

**SPECIFICATIONS  
AND  
FORMS OF CONTRACT, BOND AND PROPOSAL  
FOR  
SOUTH CENTRAL ORIGINAL TOWNSITE  
DRAINAGE IMPROVEMENTS  
RFP #2019-12**

**CITY OF EDINBURG  
HIDALGO COUNTY, TEXAS**

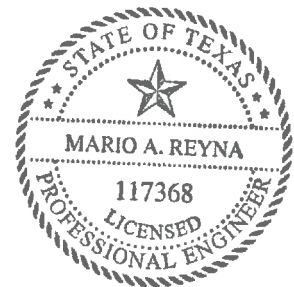
**CITY OFFICIALS**

**RICHARD MOLINA  
DAVID TORRES  
GILBERT ENRIQUEZ  
HOMER JASSO, JR.  
JORGE SALINAS  
JUAN GUERRA**

**MAYOR  
MAYOR PRO-TEM  
COMMISSIONER  
COMMISSIONER  
COMMISSIONER  
CITY MANAGER**

**2019**

**MELDEN AND HUNT, INC.  
CONSULTING ENGINEERS  
PROJECT NO. 18115.01**



*M. H.*  
*1-9-19*

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**REQUEST FOR  
PROPOSALS**

**CITY OF EDINBURG – SOUTH CENTRAL  
ORIGINAL TOWNSITE DRAINAGE  
IMPROVEMENTS**

**RFP #2019-12**

**RFP DUE DATE: Monday, January 28, 2019**

**RFP DUE TIME: 3:00 pm**

The City of Edinburg is soliciting sealed Request for Proposals; hereinafter referred to as RFP, to be received by the City Secretary's Office located at 415 W. University Drive, Edinburg, Texas 78541. City of Edinburg normal business days are Monday through Friday between the hours of 8:00 a.m. to 5:00 p.m. and shall be closed on recognized holidays.

RFP'S will be received until **3:00 p.m. Central Time**, on **Monday, January 28, 2019**, shortly thereafter all submitted RFP'S will be gathered and taken to the Edinburg City Hall Community Room, 1<sup>st</sup> Floor, to be publicly opened and read aloud. Any RFP received after the closing time will not be accepted and will be returned to the submitter unopened. It is the responsibility of the submitter to see that any RFP submitted shall have sufficient time to be received by the City Secretary's Office prior to the RFP opening date and time. The receiving time in the City Secretary's Office will be the governing time for acceptability of the RFP's. RFP's will not be accepted by telephone or facsimile machine. All RFP'S must bear original signatures and figures. The RFP shall be for:

**RFP #2019-12**  
**South Central Original Townsite Drainage Improvements**

A pre-proposal meeting is scheduled for Tuesday, January 22, 2019 at 11:00 am at Edinburg City Hall Community Room, 1<sup>st</sup> Floor. If you have any questions or require additional information regarding this RFP, please contact Ms. Lorena Fuentes, Purchasing Agent, at (956) 388-1895 or at the following e-mail address: [lfuentes@cityofedinburg.com](mailto:lfuentes@cityofedinburg.com). **If you have any questions or require additional information regarding specifications for this proposal, please contact** Mario Reyna, P.E., Melden and Hunt, Inc., 115 W. McIntyre, Edinburg, Texas 78541, 956/381-0981.

Hand Delivered RFP'S:

415 W. University Drive  
C/o City Secretary Department (1<sup>st</sup> Floor)

If using Land Courier (i.e. FedEx, UPS):

City of Edinburg  
C/o City Secretary  
415 W. University Drive  
Edinburg, Texas 78541

If Mailing Proposals:

City of Edinburg  
C/o City Secretary  
P.O. Box 1079  
Edinburg, Texas 78540-1079

The City of Edinburg reserves the right to refuse and reject any or all RFP's and to waive any or all formalities or technicalities and to accept the RFP deemed most advantageous to the City, and hold the RFP's for a period of **90** days without taking action.

RFP's must be submitted in an envelope sealed with tape and prominently marked on the lower left hand corner of the envelope with corresponding RFP number and title.

Please read your requirements thoroughly and be sure that the RFP offered complies with all requirements/specifications noted. Any variation from the solicitation requirements/specifications must be clearly

indicated by letter, on a point by point basis, attached to and made a part of your RFP. If no exceptions are noted, and you are the successful respondent, it will be required that the service(s) be provided as specified.

