be designated by the ENGINEER and shall perform all work in a professional manner and conform to the requirement of ASTM E 329.

1.05 Inspection, sampling and testing requirements, where applicable, are set forth in, but not necessarily limited to, the following Sections:

Section XXX Earthwork - Excavating, Backfilling and Compacting:

	Compaction Control and Testing.
Section	Sub-grade and Base Construction.
Section	Street Surface Courses.
Section	Concrete and Structures.
Section	Underground Piped Utilities.
Section	Incidental Construction.
Section	Soil Treatment, Termite Control.
Section	Pile Driving, Load Tests.
Section	Metal Fastening: Welding and Bolting.
Section	Structural Metal Framing.

PART 2 - LABORATORY DUTIES AND LIMITS OF AUTHORITY

2.01 Cooperate with ENGINEER and CONTRACTOR: provide qualified personnel as required promptly on notice.

2.02 Acquaint ENGINEER'S personnel with testing procedures and with all special conditions encountered at the site.

2.03 Perform specified inspections sampling and testing of materials and construction methods:

- A. Comply with specified standards, ASTM and other recognized authorities.
- B. Ascertain compliance with contract requirements.

2.04 Promptly notify the ENGINEER of irregularities or deficiencies of work which are observed during performance of services.

2.05 Promptly submit 3 copies of reports of observations and tests to the ENGINEER including but not limited to:

2.06 Perform additional services ordered by the ENGINEER.

2.07 Laboratory is not authorized to:

- A. Release, revoke, alter or enlarge on contract requirements.
- B. Approve or accept any portion of work.
- C. Perform any duties of the CONTRACTOR.

PART 3 - CONTRACTOR'S RESPONSIBILITIES

3.01 Furnish product mix design together with the applicable design work sheets and data to meet or exceed contract requirements.

3.02 Cooperate with COUNTY's laboratory personnel, provide access to the work or to the manufacturer's operations.

3.03 Provide to laboratory preliminary representative samples of materials to be tested in specified quantities.

3.04 Furnish copies of mill test reports.

3.05 Furnish verification of compliance with contract requirements for materials and equipment.

3.06 Furnish casual labor and facilities:

- A. To provide access to work to be tested.
- B. To obtain and handle samples at site.
- C. To facilitate inspections and tests.
- D. For laboratory's exclusive use for storage and curing of test samples.

3.07 Notify ENGINEER 24 hours in advance of operations to allow for the assignment of personnel.

3.08 Notify laboratory 24 hours in advance of operations to allow for the assignment of personnel.

3.09 Correct work which is defective or which fails to conform to the Contract Documents. Corrective work shall not delay the project or the work of other CONTRACTORS.

3.10 Pay all costs of retesting when test results indicate non-compliance with contract requirements.

3.11 Patch all surfaces and areas disturbed by testing operation.

***** END OF SECTION *****

SECTION 00105

AVAILABILITY OF LAND, PHYSICAL CONDITIONS AND REFERENCE POINTS

PART 1 - AVAILABILITY OF LANDS

1.01 COUNTY shall furnish, as indicated in the Contract Documents and not later than the date when needed by CONTRACTOR, the lands upon which the Work is done, rights-of-way for access thereto, and such other lands which are designated for the use of CONTRACTOR.

1.02 Easement for permanent structures or permanent changes in existing facilities will be obtained and paid for by COUNTY, unless otherwise specified in the Contract Documents. If CONTRACTOR believes that any delay in COUNTY's furnishing these lands or easements entitles him to an extension of the Contract Time, he may make a claim therefore in the Contract Documents.

1.03 CONTRACTOR shall provide for all additional lands and access thereto may be required for temporary construction facilities or storage of materials and equipment.

PART 2 - PHYSICAL CONDITIONS; SURVEYS AND REPORTS

2.01 The COUNTY will, upon request, furnish to the CONTRACTOR copies of all boundary surveys, subsurface tests, and other pertinent reports and material which are available in ENGINEER'S office.

2.02 CONTRACTOR shall promptly notify ENGINEER in writing of any subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents.

2.03 ENGINEER will promptly investigate those conditions and perform further surveys or subsurface tests deemed necessary. Promptly thereafter OWNER shall obtain the necessary additional surveys and tests and furnish copies to ENGINEER and CONTRACTOR.

2.04 If ENGINEER finds that the results of such surveys or tests indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents and which could not reasonably have been anticipated by CONTRACTOR, a Change Order shall be issued incorporating the necessary revisions.

PART 3 - REFERENCE POINTS

3.01 ENGINEER shall provide engineering surveys for construction to establish reference points which, in his judgment, are necessary to enable CONTRACTOR to proceed with the Work.

3.02 CONTRACTOR shall be responsible for surveying and laying out the Work (unless otherwise provided in the Special Conditions) and shall protect and preserve the established reference point and shall make no changes or relocations without the prior written approval of ENGINEER. He shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

3.03 CONTRACTOR shall replace and accurately relocate all reference points so lost, destroyed or moved.

***** END OF SECTION *****

SECTION 00107

WORK BY OTHERS

PART 1 - GENERAL

1.01 COUNTY may perform additional work related to the Project by itself, or it may let other direct contracts therefore which shall contain General Conditions similar to these. CONTRACTOR shall afford the other contractors who are parties to such direct contracts (or COUNTY, if it is performing the additional work itself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate his work with theirs.

1.02 If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor (or COUNTY,) CONTRACTOR shall inspect and promptly report to ENGINEER in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results. His failure so to report shall constitute an acceptance of the work as fit and proper for the relationship of his Work except as to defects and deficiencies which may appear in the other work after the execution of his Work.

1.03 CONTRACTOR shall do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work with the written consent of ENGINEER and of the other contractors whose work will be affected.

1.04 If the performance of additional work by other contractors of COUNTY is not noted in the Contract Documents prior to the execution of the contract, written notice thereof shall be given to CONTRACTOR prior to starting any such additional work. If CONTRACTOR believes that the performance of such additional work by COUNTY or others involves him an additional expense or entitles him to an extension of the Contract Time, he may make a claim therefore.

1.05 Work by the CONTRACTOR and work by others should be coordinated and expedited by the COUNTY of his representative to prevent time delays and additional cost to the CONTRACTORS. Any extension of time and/or additional costs caused by other contractors or utility service companies may be claimed.

*** * * END OF SECTION * * ***

in connection with the project is subject to the payment of any license fee or royalty; and identifying all variations of the proposed substitute from that specified and indicating available maintenance service. No substitute shall be ordered or installed without the written approval of ENGINEER, who will be the judge of equality and may require CONTRACTOR to furnish such other data about the proposed substitute as he considers pertinent. No substitute shall be ordered or installed without such performance guarantee and bonds as ENGINEER may require which shall be furnished at CONTRACTOR's expense.

PART 4 - SUBCONTRACTORS

4.01 CONTRACTOR shall not employ and subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom COUNTY or ENGINEER may have reasonable objection. A subcontractor or other person or organization identified in writing to COUNTY and ENGINEER by CONTRACTOR prior to the notice of award and not objected to in writing by COUNTY or ENGINEER prior to the Notice of Award will be deemed acceptable to COUNTY and ENGINEER. Acceptance of any subcontractor, other person, or organization by COUNTY or ENGINEER shall not constitute a waiver of any right of COUNTY or ENGINEER to reject defective work or work not in conformance with the contract documents.

4.02 If COUNTY or ENGINEER, after due investigation, have reasonable objection to any subcontractor, other person, or organization proposed by CONTRACTOR after the notice of award, CONTRACTOR shall submit an acceptable substitute and the contract price shall be increased or decreased by the difference in cost occasioned by such substitution and on appropriate change order shall be issued. CONTRACTOR shall not be required to employ any subcontractor, other person, or organization against whom he has reasonable objection. CONTRACTOR shall not, without the consent of COUNTY and ENGINEER, make any substitution for any subcontractor, other person, organization who has been accepted by COUNTY and ENGINEER unless ENGINEER determines that there is good cause for doing so.

4.03 CONTRACTOR shall be fully responsible for all acts and omissions of his subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the contract documents shall create any contractual relationship between COUNTY or ENGINEER and any subcontractor or other person or organization having a direct contract with CONTRACTOR, nor shall it create any obligation on the part of COUNTY or ENGINEER to pay or to see to the payment of any monies due any subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific work done in accordance with the schedule of values.

4.04 The sections of the specifications and the identifications of any drawings shall not control CONTRACTOR in dividing the work among subcontractors or delineating the work to be performed by any specific trade.

4.05 CONTRACTOR agrees to bind specifically every subcontractor to the applicable terms and conditions of the contract documents for the benefit of COUNTY.

PART 5 - PATENT FEES AND ROYALTIES

5.01 CONTRACTOR shall pay all license fees and royalties and assume all costs incident to

the use in the performance of 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 two work and if, to the actual knowledge of COUNTY 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 COUNTY in the contract documents.

5.02 CONTRACTOR shall indemnify and hold harmless COUNTY and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses, including attorneys' fees, 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.

PART 6 - PERMITS

6.01 CONTRACTOR shall obtain and pay for all construction permits and licenses and shall pay all governmental charges and inspection fees necessary for the prosecution of the work, which are applicable at the time of his bid. COUNTY shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACT, when necessary, in obtaining such permits and licenses. CONTRACTOR shall also pay all public utility charges.

PART 7 - LAWS, REGULATIONS AND ORDINANCE

7.01 Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the work. If CONTRACTOR observes that the specifications or drawings are at variance therewith, he shall give ENGINEER prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate modification. If CONTRACTOR performs any work knowing it to be contrary to such law, ordinances, rules, and regulations and without such notice to ENGINEER, he shall bear all costs arising there from; however, it shall not be is primary responsibility to make certain that the specifications and drawings are in accordance with such laws, ordinances, rules and regulations.

PART 8 - TAXES

8.01 CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by him in accordance with the laws and ordinances.

PART 9 - USE OF PREMISES

9.01 CONTRACTOR shall confine his equipment, the storage of materials and equipment, and the operations of his workmen to areas permitted by law, ordinances, permits, or the requirements of the contract documents and shall not unreasonably encumber the premises with materials or equipment.

9.02 CONTRACTOR shall not load nor permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the work to stresses or pressures that will endanger it.

PART 10 - RECORD DRAWINGS

10.01 CONTRACTOR shall keep one record copy of all specifications, drawings, addenda, modifications, and shop drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to ENGINEER and shall be delivered to him for COUNTY upon completion of the project.

PART 11 - SAFETY AND PROTECTION

11.01 CONTRACTOR shall be responsible for initiating maintaining, and supervising all safety precautions and programs in connection with work. He shall take all necessary precautions for the safety of and provide the necessary protection to prevent damage, injury, or loss to:

- A. All employees on the work and other persons who may be affected thereby:
- B. All the work and materials or equipment to be incorporated there-in whether in storage on or off the site; and
- C. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

11.02 The CONTRACTOR shall conduct his operations in a manner which will minimize interference with the normal use of property adjacent to the construction work and shall give owners of such property at least 24 hours notice of the commencement of work in the area abutting their property. CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. He shall notify owners of adjacent utilities at least 48 hours in advance when prospection of the work may effect them. All damage, injury, or loss to any property referred to above caused, directly or indirectly, in whole or in part, by CONTRACTOR, any subcontractor, or anyone directly or indirectly employed by any of them 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 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 of negligence of CONTRACTOR.

11.03 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 CONTRACTOR that work is acceptable.

11.04 CONTRACTOR shall designate a responsible member of his organization 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.