## **PURPOSE**

(1) The purpose of these solicitation documents is to provide a proposal for construction of storm sewer improvements consisting of drainage pipe, inlets and manholes installation for:

### **South Central Original Townsite Drainage Improvements**

## **INTENT**

(2) The services to be provided under this RFP shall be in accordance with and shall meet all specifications and/or requirements as shown in this solicitation for RFP. There is no intention to disqualify any respondent who can meet the requirements.

## **SUBMITTAL OF RFP**

(3) RFPs shall be submitted in sealed envelopes as referenced on the attached solicitation. Five (5) complete sets of the response, one (1) original marked "**ORIGINAL**," and four (4) copies marked "**COPY**". RFPs submitted by facsimile (fax) or electronically shall **NOT** be accepted. Submittal of an RFP in response to this solicitation constitutes an offer by the respondent. Once submitted, RFP's become the property of the City of Edinburg and as such the City reserves the right to use any ideas contained in any RFP regardless of whether that respondent/firm is selected. Submission of a RFP in response to this solicitation, by any respondent, shall indicate that the respondent(s) has/have accepted the conditions contained in the RFP, unless clearly and specifically noted in the RFP submitted and confirmed in the contract between the City and the successful respondent otherwise. RFPs which do not comply with these requirements may be rejected at the option of the City. RFPs must be filed with the City of Edinburg before the deadline day and hour. No late RFPs will be accepted. They will be returned to respondent unopened (if properly identified). Failure to meet RFP requirements may be grounds for disqualification.

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c/o City Secretary Department (1<sup>st</sup> Floor)

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415 W. University Drive  
Edinburg, Texas 78541

#### If Mailing RFP's:

City of Edinburg  
c/o City Secretary  
P.O. Box 1079  
Edinburg, Texas 78540-1079

## **TIME ALLOWED FOR ACTION TAKEN**

(4) The City of Edinburg may hold RFP/s 90 days after deadline without taking action. Respondents are required to hold their RFP/s firm for same period of time.

## **RIGHT TO REJECT/AWARD**

(5) The City of Edinburg reserves the right to reject any or all RFPs, to waive any or all formalities or technicalities, and to make such awards of contract as may be deemed to be the best and most advantageous to the City of Edinburg.

**ASSIGNMENT**

(6) Respondents are advised that the City of Edinburg shall not allow the successful respondent to sell, assign, transfer, or convey any part of any contract resulting from this RFP in whole or in part, to a third party without the written approval of the City of Edinburg.

**AWARD**

(7) Respondents are advised that the City of Edinburg is soliciting RFPs and award shall be made to the respondent that in the opinion of the City of Edinburg is the best qualified.

**NUMBER OF CONTRACTS**

(8) THE CITY reserves the right to award one or no contract in response to this RFP.

**STATUTORY REQUIREMENTS**

(9) It shall be the responsibility of the successful respondent to comply with all applicable State & Federal laws, Executive Orders and Municipal Ordinances, and the Rules and Regulations of all authorities having jurisdiction over the work to be performed hereunder and such shall apply to the contract throughout, and that they will be deemed to be included in the contract as though written out in full in the contract documents.

**ALTERATIONS/AMENDMENTS TO RFP**

(10) RFP **CANNOT** be altered or amended after opening time. Alterations made before opening time must be initialed by respondent guaranteeing authenticity. No RFP may be withdrawn after opening time without acceptable reason in writing and only after approval by the City of Edinburg.

**NO RESPONSE TO RFP**

(11) If unable to submit a RFP, respondent should return inquiry giving reasons.

**LIST OF EXCEPTIONS**

(12) The respondent shall attach to his/her RFP a list of any exceptions to the specifications/ requirements.

**PAYMENT**

(13) The City of Edinburg will execute payment by mail in accordance with the State of Texas Pay Law after SERVICES have been completed, introduced to the City, and found to meet City of Edinburg specifications/requirements. No other method of payment will be considered.

**SYNONYM**

(14) Where in this solicitation package SERVICES is used, its meaning shall refer to the request for South Central Original Townsite Drainage Improvements as specified.