PART 12 - EMERGENCIES

12.01 In emergencies affecting the safety of persons or the work or property at the site or

adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER, is obligated to act, at his discretion, to prevent threatened damage, injury, or loss. He shall give ENGINEER prompt written notice of any significant changes in the work or deviations from the contract documents caused thereby; and a change order shall thereupon be issued covering the changes and deviations involved.

12.02 If CONTRACTOR believes that additional work done by him in any emergency which arose from causes beyond his control entitles him to an increase in the contract price or an extension of the contract time, he may make a claim there for.

PART 13 - SHOP DRAWINGS AND SAMPLES

13.01 After checking and verifying all field measurements, CONTRACTOR shall submit to ENGINEER for approval, in accordance with the accepted schedule of shop drawing submissions, five copies (or, to ENGINEER's option, one reproducible copy) of all shop drawings which shall have been checked by and stamped with the approval of CONTRACTOR and identified as ENGINEER may require. The date shown on the shop drawing will be complete with respect to dimensions, design criteria, materials of construction, and the like to enable ENGINEER to review the information as required.

13.02 CONTRACTOR shall also submit to ENGINEER for 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 stamped with the approval of CONTRACTOR, identified clearly as to material, manufacturer, and pertinent catalog numbers and the use for which intended.

13.03 At the time of each submission, CONTRACTOR shall in writing call ENGINEER's attention to any deviations that the shop drawings or sample may have from the requirements of the contract documents.

13.04 ENGINEER will review and approve with reasonable promptness shop drawings and samples, but his review and approval shall be only for conformance with the design concept of the project and for compliance with the information given in the contract documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make any corrections required by ENGINEER and shall return the required number of corrected copies of shop drawings and resubmit new samples until approved. CONTRACTOR shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections called by the ENGINEER on previous submissions. CONTRACTOR's stamp of approval on any shop drawing or sample shall constitute a representation to ENGINEER that CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or he assumes full responsibility for doing so and that he has reviewed or coordinated each shop drawing or sample with the requirements of the work and the contract documents.

13.05 Where a shop drawing or sample submission is required by the specifications, no related work shall be commenced until the submission has been approved by ENGINEER. A copy of each approved shop drawing and each approved sample shall be kept in a good order by CONTRACTOR at the site and shall be available to ENGINEER.

13.06 ENGINEER approval of shop drawings or samples shall not relieve CONTRACTOR from

his responsibility for any deviations from the requirements of the contract documents unless CONTRACTOR has in writing called ENGINEER's attention to such deviation at the time of submission and ENGINEER has given written approval to the specific deviation, nor shall any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the shop drawings.

PART 14- CLEANING

14.01 CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish, and debris from and about the premises, as well as all tools, construction equipment and machinery, and surplus materials and shall leave the site clean and ready for occupancy by COUNTY. CONTRACTOR shall restore to their original condition those portions of the site not designated for alterations by the contract documents, unless the completion of the work is directly affected by the item in dispute.

PART 15 - INDEMNIFICATION

15.01 CONTRACTOR shall indemnify and hold harmless COUNTY and ENGINEER and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the work by the CONTRACTOR, 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 there-from and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any 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 it is caused in part by a party indemnified hereunder.

15.02 In any and all claims against COUNTY or ENGINEER or any of their agents or employees by copy any employees of CONTRACTOR, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 15.01 shall not be limited in any way by any limitation on the amount of type of damages, compensation, or benefits payable by or for CONTRACTOR or any subcontractor under workmen's compensation acts, disability benefit acts, or other employee benefit acts.

15.03 The obligations of CONTRACTOR under paragraph 15.01 shall not extend to the liability of ENGINEER, his agents, or employees arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys change orders, designs, or specifications or (b) the giving of or giving or failure to give is the primary cause of injury or damage.

***** END OF SECTION *****

SECTION 00113

SOILS AND SUBSURFACE INVESTIGATION

PART 1 - GENERAL

- 1.01** Depending on the project requirements, the ENGINEER may have obtained geotechnical information, which may include subsurface data, logs of soil borings and recommendations from geotechnical consultants.
- 1.02** Any information obtained is solely for use by the ENGINEER in the design of the project and are not part of the contract. If soil borings have been prepared they will be included in the section or on the plans.
- 1.03** Any geotechnical information included is for information only. The COUNTY and the ENGINEER do not guarantee the accuracy or validity of the data, nor do they assume any responsibility for the CONTRACTOR'S interpretation or conclusions drawn from the data.
- 1.04** The CONTRACTOR may, at his option, perform additional subsurface investigations at his own expense.

*****END OF SECTION*****

PREPARATION OF RIGHT-OF-WAY

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. Removal and disposal of all obstructions from the right-of-way and from designated easements, as noted in the plans.
- B. Obstructions shall include:
 - 1. Remains of houses not completely removed by others.
 - 2. Concrete, foundations, floorslabs curb and gutter, driveways, and sidewalk.
 - 3. Building materials such as brick, lumber and plaster.
 - 4. Water wells, septic tanks, manholes, inlets , utility pipes and conduits.
 - 5. Underground service station tanks, equipment or other foundations.
 - 6. Fencing and retaining walls.
 - 7. Paved parking areas.
 - 8. Abandoned railroad tracks, ties, and scrap iron.
 - 9. Ancillary structures such as shacks and outhouses.
 - 10. Trees, stumps, bushes, shrubs, roots, limbs and logs.
 - 11. All rubbish and debris whether above or below ground.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide materials required to perform work as specified.

PART 3 - EXECUTION

3.01 GENERAL

- A. Clear entire project right-of-way and such other areas, including public or corporate lands, specified in the plans of all structures and obstructions.
- B. Trim carefully all trees and shrubs designated for preservation and protect from scarring or other injuries during construction operation.
- C. Removal of all foundations and underground obstructions, unless otherwise specified, shall be removed to the following depths:
 - 1. In embankment areas, two (2) feet below natural ground.
 - 2. In excavation areas, two (2) feet below the lower elevation of excavation.
 - 3. In all other areas, one (1) foot below natural grade.

- D. Backfill all holes, as directed by the ENGINEER, resulting from all removals.
- E. Complete the preparation of right-of-way such that prepared right-of-way is free of holes, ditches and other abrupt changes in elevations and irregularities to contours.
- F. Plug the remaining ends of all abandoned storm sewers, culverts, sanitary sewers, conduits and utility pipes with concrete, as specified by the ENGINEER, to form a tight closure.
- G. On existing concrete where only a portion is to be removed, care shall be exercised to avoid damage to remaining concrete. Where concrete reinforcement is encountered in removed portions, a minimum of one (1) foot of such reinforcement shall be cleaned of old concrete and left in place to tie into new construction. Concrete to be preserved, but subsequently destroyed by the CONTRACTOR'S operations, shall be replaced by the CONTRACTOR'S operations, shall be replaced by the CONTRACTOR at his expense in accordance with County Specifications, or as directed by the ENGINEER.

PART 4 - MEASUREMENT AND PAYMENT

4.01 PREPARATION OF RIGHT-OF-WAY

- A. Preparation of right-of-way shall be measured on a lump-sum basis with measurement for payment made only on areas indicated and classified on the plans as preparation of right-of-way.
- B. When not listed as a separate contract pay item, preparation of right-of-way shall be considered as incidental work, and the cost thereof shall be included in such contract pay item(s) as are provided in the proposal contract.
- C. Compensation, whether by contract pay item or incidental work will be for furnishing all materials, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

*****END OF SECTION*****

SECTION 02102

CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. Clearing and grubbing on project site of trees, stumps, brush, roots, vegetation, logs, rubbish and other objectionable matter within limits described in specifications or as shown on plans.
- B. Clearing and grubbing shall be in advance of grading operation except that in cuts over 3 feet in depth, grubbing may be done simultaneously with excavation, provided objectionable matter is removed as specified.
- C. Disposal of all debris resulting from clearing and grubbing work.

1.02 PROTECTION OF ADJACENT WORK:

- A. Protect all areas outside indicated construction areas.
- B. Protect existing improvements, adjacent property, utilities and other facilities, and trees and plants not to be removed from injury or damage.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Provide materials required to perform work as specified.

PART 3 - EXECUTION

3.01 CLEARING:

- A. Clear all areas covered by dikes, roads, structures and embankments within project limits unless otherwise shown in plans.
- B. Remove all saplings, brush, down-timber and debris unless shown or directed otherwise.
- C. Use tree wound paint to treat scars, gashes or limb stubs on trees not removed.

3.02 GRUBBING:

- A. Trees, stumps, root systems, rocks and other obstructions shall be removed to the depths shown when they fall within the construction templates for the following items:
- | | | |
|----|-------------------------------------|-------------------------------|
| 1. | Footings | 18" below bottom of footing |
| 2. | Sidewalks (or other types of walks) | 12" below bottom of walk |
| 3. | Roadways or Streets | 18" below bottom of sub-grade |
| 4. | Parking Areas | 18" below bottom of sub-grade |
| 5. | Grassed Areas | 18" below top soil |
| 6. | Fills | 24" below bottom of fill |
- B. Blasting not permitted.

3.03 REMOVAL OF DEBRIS AND CLEANUP:

- A. Burn as permitted by regulating agencies or the ENGINEER as work progresses.
- B. Unguarded fires will not be permitted.
- C. Permits will be obtained, where required, for necessary burning or disposal sites.
- D. Dispose of all waste materials not burned by removal from site.
- E. Materials cleared and grubbed shall be the property of the CONTRACTOR and shall be his responsibility for disposal.

PART 4 - MEASUREMENT AND PAYMENT

4.01 CLEARING AND GRUBBING:

- A. Clearing and Grubbing shall be measured for payment either in acres or by lump sum only for areas indicated on the plans, or as provided in the proposal and contract.
- B. When not listed as a separate contract pay item, Clearing and Grubbing shall be considered as incidental work, and the cost thereof shall be included in such contract pay items as are provided in the proposal contract.
- C. Compensation, whether by contract pay items or incidental work will be furnishing all materials, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

*****END OF SECTION*****

SECTION 02210

SUBGRADE PREPARATION

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. This work shall consist of scarifying, blading and rolling the sub-grade to obtain a uniform texture and provide as nearly as practical a uniform density for the 6-inches of the sub-grade.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 CONSTRUCTION METHODS:

- A. All preparing of the right-of-way and/or clearing and grubbing shall be complete before starting the sub-grade preparation.
- B. The sub-grade shall be scarified and shaped in conformity with the typical sections and the lines and grades indicated or as established by the ENGINEER by the removal of existing material or addition of approved material.
- C. All unsuitable material shall be removed and replaced with approved material.
- D. All foundations, walls or other objectionable material shall be removed to a minimum depth of 18-inches under all structures and 12-inches under areas to be vegetated. All holes, ruts and depressions shall be filled with approved material.
- E. The surface of the sub-grade shall be finished to the lines and grades as established and be in conformity with the typical sections indicated.
- F. Any deviation in excess of 1/2 inch cross section and in a length of 10 feet measured longitudinally shall be corrected by loosening, adding or removing material, reshaping and compacting by sprinkling and rolling.
- G. Sufficient sub-grade shall be prepared in advance to insure satisfactory prosecution of the work.
- H. The CONTRACTOR will be required to set blue tops for the sub-grade on centerline, at quarter points and curb lines or edge of pavement at intervals not exceeding 50 feet.
- I. All suitable material removed may be utilized in the sub-grade with the approval of the ENGINEER. All other material required for completion of the sub-grade shall also be subject to approval by the ENGINEER.