**RESPONDENT'S EMPLOYEES**

(15) Neither the Respondent nor his/her employees engaged in fulfilling the terms and conditions of this Service Contract shall be considered employees of the City. The method and manner of performance of such undertakings shall be under the exclusive control of the vendor on contract. The City shall have the right of inspection of said undertakings at any time.

**INDEMNIFICATION CLAUSE**

(16) The Respondent agrees to indemnify and save harmless the City, from all suits and actions of every nature and description brought against them or any of them, for or on account of the use of patented appliances, products or processes, and he shall pay all royalties and charges which are legal and equitable. Evidence of such payment

or satisfaction shall be submitted upon request of the Purchasing Agent, as a necessary requirement in connection with the final estimate for payment in which such patented appliance, products or processes are used

### **INTERPRETATIONS**

(17) Any questions concerning the project and/or specifications/requirements with regards to this solicitation for statement(s) of qualifications shall be directed to the designated individuals as outlined in the RFP. Such interpretations, which may affect the eventual outcome of this request for statements of qualifications, shall be furnished in writing to all prospective Respondents via Addendum. No interpretation shall be considered binding unless provided in writing by the City of Edinburg in accordance with paragraph entitled "**Addenda and Modifications**".

### **VERBAL THREATS AND OFFICIAL CONTACT**

(18) Any threats made to any employee of the City, be it verbal or written, to discontinue the providing of item/material/services for whatever reason and/or reasons shall be considered a breach of contract and the City will immediately sever the contract with the Respondent/Consultant on contract.

Respondents shall not offer gratuities, favors or any monetary value to any official or employee of the City for purpose of influencing the selection. Any attempt by any Respondent to influence the selection process by any means, other than disclosure of qualifications and credentials through the proper channels, shall be grounds from exclusion from the selection process. Once the project is advertised, there shall be no contact with any city official or employee unless using the formal process through the Purchasing Department. Failure to comply will result in the firm being disqualified from the process.

Questions and answers that change or substantially clarify the Request for Proposals will be affirmed in writing and copies will be provided to all firms on record responding to RFP. Any inquiries to this RFP must be submitted Ms. Lorena Fuentes, Purchasing Agent, at (956) 388-1895 or at the following e-mail address: lfuentes@cityofedinburg.com no later than **January 23, 2019 at 5:00 p.m.**

### **CONFIDENTIAL INFORMATION**

(19) Any information deemed to be confidential by the respondent should be clearly noted on the pages where confidential information is contained; however, the City cannot guarantee that it will not be compelled to disclose all or part of any public record under Texas Public Information Act, since information deemed to be confidential by the respondent may not be considered confidential under Texas Law, or pursuant to a Court order.

### **PAST PERFORMANCE**

(20) Respondent's past performance shall be taken into consideration in the evaluation of RFP submittal.

### **JURISDICTION**

(21) Contract(s) executed as part of this solicitation shall be subject to and governed under the laws of the State of Texas. Any and all obligations and payments are due and performable and payable in Hidalgo County, Texas.

### **RIGHT TO AUDIT**

(22) The City of Edinburg reserves the right to audit the vendor's books and records relating to the performance of this contract. The City of Edinburg, at its own expense, shall have the right at all reasonable times during normal business hours and upon at least twenty-four (24) hours' advance notice, to audit, to examine, and to make copies of or extracts from the books of account and records maintained by the vendor(s) with respect to the Supply/Service and/or Purchase Contract. If such audit shall disclose overpayment by City to vendor, written notice of such overpayment shall be provided to the vendor and the amount of overpayment shall be promptly reimbursed by



vendor to the City. In the event any such overpayment is not paid within ten (10) business days after receipt of such notice, the unpaid amount of such overpayment shall bear interest at the rate of one percent (1%) per month from the date of such notice until paid.

#### **VENUE**

(23) The parties agree that venue for purposes of any and all lawsuits, cause of action, arbitration, and/or any other dispute(s) shall be in Hidalgo County, Texas.