- J. Sub-grade materials on which structures shall be placed shall be compacted by approved mechanical tamping equipment to a dry density of the total material of not less than 95 percent nor more than 100 percent of the maximum dry density as determined in accordance with SDHPT test method tex-114-E.
- K. Sub-grade materials on which planting or turf will be established shall be compacted to a minimum of 85 percent of the maximum dry density as determined in accordance with SDHPT test method tex-114-E.
- L. Tests for density will be made as soon as possible after compacting operations are completed. If the material fails to meet the density specified, it shall be reworked as necessary to obtain the density required.
- M. Just prior to placing any base materials, density and moisture content of the top 6-inches of compacted sub-grade shall be checked and if tests show the density to be more than 2 percent below the specified minimum or the moisture content to be more than 3 percent above or below the optimum, the sub-grade shall be reworked as necessary to obtain the specified compaction and moisture content.
- N. When lime stabilization of the sub-grade is specified, the lime is to be added in accordance with Section 02240, Lime Stabilization.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. All acceptable sub-grade preparation will be measured by the square yard.
- B. The measured area includes the entire width of the roadway for the entire length as indicated.

4.02 PAYMENT

- A. The accepted quantities of sub-grade preparation will be paid for at contract unit bid price per square yard.
- B. When not listed as a separate contract pay item, sub-grade preparation shall be considered as incidental work, and the cost thereof shall be included in such contract pay item (s) as are provided in the proposal contract.
- C. Compensation, whether by contract pay item or incidental work will be for furnishing all materials, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

***** END OF SECTION *****

SECTION 02221

TRENCH EXCAVATION, BACKFILL AND COMPACTION

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. Excavation, shoring, de-watering, pipe bedding, trench backfill, compaction, grading and cleanup of all pipeline trenching for the project.
- B. All work must be done in accordance with these specifications and the safety requirements of the State and OSHA Standards.

1.02 JOB CONDITIONS:

- A. Site Acceptance:
 - 1. Accept site in condition existing during Contract time frame.
 - 2. Ground water/surface water found during construction are conditions of the contract and responsibility of Contractor.
- B. Adverse Weather:
 - 1. Place no backfill that is excessively wet or frozen.
 - 2. Place no backfill in excessively wet or frozen trenches.

PART 2 - PRODUCTS

2.01 PIPE BEDDING AND BACKFILL:

- A. The type of bedding shall be stated on the Plans or in the Special Conditions of the contract document. Determination of source of materials for bedding and backfill to meet the stated conditions shall be responsibility of CONTRACTOR, but use of such materials shall be subject to approval of ENGINEER.
- B. Excavated Material Backfill:
Excavated material may be used in the trench backfill, provided that all hard rock and stones having any dimensions greater than 6 inches and frozen earth debris and roots larger than 2 inches are removed for the initial backfill.
- C. Select Backfill:
Select backfill shall be gravel, fine rock cuttings, sand, sandy loam or loam free from excessive clay. Rock cuttings shall have no dimension greater than 2 inches.
- D. Sand Backfill:
Sand backfill shall be clean, hard, durable, un-coated grains, free from lumps and organic material. All materials must pass a No. 8 Sieve.

- E. Granular Backfill:
Granular backfill shall be free flowing, such as sand or hydraulically graded shall be free from lumps, stones over 2 inches in diameter, clay and organic matter.
- F. Controlled Density Fill:
Use high slump mixture of portland cement, fly ash and fine aggregate formulated, licensed and marketed as K-Krete or equal. Provide mixture with minimum 28-day compressive strength of 70 psi with no measurable shrinkage or surface settlement.

2.02 CRADLING ROCK:

- A. Use crushed rock or stone with 70-100% passing 1 > inch sieve and no more than 50% passing 1 inch sieve.

2.03 SHEETING, SHORING AND BRACING:

- A. Use sound timber or structural steel.
- B. Use shapes and sizes as required.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Dewatering:
 - 1. Execute work "dry". No pipe or conduits shall be laid or concrete poured on excessively wet soil.
 - 2. Prevent surface water from flowing into excavation.
 - 3. Provide equipment for handling water encountered as required. Obtain approval of proposed method of dewatering.
 - 4. No sanitary sewer shall be used for disposal of trench water.
- B. Protection of Existing Utilities:
 - 1. Notify all utilities of location and schedule of work.
 - 2. Locations and elevations of utilities shown on plans are to be considered approximate only. Notify utility and ENGINEER of conflicts between existing and proposed facilities.
 - 3. Repair, relay or replace existing utilities damaged, destroyed or disrupted during work. Unless specified otherwise, replacement will be at the CONTRACTOR's expense.

C. Sheeting, Shoring and Bracing:

1. Provide as necessary, to hold walls of excavation, prevent damage to adjacent structures, and to protect workmen and property.
2. Leave sheeting and shoring in place where removal might cause damage to work or otherwise indicated on drawings.
3. When movable trench shield is used below spring line of pipe, it shall be lifted prior to any forward movement to avoid pipe displacement.

D. Changes in Grade:

1. Grades may be adjusted 1.5 feet (plus or minus) from plan grades to suit unforeseen construction conflicts or conditions with approval of ENGINEER.
2. No additional compensation will be made for such changes.

3.02 EXCAVATION AND TRENCHING:

A. General:

1. Method of excavation at CONTRACTOR's option.
2. Excavate by hand under tree roots 3 inches and larger, and under and around structures and utilities.
3. Stockpile and replace topsoil to a minimum of 8 inches for surface restoration in grassed or agricultural areas.

B. Trench Characteristics:

1. Depth: as indicated for pipe installation to lines and grades required with proper allowance for thickness of pipe and type of bedding specified or indicated.
2. Width:
 - a. Keep width of trench as narrow as possible and yet provide adequate room for backfilling and jointing.
 - b. Maximum width as follows:

Pipe Size <u>Inches</u>	Max. Trench <u>Width</u>
4 & 6	2' - 0"
8 & 10	2' - 4"
12	2' - 6"
15	2' - 9"
18	3' - 0"
Over 18	Pipe O.D. + 12"

3. Trench walls must be vertical below top of pipe and may be vertical or sloped above pipe to conform to excavating codes.
4. Provide bell holes for each pipe joint where pipe bears on undisturbed earth.
5. Trench bottom shall be free of large stones and other foreign material.

3.03 SOFT, SPONGY OR UNSTABLE MATERIALS:

- A. Stop work and notify ENGINEER.
- B. Perform remedial work as directed.
- C. If material is judged unsuitable and removal is authorized, remove and replace with trench stabilizing material as directed by ENGINEER.

3.04 ROCK EXCAVATION:

- A. Excavate any rock to maintain minimum 6-inch clearance around pipe.
- B. Dispose of rock material not suitable for backfill as directed by ENGINEER.
- C. Use of explosives not permitted without prior written authorization from OWNER and ENGINEER.
- D. Provide Special Hazard Insurance covering liability for blasting operations.

3.05 BEDDING:

- A. Place after bottom of trench has been excavated to proper depth and grade.
- B. Place, compact and shape bedding material to conform to barrel of pipe to insure continuous firm bedding for full length of pipe.
- C. Provide bedding as described in following table unless indicated otherwise on Plans or in Special Conditions.

<u>Pipe Material</u>	<u>Minimum Bedding Class</u>
1. Vitrified Clay Pipe	Class C *
2. Non-reinforced Concrete Pipe	Class C *
3. Reinforced Concrete Pipe	Class D *
4. Ductile Iron Pipe	Class D *
5. Steel Cylinder	Class C *
6. Flexible or Composite Pipe	Class 1 **

- * Refers to standard detail, "Pipe Envelope Requirements ",Dwg. D-01.
- ** Refers to standard detail, "Flexible Pipe Bedding Requirements", Dwg. D-02.

3.06 TRENCH BACKFILL

- A. Use excavated material backfill (2.01B) unless otherwise specified.
- B. Use Sand Backfill for all trenches within 5 feet of buildings and beneath walks, parking areas, paved streets or existing exposed utilities.
- C. Initial Backfill:
 - 1. Place after pipe has been bedded and checked for alignment, grade and internal obstructions.
 - 2. Carry out in an orderly fashion after authorization to cover pipe has been given.
 - 3. Allow no more than 300 feet of trench to be open at one time.
 - 4. Do not backfill until concrete or mortar has sufficiently cured.
 - 5. Record location of connections and appurtenances before backfilling.
 - 6. Place by hand and hand tamp to not less than 12-inches above top of pipe, in approximately 4-inch layers.
 - 7. Backfill simultaneously on both sides of pipe to prevent displacement.
 - 8. Place cushion of 4 feet above pipe envelope before using heavy compacting equipment.
- D. Subsequent Backfill:
 - 1. Place backfill into trench at an angle so that impact on installed pipe is minimized.
 - 2. Compaction of all backfill material shall be performed in a manner that shall not crack, crush, and/or cause the installed pipe to be moved from the established grade and/or alignment.
 - 3. Area under or within 5 feet of pavement; and under or within 2 feet of utilities, buildings, or walks shall be mechanically compacted to the top of the sub-grade in 6-inch lifts to a minimum of 95 percent Standard Proctor Density.
 - 4. Areas not subject to vehicular traffic shall be backfilled in layers not more than 10-inches in depth.
 - 5. Compaction method at discretion of CONTRACTOR with following exceptions:
 - a. If in OWNER's opinion compaction method presents potential damage to pipe, it will not be allowed.
 - b. Compaction of any backfill material by flooding or jetting will require prior written authorization of ENGINEER.
 - 6. Mound excavated materials no greater than 6 inches in open areas only.

7. Fill upper portion of trench with topsoil as specified hereinbefore.

E. Controlled Density Fill:

1. Use where shown on plans.
2. Provide suitable forms to limit volume of control density fill material.
3. Prevent flow of material into existing drain lines.
4. Protect exposed utility lines during placement.
5. Place material in accordance with suppliers' written recommendations unless directed otherwise by ENGINEER.

3.07 EXCESS MATERIAL:

- A. Waste excess excavated material where directed by ENGINEER.

3.08 TESTING:

- A. Unless specified elsewhere, testing will be responsibility of OWNER.

B. Standard Proctor Density:

1. ASTM D698.
2. One (1) required for each type of material encountered.

C. In Place Density:

1. ASTM D1556 (Sand Cone)
2. ASTM D2167 (Balloon)
3. ASTM D3017 (Nuclear)

- D. One (1) test per each 400 cubic yards of backfill placed.

PART 4 - MEASUREMENT AND PAYMENT

4.01 TRENCH EXCAVATION:

- A. Trench excavation shall be considered incidental to pipeline installation.
- B. Payment shall be made at the contract unit price per cubic yard only if a bid item is established in the contract.

4.02 BACKFILL:

- A. Payment for backfill shall be made at the contract unit price per cubic yard only if a separate bid item is established in the contract.
- B. No allowance for waste shall be made.

- C. If ENGINEER orders an initial backfill material other than that specified in contract, it shall be paid for as an extra in price per cubic yard as compacted in place, EXCEPT if a higher class embedment is ordered by ENGINEER because the CONTRACTOR has over-excavated the trench width.
- D. If the CONTRACTOR over-excavates the trench width and the ENGINEER orders the next higher class of embedment to be used, the embedment for as if the original specified embedment was used.
- E. If the ENGINEER orders the excavated material to be removed and disposed of and replaced with another material and a separate bid item is not established as a bid item, the material shall be paid as an extra.
- F. If the CONTRACTOR fails to compact the backfill to the density requirements, the ENGINEER may order the material removed and replaced at no cost to the OWNER.
- G. The disposal of rejected material shall be at no cost to the OWNER.