**IF YOU HAVE ANY QUESTIONS ABOUT COMPLIANCE, PLEASE CONSULT YOUR OWN LEGAL COUNSEL. COMPLIANCE IS THE INDIVIDUAL RESPONSIBILITY OF EACH PERSON OR AGENT OF A PERSON WHO IS SUBJECT TO THE FILING REQUIREMENT. AN OFFENSE UNDER CHAPTER 176 IS A CLASS "C" MISDEMEANOR.**

#### **CONFLICT OF INTEREST**

(24) CHAPTER 176 OF THE TEXAS LOCAL GOVERNMENT CODE

Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that any vendor or person considering doing business with a local government entity disclose in the Questionnaire Form CIQ, the vendor or person's affiliation or business relationship that might cause a conflict of interest with a local government entity. By law, this questionnaire must be filed with the records administrator of the City of Edinburg not later than the 7<sup>th</sup> business day after the date the person becomes aware of facts that require the statement be filed. See Section 176.006, Local Government Code. A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor. For more information or to obtain Questionnaire CIQ go to the Texas Ethics Commission web page at [www.ethics.state.tx.us/forms/CIQ.pdf](http://www.ethics.state.tx.us/forms/CIQ.pdf).

#### **CERTIFICATE OF INTERESTED PARTIES (Form 1295)**

(25) In 2015, the Texas Legislature adopted [House Bill 1295](#), which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016. For more information go to the Texas Ethics Commission web page at [www.ethics.state.tx.us/forms/CIQ.pdf](http://www.ethics.state.tx.us/forms/CIQ.pdf).

#### **CONFIDENTIALITY OF INFORMATION AND SECURITY**

(26) Should the successful respondent become the holder of and have access to confidential information in the process of fulfilling its responsibilities in connection with an awarded contract the successful respondent agrees that it shall keep such information confidential and will comply fully with the laws and regulations of the State of Texas, ordinances and regulations of the City, and any applicable federal laws and regulations relating to confidentiality.

#### **TERMINATION OF CONTRACT**

(27) The City of Edinburg reserves the right to terminate the contract if, in the opinion of the City of Edinburg, the successful vendor's performance is not acceptable, no funds are available, or if the City wishes, without cause, to discontinue this contract. Termination will be in written form allowing a 30-day notice.

#### **RESPONSE DEADLINE**

(28) Responses to the RFP must be addressed to City Secretary, City of Edinburg, 415 W. University Drive by **Monday, January 28, 2019 until 3:00 p.m.** for consideration. An (1) original and four (4) copies of complete sets

of the response must be submitted no later than this date and time in a **sealed envelope** indicating that its contents are in response to the RFP for **"South Central Original Townsite Drainage Improvements"**. **Respondents are advised that all confidential records must be submitted in a separate sealed envelope and marked accordingly.**

Hand Delivered RFP's:

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Edinburg, Texas 78541

If Mailing RFPs:

City of Edinburg  
c/o City Secretary  
P.O. Box 1079  
Edinburg, Texas 78540-1079

#### **ADDENDA AND MODIFICATIONS**

(29) Any changes, additions, or clarifications to the RFP are made by amendments (addenda). Any respondent in doubt as to the true meaning of any part of the RFP or other documents may request an interpretation from the Purchasing Division. At the request of the respondent, or in the event the Purchasing Division deems the interpretation to be substantive, the interpretation will be made by written addendum. Said Addenda shall be mailed, e-mailed, hand delivered and/or faxed, to all prospective respondents. All Addenda issued in respect to this RFP shall be considered official changes to the original documents. Verbal statements in response to inquiries and/or requests for explanations shall not be authoritative or binding. It shall be the respondent's responsibility to ensure that they have received all Addenda in respect to this project. Furthermore, respondents are advised that they must recognize, comply with, and attach a signed copy of each Addendum which shall be made part of their RFP Submittal. Respondent(s) signature on Addenda shall be interpreted as the respondent's "recognition and compliance to" official changes as outlined by the City of Edinburg and as such are made part of the original solicitation documents. Failure of any respondent to receive any such addendum or interpretation shall not relieve such respondent from its terms and requirements. The City may issue a written addendum no later than five calendar days prior to the date bids must be received. Addendums are available online at [www.cityofedinburg.com](http://www.cityofedinburg.com).

#### **RFP PREPARATION COSTS**

(30) The City of Edinburg shall not be held liable for any costs incurred by any respondent for work performed in the preparation of and production of a RFP or for any work performed prior to execution of contract.

#### **EQUAL EMPLOYMENT OPPORTUNITY**

(31) Respondent agrees that they will not discriminate in hiring, promotion, treatment, or other terms and conditions of employment based on race, sex, national origin, age, disability, or in any way violate Title VII of 1964 Civil Rights Act and amendments, except as permitted by said laws.

#### **AUTHORIZATION TO BIND RESPONDENT TO RFP**

(32) RFPs MUST give full firm name and address of respondent, and be manually signed. Failure to do so will disqualify your RFP. Person signing bid must show title or AUTHORITY TO BIND HIS/HER FIRM IN A CONTRACT. Firm name and authorized signature must appear on each page that calls for this information. The legal status of

the Respondent whether corporation, partnership, or individual, shall also be stated in the RFP. A corporation shall execute the RFP by its duly authorized officers in accordance with its corporate by-laws and shall also list the state in which it is incorporated. A partnership Respondent shall give full names and addresses of all partners. All partners shall execute the RFP. Partnership and Individual Respondent shall state in the proposal the names and addresses of all persons with a vested interest therein. The place of residence of each Respondent, or the office address in the case of a firm or company, with county and state and telephone number, shall be given after the signature.

#### **BRAND OR MANUFACTURER REFERENCE**

(33) Unless otherwise specified, any catalog or manufacturer's reference or brand name used in describing an item is merely descriptive, and not restrictive, and is used only to indicate type and style of product desired. Proposals on alternate brands will be considered if they meet specification requirements. If a bidder quotes on equipment other than the one(s) specified in the bid, sufficient specifications and descriptive (pictured literature) data must accompany same to permit thorough evaluation. In the absence of these qualifications, he/she will be expected to furnish the product called for.

#### **COOPERATIVE PRICING**

(34) Bidders are advised that in addition to responding to our "local" solicitation for bids/Bids with Dealer pricing, vendors/contractors are encouraged to provide pricing on the below referenced items/products/services based on BuyBoard, TX-MAS, H-GAC and/or any other State of Texas recognized and approved cooperative which has complied with the bidding requirements for the State of Texas. If bidding other than or in addition to "dealer" pricing, kindly duplicate the bid forms for each bid being provided from a cooperative contract. Any and all applicable fees must be included. All cooperative pricing must be submitted on or before bid opening date and hour.

#### **HB 89**

(35) The 85th Texas Legislature approved new legislation, effective Sept. 1, 2017, which amends Texas Local Government Code Section 1. Subtitle F, Title 10, Government Code by adding Chapter 2270 which states that a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it:

- 1) does not boycott Israel; and
- 2) will not boycott Israel during the term of the contract

**Confidential Information** Respondents are advised that all confidential records must be submitted in a separate sealed envelope and marked accordingly.

## **SECTION I SCOPE OF THE PROPOSAL**

### **INTRODUCTION**

The purpose of the RFP is to solicit and obtain from interested parties (also referred to herein as "Vendor" or "Vendors") the best possible proposal to build the South Central Original Townsite Drainage Improvements. The City of Edinburg intends to select the most competitive proposal that meets the City's requirements and specifications listed within the proposal and then enter into negotiations with the Vendor/s for purposes of reaching a satisfactory agreement for the City South Central Original Townsite Drainage Improvements.

### **BACKGROUND**

The City of Edinburg South Central Original Townsite Drainage Improvements will mitigate drainage issues occurring within the project area, as specified in the project documents.

### **SCOPE OF WORK**

The City is soliciting competitive proposals from experienced and qualified companies to build the South Central Original Townsite Drainage Improvements which comprises of the installation of drainage improvements and appurtenances.

### **ADDITIONAL INFORMATION**

Attach specifications The City of Edinburg is requesting that RFP's (Request for Proposal) be routed to: The CITY Secretary, at 415 West University, Edinburg, Texas 78541 (Engineering Firm).

### **NON-COLLUSION**

Submitters, by submitting a signed submission, certify that the accompanying submission is not the result of, or affected by, any unlawful act of collusion with any other person or company engaged in the same line of business or commerce, or any other fraudulent act punishable under Texas or United States law.

### **NON-DISCRIMINATION**

Submitters, during the performance of this contract, will not discriminate against any employee or applicant for employment because of race, religion, sex, national origin or disability except where religion, sex, national origin or disability is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor.

### **PROCESSING TIME FOR PAYMENT**

Submitters are advised that a minimum of thirty (30) days is required to process invoices for payment.