*** * * * END OF SECTION * * * ***

UNCLASSIFIED STREET EXCAVATION

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. Perform all required excavation within the limits of right-of-way and adjacent thereto (except excavations specifically described and provided for elsewhere in the specifications).
- B. Remove, properly use, or dispose of all excavated materials.
- C. Shape and finish all earthwork in conformance with lines and grades as shown on the plans or as specified by the ENGINEER.
- D. Schedule work to avoid property owner inconvenience as practical during construction.
- E. Exercise care in operating applicable equipment beneath or adjacent to trees, sidewalks, poles, and other existing features to prevent damage.
- F. Restore obstructions removed to accommodate construction equipment or to facilitate excavation.

1.02 CLASSIFICATION:

- A. All street excavation shall be unclassified, regardless of material encountered.
- B. Any reference to rock or any other material on the plans, or in these specifications, is not to be constructed as classification of the excavation.

PART 2 - PRODUCTS

2.01 SUBGRADE:

- A. Use on-site material moved from cut areas to fill areas as approved by ENGINEER.
- B. Use borrow materials from areas designated as needed.

2.02 DRAINAGE PROVISIONS:

- A. Interruptions of natural surface drainage, or flow of artificial drains shall be mitigated by the CONTRACTOR by use of temporary drainage facilities, as approved by the ENGINEER, to prevent damage to public or private interest.

- B. Restore original drainage as soon as the work shall permit.
- C. The CONTRACTOR shall be held liable for all damages which may result from neglect to provide for either natural or artificial drainage which his work may have interrupted.

PART 3 - EXECUTION

3.01 UNCLASSIFIED STREET EXCAVATION:

- A. Perform all excavation, embankment and grading required for pavement and/or curb and/or gutter as shown on plans.
- B. Move suitable excavated material to areas requiring fill and place in accordance with these specifications. Determination of suitable material will be made by ENGINEER. Haul unsuitable material to waste sites.
- C. Slope cut or fill sections uniformly from curb line to sidewalk or other controlling feature, as designated by ENGINEER. Smooth bank to provide a neat finished appearance.
- D. Remove and replace unstable soils encountered during grading operations with suitable material. Notify ENGINEER of suspected unsuitable material before commencing removal. Authorized replacement with select material will be paid for by change order.
- E. Replace gravel or rock driveway surfaces disturbed by grading with like material at no additional cost to OWNER.
- F. Strip, salvage and stockpile topsoil in sufficient quantity to allow a uniform 6-inch lift over all disturbed areas not otherwise surfaced. Topsoil is included in unclassified excavation.
- G. Removed existing culvert pipe where shown as part of incidental to unclassified excavation.

3.02 UNSTABLE OR UNSUITABLE SUBGRADE:

- A. Excavate unstable subgrade at least 2 feet below grade where directed by ENGINEER.
- B. Replace with suitable stable material approved by ENGINEER.
- C. Compact to uniform density in 6-inch lifts.
- D. Density of compacted subgrade to be equal to or greater than adjacent undisturbed grade.

- E. Payment will be as specified for unclassified excavation.
- F. Conduct operations in such a manner such that measurements may be taken before any backfill, as required above, is placed.

3.03 EXCESS OR UNSUITABLE EXCAVATION:

- A. Dispose of excavation in excess of that needed or unsuitable for construction. As directed by the ENGINEER, excess or unsuitable excavation may be used for widening of embankments, or flattening of slopes, or as otherwise specified.
- B. Obtain approval of the ENGINEER as to disposition and method for disposal of excess or unsuitable excavation.

3.04 GENERAL:

- A. Provide all labor, equipment and associated materials to excavate areas specified.

PART 4 - MEASUREMENT AND PAYMENT

4.01 UNCLASSIFIED STREET EXCAVATION:

- A. Unclassified street excavation, as authorized, shall be measured in its original position and the volume determined by the average end area method. All work performed shall be paid for at the contract bid price per cubic yard for unclassified street excavation.
- B. When not listed as a separate contract pay item, unclassified street excavation shall be considered as incidental work, and the cost thereof shall be included in such contract pay items as are provided in the proposal contract.
- C. Compensation, whether by contract pay item or incidental work will be for furnishing all materials, labor, equipment, tools and incidentals required by the work, all in accordance with the plans and these specifications.

***** END OF SECTION *****

SECTION 02230

EXCAVATION

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK

- A. This work shall consist of excavating and properly utilizing or otherwise satisfactorily disposing of all excavated materials, of whatever character, within the limits of work.
- B. Excavation shall also consist of constructing, compacting, shaping and finishing of all earthwork in designated areas on the plans, as specified herein, and in conformity with the required lines grades and typical cross sections or as directed by the ENGINEER.
- C. When not otherwise included, this item shall include the work described in Section 02101 - Preparation of Right-of Way, Section 02102 - Clearing and Grubbing, Section 02236 - Embankment, Section 02238 - Removal of Concrete, and Section 02210 - Sub-grade Preparation.

Introduction

The Occupational Safety and Health Administration (OSHA) issued its first Excavation and Trenching Standard in 1971 to protect workers from excavation hazards. Since then, OSHA has amended the standard several times to increase worker protection and to reduce the frequency and severity of excavation accidents and injuries. Despite these efforts, excavation-related accidents resulting in injuries and fatalities continue to occur.

To better assist excavation firms and contractors, OSHA has completed updated the existing standard to simplify many of the existing provisions, add and clarify definitions, eliminate duplicate provisions and ambiguous language, and give employers added flexibility in providing protection for employees. The standard is effective as of March 5, 1990.

In addition, the standard provides several new appendices. One appendix provides a consistent method of soil classification. Others provide sloping and benching requirements pictorial examples of shoring and shielding devices, timber tables, hydraulic shoring tables, and selection charts that provide a graphic summary of the requirements contained in the standard.

This booklet highlights the requirements in the updated standard excavation and trenching operations, provides methods for protecting employees against cave-ins, and described safe work practices for employees.

Scope and Application

OSHA's revised rule applies to all open excavations in the earth's surface, which includes

trenches.

According to the OSHA construction safety and health standards, a trench is referred to as a narrow excavation made below the surface of the ground in which the depth is greater than the width-the width not exceeding 15 feet. An excavation is any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal. This can include excavations for anything from cellars to highways.

General Requirements

Planning for Safety

Many on-the-job accidents are a direct result of inadequate initial planning. Correcting mistakes in shoring and/or sloping after work has begun slows down the operation, adds to the cost, and increases the possibility of an excavation failure. The contractor should build safety into the pre-bid planning in the same way all other pre-bid factors are considered.

It is a good idea for contractors to develop safety checklists before preparing a bid, to make certain there is adequate information about the job site and all needed items are on hand.

These checklists should incorporate elements of the relevant OSHA standards as well as other information necessary for safe operations.

Before preparing a bid, these specific site conditions should be taken into account:

- Traffic,
- Nearness of structures and their conditions,
- Soil,
- Surface and ground water,
- The water table,
- Overhead and underground utilities and
- Weather.

These and other conditions can be determined by job site studies, observations, test borings for soil type or conditions, and consultations with local officials and utility companies.

Before any excavation actually begins, the standard requires the employer to determine the estimated location of utility installations-sewer, telephone, fuel, electric, water lines, or any other underground installations-that may be encountered during digging. Also, before starting the excavation, the contractor must contact the utility companies or owners include and inform them, within established or customary local response times, of the proposed work. The contractor must also ask the utility companies or owners to find the exact location of the underground installations. If they cannot respond within 24 hours (unless the period required by the state or local law is longer), or if they cannot find the exact location of the utility installations, the contractor may proceed with caution. To find the exact location of underground installations, workers must use safe and acceptable means. If underground installations are exposed, OSHA regulations also require that they be removed, protected or properly supported.

When all necessary specific information about the job site is assembled, the contractor is ready

to determine the amount, kind, and cost of safety equipment needed. A careful inventory of the safety items on hand should be made before deciding what additional safety material must be acquired. No matter how many trenching, shoring and backfilling jobs have been done in the past, each job should be approached with the utmost care and preparation.

Before Beginning the Job

It is important, before beginning the job, for the contractor to establish and maintain a safety and health program for the work site that provides adequate systematic policies, procedures, and practices to protect employees from, and allow them to recognize, job-related safety and health hazards.

An effective program includes provisions for the systematic identification, evaluation, and prevention or control of general workplace hazards, specific job hazards, and potential hazards that may arise from foreseeable conditions. The program may be written or verbal but it should reflect the unique characteristics of the job site.

To help contractors develop an effective safety and health program, in 1989 OSHA issued recommended guidelines for the effective management and protection of worker safety and health. The complete original text of the non-mandatory guidelines is found in the Federal Register (54 FR(18):3904-3916, January 26, 1989).

A copy of the guidelines can be obtained from the OSHA Publications Office, U.S. Department of Labor, 20 Constitution Avenue, N.W., Room N-3101, Washington, D.C. 20210, or from the nearest OSHA Regional Office listed in this booklet.

To be sure safety policies are implemented effectively, there must be cooperation among supervisors, employee groups, including union, and individual employees. Each supervisor must understand the degree of responsibility and authority he or she holds in a particular area. For effective labor support, affected unions should be notified of construction plans and asked to cooperate.

It is also important, before beginning work, for employers to provide employees who are exposed to public vehicular traffic with warning vests or other suitable garments marked with or made of reflectorized or high-visibility material and ensure that they wear them. Workers must also be instructed to remove or neutralize surface encumbrances that may create a hazard.

In addition, no employee should operate a piece of equipment, without first being properly trained to handle it and fully alerted to its potential hazards.

In the training and in the site safety and health program, it also is important to incorporate procedures for fast notification and investigation of accidents.

On-the-Job Evaluation

The Standard requires that a competent person inspect, on a daily basis, excavations and the adjacent areas for possible cave-ins, failures of protective systems and equipment, hazardous

atmospheres, or other hazardous conditions. If these conditions are encountered, exposed employees must be removed from the hazardous area until the necessary safety precautions have been taken. Inspections are also required after natural (e.g. heavy rains) or man-made events such as blasting that may increase the potential for hazards.

Larger and more complex operations should have a full-time safety official who makes recommendations to improve the implementation of the safety plan. In a smaller operation, the safety official may be part-time and usually will be a supervisor.

Supervisors are the contractor's representatives on the job. Supervisors should conduct inspections, investigate accidents, and anticipate hazards. They should ensure that employees receive on-the-job safety and health training. They should also review and strengthen overall safety and health precautions to guard against potential hazards, get the necessary worker cooperation in safety manners, and make frequent reports to the contractor.

It is important that managers and supervisors set the example for safety at the job site. It is essential that when visiting the job site, all managers, regardless of status, wear the prescribed protective equipment such as safety shoes, safety glasses, hard hats, and other necessary gear (see CFR 1926.100 and 102).

Employees must also take an active role in job safety. The contractor and supervisor should make certain that workers have been properly trained in the use and fit of the prescribed protective gear and equipment, that they are wearing and using the equipment correctly, and that they are using safe work practices.

Cave-Ins and Protective Support Systems

Support Systems

Excavation workers are exposed to many hazards, but the chief hazard is danger of cave-ins. OSHA requires that in all excavation employees exposed to potential cave-ins must be protected by sloping, or benching the sides of the excavation; supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

Designing a protective system can be complex because of the number of factors involved-soil classification, depth of cut, water content of soil, changes due to weather and climate, or other operation in the vicinity. The standard, however, provides several different methods and approaches (four for sloping and four for shoring, including the use of shields)* for designing protective systems that can be used to provide the required level of protection against cave-ins.