### **ELECTRONIC SUBMISSION OF BIDS**

The City of Edinburg's City Secretary Department will not accept telegraphic or electronically transmitted submissions.

### **PROOF OF FINANCIAL AND BUSINESS CAPABILITY**

Submitters must, upon request, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these requirements. The CITY will make the final determination as to the submitter's ability.



### **SUBMITTER DEFAULT**

The City of Edinburg reserves the right, in case of submitter default, to procure the articles or services from other sources and hold the defaulting submitter responsible for any excess costs occasioned thereby.

### **RESTRICTIVE OR AMBIGUOUS REQUIREMENTS**

It is the responsibility of the submitter to review the Request for Proposals (RFP) packet and to notify the City Engineering Department if the requirements are formulated in a manner that would unnecessarily restrict competition. Any such protest or question regarding the requirements or bidding procedures must be received in the City Secretary Department not less than seventy-two hours prior to the time set for the opening. These criteria also apply to requirements that are ambiguous.

### **RFP DELIVERY**

The City of Edinburg requires submitters, when hand-delivering statements of qualifications, to have a City Secretary Department representative time/date stamp and initial the envelope.

### **SIGNING OF PROPOSALS**

In order to be considered, all submittals **must** be signed.

### **WAIVING OF INFORMALITIES**

THE CITY reserves the right to waive minor informalities or technicalities when it is in the best interest of THE CITY.

### **SUBCONTRACTING**

The successful submitter may not subcontract the award without the written consent of the City.

### **BIDDER RESPONSIBILITY**

It is the responsibility of each vendor before submitting a proposal:

- To examine thoroughly the contract documents and other related data identified in the proposal documents.
- To visit the site to become familiar with and satisfy vendor as to the general, local, and site conditions that may affect cost, progress, performance, etc.
- To consider federal, state, and local laws and regulations that may affect costs, progress, performance or furnishing of the work.
- To study and carefully correlate vendor's knowledge and observations with the contract documents and such other related data.
- To promptly notify THE CITY Purchasing of all conflicts, errors, ambiguities, or discrepancies which vendor has discovered in or between the contract documents and such other related documents.

### **TERMINATION**

THE CITY has the authority and express right to terminate any Agreement awarded under this RFP or any Work Order resulting from the Agreement at any time for any reason, including but not limited to, instances



where THE CITY finds that the Contractor's work is negligent, not satisfactory, or not in accordance with the Agreement requirements.





## SECTION II RFP REQUIREMENTS

### PURPOSE

The intent of this Request for Proposal and resulting contract is to obtain proposals to South Central Original Townsite Drainage Improvements.

### REQUEST FOR PROPOSALS

The required contents and limitations for the preparation of the RFP are described in this section. Failure to provide the requested information or adhere to any of The CITY limitations will result in disqualification of the submitted RFP. A total of **one (1) original and four (4) copies** of the RFP shall be submitted to the address on the cover letter. Letter of Intent from Surety Company to provide Payment and Performance Bonds shall also be required from the proposer as part of RFP.

### SUBMITTAL

For proper comparison and evaluation, THE CITY requests that proposals address, at a minimum, the following format.

- 1) **Cover Letter** - A brief introductory letter of representation.
- 2) **Executive Summary** - A brief summary highlighting the most important points of the proposal. If used, the Summary should not exceed five pages.
- 3) **Degree of Compliance** - A statement that all products and services quoted in proposal is in full accord with the specifications or a brief listing of all those specification sections to which the Proposer takes exception. All explanations, exceptions, comments, etc., pertaining to the specific sections of the specifications shall be listed and numbered in order of the respective article of the specification.

### CONTENTS

The required contents for the RFP are presented below in the order they should be incorporated into the submitted document.

- 1) **UNDERSTANDING OF THE PROJECT:** This section should demonstrate the submitter's understanding of the project's needs, the work required, and any local issues or concerns. This description should be concise, candid, and limited to 2 pages in length.
- 2) **FIRM QUALIFICATIONS, PERSONNEL AND STAFFING:** The CITY is seeking a contract with a competent firm(s); with a minimum of 5 years' experience of installation of the South Central Original Townsite Drainage Improvements.
  - a) **Qualifications:**
    - i) List Firm's qualifications and ability to perform the service requirements.
    - ii) List qualifications of key personnel to be assigned to this project, including but not limited to education, training, registrations, certifications and licenses.