One method of ensuring the safety and health of workers in an excavation is to slope the side to an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal). These slopes must be excavated to form configurations that are in accordance with those for Type C soil found in Appendix B of the standard. A slope of this graduation or less is considered safe for any type soil (see Figure 1).

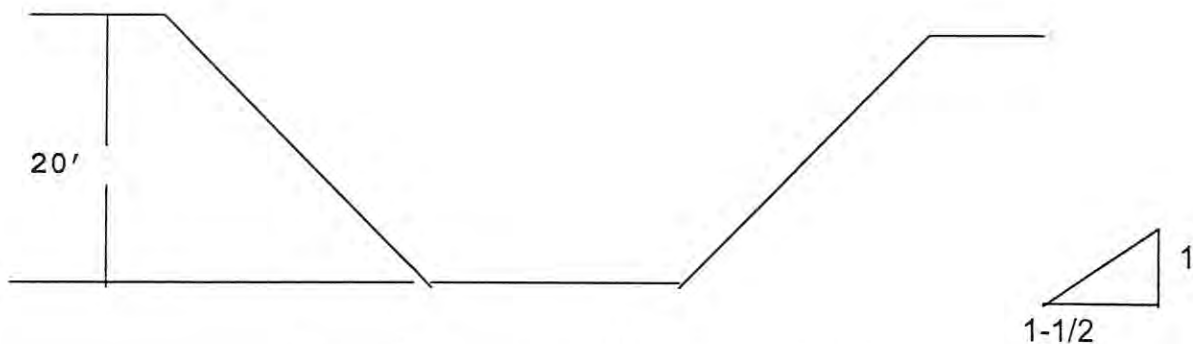


Figure 1. Excavations Made in Type C Soil

All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1 1/2:1.

*See Appendix F to the standard for a complete overview of all options.

A second design method, which can be applied for both sloping and shoring, involves using tabulated data, such as tables and charts, approved by a registered professional engineer. These data must be in writing and must include sufficient explanatory information to enable the user to make a selection, including the criteria for determining the selection and the limits on the use of the data.

At least one copy of the information, including the identity of the registered professional engineer who approved the data, must be kept at the worksite during construction of the protective system. Upon completion of the system, the data must be stored away from the job site, but a copy must be made available, upon request, to the Assistant Secretary of Labor for OSHA.

Contractors also may use a trench box or shield that is either designed or approved by a registered professional engineer or is based on tabulated data prepared or approved by a registered professional engineer. Timber, aluminum, or other suitable materials may also be used. OSHA standards permit the use of a trench shield (also known as a welder's hut) as long as the protection it provides is equal to or greater than the protection that would be provided by the appropriate shoring system (see Figure 2).

The employer is free to choose the most practical design approach for any particular circumstance. Once an approach has been selected, however, the required performance criteria must be met by that system.

The standard does not require the installation and use of a protective system when an excavation (1) is made entirely in stable rock, or (2) is less than 5 feet deep and a competent person has examined the ground and found no indication of a potential cave-in.

Safety Precautions

The standard requires the employer to provide support systems such as shoring, bracing, or

underpinning to ensure the stability of adjacent structures such as buildings, walls, sidewalks or pavements.

Figure 2. Trench Shields

The standard prohibits excavation below the level of the base or footing of any foundation or retaining wall unless (1) a support system such as underpinning is provided, (2) the excavation is in stable rock, or (3) a registered professional engineer determines that the structure is sufficiently removed from the excavation and that excavation will not pose a hazard to employees.

Excavations under sidewalks and pavements are also prohibited unless an appropriately designed support system is provided or another effective method is used.

Installation and Removal of Protective Systems

The standard requires the following procedures for the protection of employees when installing support systems:

- Securely connect members of support system,
- Safely install support systems,
- Never overload members of support systems, and
- Install other structural members to carry loads imposed on the support system when temporary removal of a individual members is necessary.

In addition, the standard permits excavation of 2 feet or less below the bottom of the members of a support or shield system of a trench if (1) the system is designed to resist the loads calculated for the full depth of the trench, and (2) there are no indications, while the trench is open, of a possible cave-in below the bottom of the support system. Also, the installation of support systems must be closely coordinated with the excavation of trenches.

As soon as work is completed, the excavation should be back-filled as the protective system is designated. After the excavation has been cleared, workers should slowly remove the protective system from the bottom up, taking care to release members slowly.

Materials and Equipment

The employer is responsible for the safe condition of materials and equipment used for protective systems. Defective and damaged materials and equipment can result in the failure of a protective system and cause excavation hazards.

To avoid possible failure of a protective system, the employer must ensure that (1) materials and equipment are free from damage or defects, (2) manufactured materials and equipment are used and maintained in a manner consistent with the recommendations of the manufacture and in a way that will prevent employee exposure to hazards, and (3) while in operation, damaged materials and equipment are examined by a competent person to determine if they are suitable

for continued use. If the materials and equipment are not safe for use, they must be removed from service. These materials cannot be returned to service without the evaluation and approval of a registered professional engineer.

Other Hazards

Falls and Equipment

In addition to cave-in hazards and secondary hazards related to cave-ins, there are other hazards from which workers must be protected during excavation-related work. These hazards include exposure to falls, falling loads, and mobile equipment. To protect employees from these hazards, OSHA requires the employer to take the following precautions:

- Keep materials or equipment that might fall or roll into an excavation at least 2 feet from the edge of excavations, or have retaining devices, or both.
- Provide warning systems such as mobile equipment, barricades, hand or mechanical signals, or stop logs, to alter operations of the edge of an excavation. If possible, keep the grade away from the excavation.
- Provide scaling to remove loose rock or soil or install protective barricades and other equivalent protection to protect employees from the hazard of falling, rolling, or sliding material or equipment.
- Prohibit employees from working on faces of sloped or benched excavations at levels above other employees unless employees at lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.
- Prohibit employees under loads that are handled by lifting or digging equipment. To avoid being struck by any spillage or falling materials, require employees to stand away from vehicles being loaded or unloaded. If cabs of vehicles provide adequate protection from falling loads during loading and unloading operations, the operators may remain in them.

Water Accumulation

The standard prohibits employees from working in excavations where water has accumulated or is accumulating unless adequate protection has been taken. If water removal equipment is used to control or prevent water from accumulating, the equipment and operations of the equipment must be monitored by a competent person to ensure proper use.

OSHA standards also require that diversion ditches, dikes, or other suitable means be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Also, a competent person must inspect excavations subject to runoffs from heavy rains.

Hazardous Atmospheres

Under this provision, a competent person must test excavations greater than 4 feet in depth as well as ones where oxygen deficiency or a hazardous atmosphere exists or could reasonably be expected to exist, before an employee enters the excavation. If hazardous conditions exist, controls such as proper respiratory protection or ventilation must be provided. Also, controls

used to reduce atmospheric contaminants to acceptable levels must be tested regularly.

Where adverse atmospheric conditions may exist or develop in an excavation, the employer also must provide and ensure that emergency rescue equipment, (e.g., breathing apparatus, a safety harness and line, basket stretcher, etc.) is readily available. This equipment must be attended when used.

When an employee enters bell-bottom pier holes and similar deep and confined footing excavations, the employee must wear a harness with a lifeline. The lifeline must be securely attached to the harness and must be separate from any line used to handle materials. Also, while the employee wearing a lifeline is in the excavation, an observer must be present to ensure that the lifeline is working properly and to maintain communication with the employee.

Access and Egress

Under the standard, the employer must provide safe access and egress to all excavations. According to OSHA regulations, when employees are required to be in trench excavations 4-feet deep or more, adequate means of exit, such as ladders, steps, ramps or other safe means of egress, must be provided and be within 25 feet of lateral travel. If structure ramps are used as a means of access or egress, they must be designed by a competent person if used for employee access or egress, or a competent person qualified in structural design if used by vehicles. Also, structural members used for ramps or runways must be uniform in thickness and joined in a manner to prevent tripping or displacement.

Related Issues

Hazard Communication

The Hazard Communication Standard (29 CFR 1910.1200) requires employers to inform employees of the identities, properties, characteristics, and hazards of chemicals they use and the protective measures they can take to prevent adverse effects. The standard covers both physical hazards (e.g., flammability) and health hazards (e.g., lung damage, cancer). Knowledge acquired under the Hazard Communication Standard will help employers provide safer workplaces for their employees, establish proper work practices, and help prevent chemical-related illnesses and injuries.

Access to Medical and Exposure Records

Under the provision of the Access to Medical and Exposure Records standard (29 CFR 1910.20), employees, their designated representatives, and OSHA are permitted direct access to employer-maintained exposure and medical records. This access is designed to yield both direct and indirect improvements in the detection, treatment, and prevention of occupational disease. Also, access to these records will assist employees in the management of their own safety and health.

Recordkeeping

Each employer must preserve and maintain accurate medical and exposure records for each employee. The standard requires that exposure records be kept for 30 years and medical records be kept for at least the duration of employment plus 30 years. Background data for exposure records such as laboratory reports and work sheets need to be kept only for 1 year. Records of employees who have worked for less than 1 year need not be retained after employment, but the employer must provide these records to the employee upon termination of employment. First-aid records of one-time treatment need not be retained for any specified period.

The employer must inform each employee of the existence, location, and availability of these records. When an employer plans to stop doing business and there is no successor employer to receive and maintain these records, the employer must notify employees of the right to access of the records at least 3 months before the employer ceases to do business. At the same time, the employer also must inform the National Institute for Occupational Safety and Health.

State Plan States

States administering their own occupational safety and health program (see listing on page), through plans approved under section 18(b) of the Occupational Safety and Health Act of 1970, must adopt standards and enforce requirements at least as effective as Federal requirements. There are currently 25 State plan States; 23 covering private and public (State and local government) sectors and two covering public sector only.

Summary

Trenching and excavation work presents serious risks to all workers involved. The greatest risk, and one of primary concern, is that of cave-ins. Furthermore, when cave-in accidents occur, they are much more likely to result in worker fatalities than other excavation-related accidents. Strict compliance, however, with all sections of the standard will prevent or greatly reduce the risk of cave-ins as well as other excavation-related accidents.

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DIRECTOR
Department of Employment Division of
Employment Affairs
Occupational Safety and Health
Administration
Herchfer Building, 2nd Floor East
122 West 25th Street
(307)777-7786 or 777-7787

DIRECTOR
Washington Department of Labor
and Industries
General Administration Building
Room 334 - AX-31
Olympia, WASHINGTON 98504-0631

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Related Publications

A single free copy of the following publications can be obtained from the OSHA Publications Office, U.S. Department of Labor, 200 Constitution Avenue, N.W., Room N-301, Washington, D.C., 20210.

Please send a self-addressed label with your request.

All about OSHA - OSHA 2056

Chemical Hazard Communication - OSHA 3084

Construction Industry Digest - OSHA 2207

Consultation Services for the Employer - OSHA 3047

Ground-Fault Protection on Construction Sites - OSHA 3007

OSHA Inspections - OSHA 2098

OSHA: Safety and Health is our Middle Name - OSHA 3076

Personal Protective Equipment - OSHA 3077

Respiratory Protection - OSHA 3079

Safety and Health Program Management Guidelines
(Federal Register (54 FR (18):3904-3916, January 1989))

A Hazard Communication Compliance Kit may be ordered from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402 for \$18.00 (\$22.00 for foreign addresses). OSHA Publication 3104, GPO order No. 929-022-00000-9. The kit can be ordered from GPO by phone using Visa or Mastercard; call (202)783-3238.