**b) Experience:**

- i) Number of years of experience as a General Contractor.
- ii) Relevant experience with projects of similar size and scope performed over the past five (5) years. For each project listed, date services provided and name, titles, and telephone numbers of each client or client's representative.
- iii) Specific experience with public entity clients, especially large municipalities. If company submitting proposal for new construction has provided services to the CITY in the past, identify the name of the project and the department for which services were provided.
- iv) If company submitting proposal for this project is submitting as a team or joint venture, provide the same information for each member of the team or joint venture.
- v) Provide the following information for key personnel to be assigned to this project:
  - (1) Total years' experience.
  - (2) Primary work assignment for the projects outlined in this RFP.
  - (3) Relevant experience with projects of similar size and scope.

**c) Previous Project Performance:**

- i) Provide evidence of satisfactory performance on past projects
- ii) List past assignments over the past five (5) years
- iii) Provide copies of outstanding service letters, letters of commendation, service awards, etc.
- iv) Provide five recent references who may be contacted to verify performance of similar services. For each reference, provide a current phone number and e-mail address. References may not be present or former CITY employees.

**d) Quality of Service:**

- i) Company submitting proposal for the South Central Original Townsite Drainage Improvements – Availability: Identify any concurrent or near future commitment that would impede the firm's ability to perform this contract.
- ii) Describe company submitting proposal for the South Central Original Townsite Drainage Improvements policies, procedures and plans to ensure quality services (continuing education, on-going training, internal quality practices, etc.)
- iii) If company submitting proposal for the South Central Original Townsite Drainage Improvements has ever had a contract terminated or has been dismissed due to alleged unsatisfactory performance, state when, where and why the contract was terminated and/or Security Consultant dismissed, the client's name, and the contact person's phone number.

- 3) **Proposal Pricing/Delivery** - Pricing shall be inclusive for all items requested in this proposal. Brief notes referencing specific line items may be included, if necessary, for explanation. Proposal shall state





all labor, materials and equipment necessary to complete the project as stated in the SCOPE OF WORK (Page 2).

- 4) **Contractor Background Information** - This section should include a description of the Proposer experience with other services similar to the one described herein. This information should include scope of several similar jobs including magnitude and cost, customer contacts and other information that THE CITY can use as a basis for performance evaluation. This section should also include information on your organization and staff assigned to the project.
- 5) **References** - Proposer shall submit with this proposal a list of at least three (3) references where like services or similar projects have been performed by their firm. Include name of firm, address, telephone number and name of representative.
- 6) **Schedule** – Proposer shall submit the amount of working days that will take company to complete project.



**PROPOSAL  
BID FOR UNIT PRICE CONTRACT**

Place: Edinburg, Texas  
Date: January 28, 2019

Proposal of \_\_\_\_\_ (hereinafter called "Bidder") \* a corporation,  
organized and existing under the laws of the State of \_\_\_\_\_, \* a partnership, or an  
individual doing business as \_\_\_\_\_.

To the **City of Edinburg**  
\_\_\_\_\_ (hereinafter called "Owner")

Gentlemen:

The Bidder, in compliance with your invitation for bids for the South Central Original Townsite Drainage Improvements, City of Edinburg, having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials, and supplies, and to construct the project in accordance with the contract documents, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within \_\_\_\_ calendar days thereafter as stipulated in the specifications. Bidder further agrees to pay as liquidated damages, the sum of \$500.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 41 of the General Conditions.

Bidder acknowledges receipt of the following addendum:

---

\*Insert corporation, partnership or individual as applicable.