* U.S. Government Printing Office: 1991 282-150/45367

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- These states and territories operate their own OSHA-approved job safety and health programs (Connecticut and New York plans cover public employees only). States with

approved programs must have a standard that is identical to or at least as effective as, the federal standard.

PART 2 - PRODUCTS

2.01 CLASSIFICATION

- A. All excavations shall be unclassified as shall include all materials encountered regardless of their nature or the manner in which they are removed.

PART 3 - EXECUTION

3.01 CONSTRUCTION METHODS

- A. Prior to commencing this work, all erosion control and tree protection measures required shall be in place and all utilities located and protected.
- B. Construction equipment shall not be operated within the drip line of trees, unless otherwise indicated.
- C. Construction materials shall not be stockpiled under the canopies of trees. No excavation or embankment shall be placed within the drip line of trees until tree wells are constructed.
- D. All excavation shall be performed as specified herein and shall conform to the established alignment, grades and cross sections.
- E. Suitable excavated materials shall be utilized, in so far as practical, in constructing required embankments.
- F. The construction of all embankments shall conform to Section 02236 - Embankment. No material shall be stockpiled within the banks of a waterway.
- G. Unsuitable excavated materials or excavation in excess of that needed for construction shall be known as "Waste" and shall become the property of the CONTRACTOR and it shall become his sole responsibility to dispose of this material off the limits of the right-of-way in an environmentally sound manner at a permitted disposal site.
- H. Adequate dewatering and drainage of excavation shall be maintained throughout the time required to complete the work.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Measurement of the volume of excavation in cubic yards by the average end areas. Cross sectional areas shall be computed from the existing ground section to the established line of the sub-grade, as shown on typical sections for the limits

of the right-of-way or other work limits, including parkway slopes and sidewalk areas.

- B. Measurement of the area in square yards of surface area excavated as shown on the typical sections included in the plans.
- C. Measurement of the volume of excavation is in cubic yards, based upon the average end areas taken from pre-construction cross sections and planned grades. The planned quantities for excavation will be used as the measurement for payment for this item.

4.02 PAYMENT

- A. This item will be paid for at the contract unit price bid for "Excavation", as provided under the measurement method as included in the bid, which price shall be full compensation for all work herein specified including: dewatering, drainage, sub-grade preparation, unless otherwise indicated and the furnishing of all materials, equipment, tools, labor and incidentals necessary to complete the work.
- B. When not listed as a separate contract pay item, excavation shall be considered as incidental work, and the cost thereof shall be included in such contract pay item(s) as are provided in the proposal contract.
- C. Compensation, whether by contract pay item or incidental work will be furnishing all materials, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

***** END OF SECTION *****

SECTION 02238

REMOVAL OF CONCRETE

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. This work shall consist of breaking up, removing and satisfactorily disposing of existing concrete, as classified, at locations indicated or as directed by the Engineer.
- B. Existing concrete, when under this section, will be classified as follows:
 - 1. Concrete Curb will include curb, curb and gutter combinations thereof.
 - 2. Concrete Slabs will include, but not be limited to, patio slabs, porch slabs, concrete riprap and concrete pavement.
 - 3. Sidewalks and Driveways will include concrete sidewalks and driveways.
 - 4. Concrete Walls will include all walls regardless of height and wall footings.
 - 5. Concrete Steps will include all steps and combinations of walls and steps.
 - 6. Abandoned Foundations will include abandoned Electric Department foundations.
 - 7. Miscellaneous Concrete shall include but not be limited to manholes, inlets, junction boxes and headwalls.

PART 2 PRODUCTS

2.01 MORTAR:

- A. Mortar, for repair of existing concrete structures, shall conform to the requirements thereof in Section 03300 - Cast-In-Place Concrete.

PART 3 - EXECUTION

3.01 CONSTRUCTION METHODS:

- A. Prior to commencing this work, all erosion control and tree protection measures required shall be in place and all utilities located and protected. The existing concrete shall be broken up, removed to conform to Section 02101 - "Preparing Right-of-Way" and disposed of by the Contractor and deposited at a permitted at a permitted disposal site.
- B. Where only a portion of the existing concrete is to be removed and that remaining will continue to serve in its purpose, care shall be exercised to avoid damage to that portion to remain in place.
- C. The existing concrete shall be cut to the neat lines when indicated or as established by the Engineer, by sawing with an appropriate type circular concrete

saw to a minimum depth of 1/2 inch.

- D. Any reinforcing steel encountered shall be cut off 1 inch inside of concrete sawed line. Any existing concrete which is damaged or destroyed beyond the neat lines so established shall be replaced at the Contractor's expense.
- E. Remaining concrete shall be mortared to protect the reinforcing steel and provide a neat clean appearance.
- F. Where reinforcement is encountered in the removed portions of structures to be modified, a minimum of 1 foot of steel length shall be cleaned of all old concrete and left in place to tie into the new construction where applicable.
- G. All unsuitable material shall be removed and replaced with approved material.
- H. All foundation, walls or other objectionable material shall be removed to a minimum depth of 18 inches below all structures and 12 inches below areas to be vegetated.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Concrete curb and concrete wall removed as prescribed above will be measured by the linear foot in its original position regardless of the dimensions or size.
- B. Concrete slabs and concrete sidewalks and driveways removed as prescribed above will be measured by the square foot in original position, regardless of the thickness and reinforcing.
- C. Concrete steps removed will be measured per linear foot of each individual step tread including the bottom step.
- D. Concrete foundation removed will be measured per each.
- E. Miscellaneous concrete removed will be measured per each.

4.02 PAYMENT:

- A. This item will be paid for at the contract unit price bid for "Removed Concrete Curb", "Removed Concrete Slab", "Remove Concrete Sidewalks and Driveways", "Removed Concrete Foundations" and "Remove Miscellaneous Concrete" which price shall be full compensation for all work herein specified, including the disposal of all material not required in the work, the furnishing of all materials, equipment, tools, labor and incidentals necessary to complete the work.
- B. When not listed as a separate contract pay item, removal of concrete shall be considered as incidental work, and the cost thereof shall be included in such contract pay item(s) as are provided in the proposal contract.

- C. Compensation, whether by contract pay item or incidental work will be for furnishing all materials, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

*** * * END OF SECTION * * ***

SECTION 02240

LIME STABILIZATION

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. Treating of subgrade, sub-base, and base courses by the pulverization, addition of lime, mixing and compacting the mixed material to the required density.
- B. Application to natural ground, embankment, existing pavement, base or sub-bases under this contract, or as directed by the ENGINEER, which shall be constructed as specified herein and in conformity with the typical section, lines, grades as shown on the plans.

1.02 QUALITY ASSURANCE:

- A. Comply with the latest published edition (or addended portions thereof) of the following standards and codes:
 - 1. ASTM c-207 or Type N - Requirements for Hydrated Lime
 - 2. ASTM Designation C5 - Quick Lime for Structural Purposes
 - 3. Texas SDHPT Test Method Tex-600-J - Hydrated Lime
 - 4. ASTM D-1557 - Density of Compacted Materials
 - 5. ASTM D-2049 - Density of Compacted Materials
 - 6. Texas SDHPT Test Method Tex 113-E - Density of Compacted Materials
 - 7. AASHTO T-99, Method C - Density of Compacted Materials
 - 8. AASHTO M-216 - Hydrated Lime

PART 2 - PRODUCTS

2.01 HYDRATED (DRY) LIME:

- A. Use, for stabilization of soils, a dry powder consisting primarily of calcium hydroxide ($\text{Ca}(\text{OH})_2$).
- B. Provide Material in accordance with Texas SDHPT Test Method TEX-600-J and conforming to the following chemical composition:

Hydrate Alkalinity, Percent by Weight $\text{Ca}(\text{OH})_2$	90% Min.
Un-hydrate Lime Content, Percent by Weight CaO	5% Max.
"Free Water" Content, Percent by Weight H_2O	4% Max.

And with the following residue retainage:

Residue Retained on No. 6 Sieve
Residue Retained on No. 10 Sieve
Residue Retained on No. 30 Sieve

None
1% Max.
2.5% Max.

- C. Store and handle hydrated lime in closed, weather proof containers, storage bins, or bags until immediately before application to the road.
- D. Furnish hydrated lime in trucks, as applicable, with weight of lime measured on certified scales and clearly marked on the truck or stamped on a haul ticket.
- E. Furnish hydrated lime in bags, as applicable, bearing the manufacturer's certified weight. Bags varying more than five percent may be rejected.

2.02 HYDRATED LIME SLURRY:

- A. Provide a pumpable suspension of solids, principally composed of hydrated lime, in water.
- B. Provide material with a "Solids Content" having a hydrated alkalinity $\text{Ca}(\text{OH})_2$ of not less than 90 percent by weight and a residue retainage equal to the retainage specified in Part 2.01 above.
- C. Supply Type B, commercial lime slurry, with a "dry solids content" of at least 31% by weight of the slurry (Grade 1).
- D. Procure mixing water only from County of Hidalgo water mains. The Contractor shall make arrangements with the Water Department to obtain a meter and subsequent payment for water used.

2.03 QUICKLIME (MASON'S LIME):

- A. Provide quicklime, as a dry powder in a tank, to form a lime slurry.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Provide a completed course of treated materials containing a uniform lime mixture, free from loose or segregated areas, of uniform density and moisture content, well bound for its full depth, and with a smooth surface and suitable for placement of subsequent courses.
- B. Regulate sequence work, use proper amounts of lime, maintain the work and rework the courses as necessary to meet the requirements of this specification.
- C. Construct and shape roadbed to conform with typical sections, lines and grades as shown on the plans, or as directed by the ENGINEER.
- D. Excavate materials to be treated to the proposed bottom of lime treatment grade, or secondary grade and remove or window to expose.

- E. Correct any wet or unstable material below the secondary grade by scarifying, adding lime and compacting until uniform stability is achieved.
- F. Use a cutting or pulverizing machine, as applicable, to remove subgrade material accurately to secondary grade and to pulverize the material at the same time. When cutting or pulverizing machine is used, the requirement for exposing and windowing the material is waived.
- G. Roll subgrade before use of pulverizing machinery and correct any soft areas that rolling operations shall reveal.
- H. Materials for new bases and sub-bases shall be delivered, placed and spread in the required amount per station. The material shall be thoroughly mixed prior in the same working day.
- I. Lime shall be spread only on that area where first mixing operation can be completed in the same working day.

3.02 SLURRY PLACING:

- A. Mix lime, in amounts as shown on plans or as specified by the Materials Engineering Laboratory, with water in trucks or approved distributors and apply as a thin water suspension or slurry.
- B. The distribution of lime at the rates shown on the plans, as directed herein, and/or as directed by the ENGINEER. Shall be attained by successive passes over a measured surface of roadway until the proper moisture and lime content is achieved.
- C. Lime slurry distributors shall be equipped with an agitator for maintaining lime and water in a uniform mixture.

3.03 DRY PLACING:

- A. Spread lime by an approved screw type spreader box or by bag distribution at the rate shown in the plans.
- B. Distribute lime at a uniform rate and in such a manner as to reduce scattering of lime to a minimum. Lime shall not be applied when wind conditions, in the opinion of the ENGINEER, will cause objectionable blowing of lime to traffic or adjacent properties.
- C. Motor graders shall not be used to spread lime.
- D. Sprinkle material until proper moisture and lime content has been secured.

3.04 MIXING

- A. Mixing procedures shall be the same for "Dry Placing" or "Slurry Placing" or lime.
- B. Treatment for Materials in Place:

1. Thoroughly mix material and lime using approved road mixers or other approved equipment, until a homogeneous, friable mixture of material is obtained, free from all clods and lumps.
2. Mix as thoroughly as possible at the time of lime application of materials containing plastic clay or other materials not readily mixed with lime, bring to proper moisture content, seal with a pneumatic roller, and leave to cure one to four days, as directed by the ENGINEER.
3. During curing period, material shall be kept moist by method(s) approved by the ENGINEER.
4. Uniformly mix, after required curing time, using approved methods.
5. Clods in soil binder - Lime mixture shall be reduced in size by raking, blading, dicing, harrowing, scarifying or by other approved pulverization methods such that non-slaking aggregates obtained on the No. 4 sieve are removed. The remainder of the material shall meet the following requirements when test dry by laboratory sieves:

Minimum Passing 1 3/4 inch	100%
Minimum Passing No. 4 Sieve	60%

C. Treatment of New Material

1. Thoroughly mix and blend, using approved road mixers or other approved equipment, the base or sub-base material, lime and required water until a homogeneous, friable mixture is obtained.
 2. When lime is placed as a slurry and mixed by use of blades, the material shall be bladed as the lime water mixture is applied.
- D. During the time between application and mixing, hydrated lime that has been exposed to the open air for a period of six hours or more, or to excessive loss due to washing or blowing, shall not be accepted for payment.

3.05 COMPACTION:

- A. Compaction of the mixture shall begin immediately after final mixing and in no case later than three calendar days after final mixing.
- B. Aerate or sprinkle material as required to provide optimum moisture.
- C. Compaction shall begin at the bottom and shall continue until entire depth of mixture is uniformly compacted to 95% of maximum density as determined by AASHTO T-99, Method C.
- D. If any portion fails to meet the density specified, it shall be reworked as required to obtain specified density.

3.06 FINISHING, CURING, AND PREPARATION FOR SURFACING:

- A. Shape surface after compaction to the required lines, grades, and cross sections, followed by thorough rolling sufficiently light to prevent hair-line cracking.
- B. Complete section shall be moist cured for a minimum of seven days before further courses are added or any traffic permitted, other than sprinkling equipment.
- C. The surface or compacted layer shall be kept moist until covered by other base or paving material, or until an application of CSS-1 or SS-1 emulsified asphalt as a curing seal. Curing seal shall be applied as soon as possible after final rolling at a rate of 0.10 to 0.20 gallons per square yard. The exact rate will be as directed by the ENGINEER.

No equipment or traffic will be permitted on lime treated materials for 72 hours after application of curing seal.

3.07 MAINTENANCE:

- A. Maintain the completed lime treated material within the limits of contract, in condition satisfactory to the ENGINEER as to grade, crown and cross section until surface course is constructed.
- B. Immediately repair all irregularities and defects that may occur at no cost to the County and as directed by the ENGINEER.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT AND PAYMENT:

- A. Lime treatment shall be measured for payment in square yards for the thickness of material shown on the plans for the surface area of completed and accepted work. Lime treatment shall be paid for at the contract unit price per square yard.
- B. Lime will be measured by the ton 2000 pounds dry weight. Lime will be paid for at the contract unit cost per ton of 2000 pounds dry weight.
- C. The contract unit price for lime treatment shall be the total compensation for preparing roadbed; for loosening, pulverizing, application of lime, water content of slurry mixture and the mixing water; mixing, shaping, sprinkling, compacting, finishing, curing and maintaining; for manipulations required, for all labor, equipment, fuels, tools and incidentals necessary to complete the work.
- D. The contract unit price for lime shall be full compensation for furnishing the material; for all freight involved; for all unloading, storing and hauling; and for all labor, equipment, fuels, tools, and incidentals necessary to complete the work.

*** * * END OF SECTION * * ***

SECTION 02571

STORM SEWER

CONCRETE PIPE

The various sizes of concrete pipe used for construction of this project shall be manufactured under ASTM Specification C76-66T for Reinforced Concrete Pipe. All reinforced concrete pipe shall be Class III unless otherwise noted. Pipe shown as "Heavy Wall" pipe shall be to specification above without reinforcing. Pipe for storm sewers shall be mortar joint unless otherwise noted.

Pipe shall be plainly marked on each section or joint of pipe with the following: pipe class, date of manufacture, trade mark or manufacturer's name and top marked for reinforced pipe with waterproof paint. Pipe shall not be delivered sooner than 72 hours after manufacturing.

The manufacturer shall perform, or have performed at his own expense, pipe tests and furnish copies of such tests to the owner's Engineer upon his request. Acceptance shall be based on ASTM Specifications C76-68, Paragraph 3. (a) (1) unless otherwise advised.

HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED SMOOTH INTERIOR PIPE

Where shown, specified, or called for on the proposal, HDPE Corrugated Smooth Interior Pipe shall be used. Pipe and fittings shall be manufactured from high density polyethylene resin which shall meet or exceed the requirements of Type III, Category 4 or 5, Grade P33 or P34, Class C per ASTM D1248. The pipe & fittings shall be manufactured in accordance with AASHTO M-294-87 or latest revisions. All pipe shall be plainly marked with manufacturer pipe, class, and trade name. Pipe and fittings shall also meet the following applicable standards: ASTM F405, ASTM F667, AASHTO M252, and shall be suitable for use under H20 and E80 live loads.

MANHOLES

Manholes shall be pre-cast concrete manufactured in accordance with ASTM Specification C478-68 or HDPE manholes as manufactured by ADS (or equal). No steps or ladders shall be furnished unless specified on plans.

Each section of manhole shall be marked with the following: M.H., date of manufacturer, and manufacturer or trade name.

Base for concrete manholes shall be concrete with reinforcing as shown on the detail sheet. Invert channels shall be smooth, accurately shaped, and in accordance with the details. Invert may be formed directly in the base of manholes. HDPE manholes shall have a factory formed base section.

Manholes on straight runs of larger pipe (where no branching or turns occur) may be constructed on top of pipe by beveling 48" manhole section to fit curvature of pipe and providing a 36" hole in top of pipe 60" or larger in diameter.

INLETS

Inlets shall be concrete Type "A" slotted type or Type "C" (modified) grate inlet type as shown on plans. Inlets may be pre-cast with permission of the Engineer. Flow line of all pipe entering or leaving inlets shall be at bottom of inlet. Manhole ring and cover in top of Type "A" inlets may be lightweight sidewalk type unless otherwise noted.

Inlet pipe shall be trimmed flush with inside of inlets, manholes or pipe. On pipe 54" or larger, inlet pipe shall be tied directly into side of pipe instead of into manhole.

TRENCH EXCAVATION

Unless otherwise ordered by Engineer, all trenches shall be excavated to a width not less than the external diameter of the pipe plus 18 inches.

Excavation shall not be carried below the required elevation. Excess excavation below the required elevation shall be backfilled at the Contractor's expense with earth, sand or gravel, as directed by the Engineer, and thoroughly tamped.

Unstable soil shall be removed and replaced with gravel which shall be thoroughly tamped. The Engineer will determine the depth of removal, and the replacement of unstable soil shall be at the Contractor's Expense.

Banks of trenches shall be vertical and in the event that bell and spigot type of pipe are used, bell holes are to be accurately located under each pipe joint, and excavated to size by hand.

PIPE LAYING

In general, pipe shall be installed at depths as shown on the plans.

Ditching and pipe laying shall be uniformly in straight line and to uniform elevation unless otherwise specified by the Engineer.

Before laying pipe, all dirt, grease and other foreign matter shall be removed from the pipe.

Before lowering pipe into the trench, pipe shall be examined for defects and defective pipe shall be rejected.

Pipe shall be subject to rejection on account of failure to conform to any of the specification requirements, or on account of any of the following:

- (a) Fractures or cracks passing through the shell, except that a single end crack that does not exceed the depth of the joint shall not be cause for rejection. If a single end crack that does not exceed the depth of the joint exists in more than 5% of the pipe inspected, however, the defective pipe shall be rejected.

- (b) Defects that indicate imperfect mixing or molding.
- (c) Surface defects indicating honey combed or open texture.
- (d) Spalls deeper than one-half of the depth of joint. If spalls not deeper than one-half the depth of joint exist in more than 10% of the pipe, the defective pipe shall be rejected.
- (e) Exposure to the circumferential reinforcement when such exposure would indicate that the reinforcement is misplaced.
- (f) The complete absence of distinct web-like markings, which is indicative of a possible deficiency of water in the concrete mix from the external surface of pipe made by the packer-head or machine-tamp process.

After each joint is completed, Contractor may proceed with hand tamping of backfill to a point of 6 inches above pipe or sanding as outlined in section "Backfilling". All joints, however must remain exposed until pipe laying and joints have been inspected by the Engineer.

After the pipe is laid, care should be taken to avoid entrance of dirt, water or small animals by use of tight bulk heads in all openings.

JOINTING

If the bell and spigot type of joint is used, the first pipe (downstream) should be bedded to established line and grade with the bell upstream. Interior surface of the bell is to be thoroughly cleaned with a wet brush and the lower portion filled with a stiff mortar of sufficient thickness to make the inner surface of the abutting sections flush and even when pipes are laid.

The spigot end of the second pipe must be thoroughly cleaned with a wet brush and uniformly matched into the bell so that the sections are closely fitted. The annular space in the bell is then filled with mortar and the inner surface of the pipe at the joint brushed smooth.

If the tongue and groove type of joint is used, the first pipe (downstream) should be laid to establish alignment with the groove upstream. A shallow excavation should be made underneath the pipe at the joint and this space should be filled with mortar. The end of the second pipe will be laid into the mortar at the joint.

The groove end of the first pipe must be thoroughly cleaned with a wet brush, and while in a horizontal position, a layer of soft mortar applied to the upper half of the tongue.

The tongue end of the second pipe is then inserted into the groove end of the first pipe until the mortar is squeezed out on the interior and exterior surfaces. The interior surface of the pipe at the joint is then brushed smooth.

External Bands – The outer surface of the pipe at the joints must be thoroughly cleaned with a wet brush to assure proper band of the mortar with the concrete surface. This banding

operation must be carried out four or five pipe lengths behind the laying operation in order to prevent movement of the pipe and consequent loosening of the band. Bands should have a thickness of at least 6 inches.

JOINTING MATERIAL

Portland cement mortar consisting of one part Portland cement to two parts sand should be used.

Completed Joints – Completed joints should be protected immediately from air and sun with an initial covering of moist earth, sand, canvas, burlap or suitable chemical spray. If not backfilled at once, the joint mortar should be cured for 48 hours.

Jointing Mastic such as Tal-Cote or similar products may be used instead of mortar.

BACKFILL

Backfill should be placed evenly around and over pipe in maximum layers of 6-inch thickness. Each layer shall be thoroughly and carefully tamped until six inches of cover exists over pipe. Remainder of backfill material may be handled by machine, care being taken not to drop large quantities of backfill material on the pipeline until initial cover of at least 2 feet or more over the top of the pipe has been made. Ponding may be used as a method of settling backfill where practical. Final mound of backfill earth approximately six inches higher than adjacent ground level, shall be left over the immediate area of trench excavation. Backfill shall be 95% Standard Protector.

PIPE CRADLE

Pipe shall be cradled only upon instructions from the Engineer.

HIGHWAY CROSSINGS

Storm sewer lines crossing state or federal highways, shall meet the requirements of the Texas Highway Department as regards to pavement cutting, replacing, backfill, and the provision for suitable barricades, detours, flares, etc. The Highway Department shall be notified of the intended dated of cutting or crossing the Highway, after permission to cross has been obtained.

RAILROAD CROSSING

Either Class IV reinforced concrete pipe or corrugated metal pipe may be used, as shown on the plans. These crossings are to be made in accordance with the requirements of the railroad company.

CITY STREET CROSSINGS

Storm sewer lines located on or crossing city streets shall be provided with adequate barricades, detours, flares, during construction.

Pavement replaced should be equal in quality, quantity, type and thickness to that which was removed.

GRADE CONFLICTS

Where grade conflicts occur with sanitary sewer lines, the sanitary sewer shall have precedence. The existing V.C. sewer pipe shall be replaced with equal size of cast iron pipe and a manhole constructed around the sanitary sewer line, cast iron pipe replacement shall be set of grade and supported to natural ground or the walls of the manhole. Conflicts with water lines that cannot be rerouted will be crossed in a similar manner. Backfilling outside manhole shall be done in such manner that no settlement of sewer or water line will occur at a later date.

***** END OF SECTION *****

SECTION 02573

CORRUGATED PVC STORM SEWER PIPE

1.0 SCOPE:

This specification includes materials and test methods for 4 to 36 – inch diameter Polyvinyl Chloride (PVC) Corrugated Pipe with a smooth interior. The requirements of this specification are intended to provide pipe and fittings suitable for underground use in non-pressure applications such as storm sewers, drainage and under-drains.

2.0 PIPE:

PVC Corrugated Pipe with a smooth interior shall conform to the requirements of AASHTO M 304 or ASTM Designation F949. Pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. Pipe shall be manufactured to the pipe stiffness requirements of AASHTO M 304 or ASTM F949 when tested in accordance with the ASTM Test Method D2412. There shall be no evidence of splitting, cracking or breaking when the pipe is tested per ASTM Test Method D2412 in accordance with AASHTO M304 or ASTM F949. The pipe shall be made of PVC Compound having a minimum cell classification of 12454 or 12364 as defined in ASTM Specification D1784.

3.0 FITTINGS:

All fittings for PVC Corrugated Sewer Pipe with a smooth interior shall conform to AASHTO M304 or ASTM F949.

4.0 JOINTS:

All joints shall be made with integrally-formed bell and spigot gasketed connections. Watertight gasketed pipe joins are tested in accordance with ASTM Test Method D3212. Elastomeric seals (gaskets) shall meet the requirement of ASTM Designation F477. Soil tight joints shall meet the requirements of AASHTO M304, Section 7.6

5.0 PERFORATIONS (WHEN REQUIRED)

Perforation dimensions and spacing shall be in accordance with AASHTO M304 or ASTM Designation F949.

*** END OF SECTION ***

STORM SEWER APPURTENANCES

PART 1 - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. This work shall consist of furnishing and installing appurtenances except manholes, for storm sewers in accordance with details on the plans and as specified herein as directed by the ENGINEER.
- B. The various types of structures and appurtenances such as inlets, headwalls, energy dissipators, etc. are designated on the plans by letters or by numbers indicating the particular design of each. Each type shall be constructed in accordance with the details indicated and to the depth required by the profiles and schedules given.

PART 2 - PRODUCTS

2.01 GENERAL:

- A. The construction plans will specify the size and material for the pipe between the storm sewer main and the storm water collection structure.
- B. The various types of storm inlets and their relation to curb and gutter, or valley gutter are shown on the Standard Detail Drawings. Construction plans will identify the type to be constructed.
- C. Grating size, material, and configuration shall conform to the Standard Detail Drawings.

2.02 MATERIALS:

A. Concrete

- 1. Concrete for cast in place miscellaneous structures shall be Class A concrete when used with precast pipe sewer construction and Class C concrete when used with monolithic pipe sewer construction.
- 2. Concrete for precast structures shall be 4000 psi and comply with the applicable requirements of ASTM C 478.

B. Mortar:

- 1. Mortar shall be composed of 1 part Portland Cement and 2 parts clean, sharp mortar sand suitably graded for the purpose by conforming in other respects to the provisions of Section 03300 for fine aggregate.

2. Hydrated lime or lime putty may be added to the mix, but in no case shall it exceed 10 percent by weight of the total dry mix.

C. Reinforcement:

Reinforcing Steel shall conform to Item 440.

D. Brick:

1. Bricks shall be of first quality, sound, hard-burned brick. Shale bricks, if used, shall be homogeneous, thoroughly and uniformly burned.
2. Bricks shall not absorb more than 17 percent of water by weight submerged in water for 24 hours, having been in a completely dry state prior to placing in water.
3. Clay brick shall conform to the requirements of ASTM C 62, Grade SW. concrete brick meeting the requirements of ASTM C 55, Grade A, shall be acceptable.

E. Concrete Block:

Concrete blocks when indicated shall conform to ASTM C 139.

F. Frames, Grates, Rings and Covers:

Frames, grates, rings and covers shall conform to Section 02575 and 02577.

G. Miscellaneous Items:

Cast iron for supports, steps and inlet units shall conform to the shape and dimensions indicated. The casting shall be clean and perfect, free from sand or blow holes or other defects. Cast iron casting shall meet the requirements of ASTM A 48, Class 30. Steel for temporary covers when used with Stage Construction shall be adequate for the loads imposed.

PART 3 - EXECUTION

3.01 INSTALLATION OF DRAINAGE FACILITIES:

- A. Excavation and backfilling for the storm inlet shall be accomplished in accordance with Section 02221.
- B. Trenching, backfilling, and compaction for the connecting pipe between the storm sewer main and the storm inlet shall conform to the specifications contained in Section 02221. Pipe shall be installed in accordance with Section 02572.
- C. All pipe and structures shall be installed per location and elevations, as shown on the construction plans. If during the course of installation, an underground obstruction (i.e., existing utility line) the work shall stop and the ENGINEER shall be immediately notified so that the problem can be resolved.

- D. Direct connection to storm sewer main will be permitted if the main is a minimum of 36 inches in diameter (I.D.) and the connecting line is not greater than 12-inches (I.D.). If storm sewer mains are 48 inches (I.D.) or larger, the connecting line diameter may be increased to 18 inches (I.D.). For connecting line sized greater than those specified above, the connecting to the main will be made into a manhole or by inserting into the main a factory constructed way. Connection to the main will comply with the Standard Detail Drawings.
- E. Removal of curb and gutter and sidewalk for installation of a storm inlet shall be made at a scored or full depth joint.
- F. Existing pavement removal and replacement shall conform to Section 02572, 02575, 02601 and 02612 and shall conform to residential or arterial pavement sections of the same material (asphalt or Portland Cement concrete) as the existing pavement.
- G. No width greater than 1/2 inch will be permitted between the inlet grate and the roadside portion of the inlet frame.
- H. Private drainage facility installations, which are to be constructed under the authorization of "Drainage Facilities within Public Right-of-Way," shall comply with the Standard Detail Drawings and appropriate sections of this publication.
- I. The construction inlets shall be done as soon as is practicable after sewer lines into the inlet are complete. All sewers shall be cut neatly at the inside face of the walls of the inlet and pointed up with mortar.
- J. Bases for cast in place inlets may be placed prior to or at the CONTRACTOR'S option after the sewer is constructed.
- K. The inverts passing out or through an inlet shall be shaped and grout across the floor of the inlet as indicated. This shaping may be accomplished by adding shaping mortar or concrete after the base is cast or by placing the required additional material with the base.
- L. All miscellaneous structures shall be completed in accordance with the details indicated. Backfilling to original ground elevation shall be in accordance with the provisions of the appropriate items and as directed by the ENGINEER.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT:

- A. Pavement removal and replacement will be measured by the square yard.
- B. Trenching, backfilling and compaction will not be measured or paid, but will be considered incidental to other items.
- C. Frame, grates, rings and covers will not measured or paid, but will be considered

incidental to other items.

- D. Connecting pipe shall be measured by the linear foot along centerline of pipe from the main side wall of the inlet to the centerline of the main.
- E. Storm sewer inlets shall be measured per each for the type and size specified.
- F. All miscellaneous structures satisfactorily completed in accordance with the plan and specifications will be measured as complete units per each.

4.02 PAYMENT:

- A. The accepted quantities of pavement removal and replacement shall be paid for at the unit bid price per square yard per type of replacement paving material.
- B. The accepted quantities of connecting pipe shall be paid at the unit bid price per linear foot per type and size of pipe, and shall include pipe in place and all necessary jointing materials.
- C. The accepted quantities of storm inlets will be paid at the unit price per each per type of storm inlet, and shall include: structure, grating, excavation, backfilling and compaction, and curb removal and replacement, as defined in Bid Proposal.
- D. The accepted quantities of special complete structures shall be paid at the unit bid price per each.
- E. Compensation, whether by contract pay item or incidental work will be for furnishing all material, labor, equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications.

******* END OF SECTION *******

SECTION 02601

FLEXIBLE BASE

PART I - GENERAL

1.01 GENERAL DESCRIPTION OF WORK:

- A. This work shall consist of furnishing and placing a foundation course for surface courses or for other base courses.
- B. Flexible base shall be composed of either caliche (argillaceous limestone, calcareous or calcareous clay particles, with or without stone, conglomerate, gravel, sand or other granular materials), crushed stone, gravel, iron ore topsoil, shell, or crushed slag.
- C. Flexible base shall be constructed as specified herein in one or more courses in conformance with details, lines and grades shown on the plans, and as established by the ENGINEER.

PART 2 -PRODUCTS

2.01 MATERIALS:

- A. Materials for flexible base shall be crushed or un-crushed as necessary to comply with the requirements hereinafter specified.
- B. Materials shall consist of durable course aggregate particles mixed with approved binding materials.

2.02 LIME STABILIZATION:

- A. Where shown on the plans, or directed by the ENGINEER, material for flexible base shall be lime stabilized in accordance with the provisions of Section 02240.

2.03 TYPES:

- A. Type A - Crushed or broken aggregate (excluding gravel aggregate).
- B. Type B - Gravel Aggregate
- C. Type C - Iron Ore Topsoil
- D. Type D - Shell Aggregate with Sand Admixture
- E. Type E - Shell Aggregate with Sand and Caliche Admixture
- F. Type F - Caliche

G. Type G - Crushed Slag

H. Unless otherwise noted on the plans, the CONTRACTOR may use any one type of these types provided the material used meet the requirements set forth in the specification test limits herein.

2.04 GRADES:

- A. Unless otherwise shown on the plans or directed by the ENGINEER, the final course of base material shall consist of Grades 1,2,3, or 4, as specified in Table 02601-1.
- B. Base courses or sub-base materials, unless otherwise noted on the plans or directed by the ENGINEER, may consist of Grades 1, 2, 3, or 4, as specified in Table 02601-1.
- C. All grades shall, when tested in accordance with standard laboratory test procedures, meet the physical requirements set forth in Table 02601-1.
- D. Testing of flexible base materials shall be in accordance with the following test procedures:

TEST

TESTING PROCEDURE

Preparation for soil constants and sieve analysis	TEX-101-E
Liquid Limit	TEX-104-E
Plastic Limit	TEX-105-E
Plasticity Limit	TEX-106-E
Sieve Analysis	TEX-110-E
Wet Ball Mill	TEX-116-E
Triaxial Tests	TEX-117-E (Part I or II)

- E. Unless otherwise specified on the plans, samples for testing the material for Soil constants, Gradation and Wet Ball Mill shall be taken prior to the compaction operations.
- F. Unless otherwise specified on the plans, samples for triaxial tests shall be taken from the stockpile or from production, as directed by the ENGINEER, where stockpiling is required and from production where stockpiling is not required.