ENGINEER'S ESTIMATE OF QUANTITIES – APPROXIMATE ONLY

<u>No.</u>	<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Price</u>
STORM SEWER IMPROVEMENTS: Sprague Street (19 <sup>th</sup> Ave to 8 <sup>th</sup> Ave)					
1.	24" Storm sewer (6'-8' cut)	150	LF	_____	_____
2.	24" Storm sewer (8'-10' cut)	100	LF	_____	_____
3.	36" Storm sewer (10'-12' cut)	347	LF	_____	_____
4.	42" Storm sewer (10'-12' cut)	474	LF	_____	_____
5.	42" Storm sewer (12'-14' cut)	566	LF	_____	_____
6.	42" Dry bore Class V ASTM C-76 (12'-14' cut)	104	LF	_____	_____
7.	48" Storm sewer (12'-14' cut)	480	LF	_____	_____
8.	48" Storm sewer (14'-16' cut)	607	LF	_____	_____
9.	72" Storm sewer (10'-12' cut)	240	LF	_____	_____
10.	72" Storm sewer (12'-14' cut)	1078	LF	_____	_____
11.	72" Storm sewer (14'-16' cut)	125	LF	_____	_____
12.	Trench excavation protection	4271	LF	_____	_____
13.	60" Manhole (10'-12' cut)	1	EA	_____	_____
14.	72" Manhole (10'-12' cut)	2	EA	_____	_____
15.	Type "A" curb inlet (6'-8' cut)	5	EA	_____	_____

- |     |  |          |    |       |       |
|-----|--|----------|----|-------|-------|
| 16. | Type "A" curb inlet (8'-10' cut)   | 8        | EA | _____ | _____ |
| 17. | Type "CC" grate inlet (6'-8' cut)  | 2        | EA | _____ | _____ |
| 18. | Junction box #1 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); Pavement repair; complete in place.) | Lump Sum |    | _____ | _____ |
| 19. | Junction box #2 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place.) | Lump Sum |    | _____ | _____ |
| 20. | Junction box #3 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place.) | Lump Sum |    | _____ | _____ |
| 21. | Junction box #4 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place)  | Lump Sum |    | _____ | _____ |
| 22. | Junction box #5 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place)  | Lump Sum |    | _____ | _____ |

23. Junction box #6 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place) Lump Sum \_\_\_\_\_
24. Junction box #7 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place ) Lump Sum \_\_\_\_\_
25. Junction box #8 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place ) Lump Sum \_\_\_\_\_
26. Junction box #9 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place) Lump Sum \_\_\_\_\_
27. Junction box #12 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place ) Lump Sum \_\_\_\_\_

- |     |  |          |       |       |
|-----|--|----------|-------|-------|
| 28. | Junction box #13 (Bid to be inclusive of connections; excavation protection; concrete; foundation: base foundation preparation; subgrade preparation; traffic control; bypass pumping (if required); dewatering (if required); pavement repair; complete in place) | Lump Sum | _____ | _____ |
| 29. | Remove exist storm pipes, manholes, Inlets, etc.   | Lump Sum | _____ | _____ |
| 30. | Traffic control as per plan  | Lump Sum | _____ | _____ |

*NOTE: Manholes & inlets to include connections to existing pipes as per plan.*

Total Storm Sewer for Sprague Street: (19<sup>th</sup> to 8<sup>th</sup> Ave)     \$ \_\_\_\_\_

**PAVING IMPROVEMENTS: Sprague Street (19<sup>th</sup> Ave to 8<sup>th</sup> Ave)**

- |    |  |          |       |       |
|----|--|----------|-------|-------|
| 1. | Salvaged 8" compacted caliche Base w/prime coat                  | 9072 SY  | _____ | _____ |
| 2. | Mill 1 1/2" of undisturbed asphalt                               | 9072 SY  | _____ | _____ |
| 3. | 2" Hot mix asphaltic concrete With tack coat (2 courses 1" each) | 18145 SY | _____ | _____ |
| 4. | Striping & markings (match existing)                             | Lump Sum | _____ | _____ |

Total Paving Improvements: Sprague Street (19<sup>th</sup> to 8<sup>th</sup>)     \$ \_\_\_\_\_

**STORM SEWER IMPROVEMENTS: 8<sup>th</sup> AVE (Sprague to Champion)**

- |    |                               |        |       |       |
|----|-------------------------------|--------|-------|-------|
| 1. | 30" Storm sewer (8'-10' cut)  | 250 LF | _____ | _____ |
| 2. | 30" Storm sewer (10'-12' cut) | 500 LF | _____ | _____ |
| 3. | Trench excavation protection  | 750 LF | _____ | _____ |

4.	72" Manhole (8'-10' cut) includes Pipe connections	1	EA	_____	_____
5.	Type "A" curb inlet (8'-10' cut)	1	EA	_____	_____
6.	Type "CC" grate inlet (8'-10' cut)	1	EA	_____	_____
7.	Type "CC" grate inlet (10'-12' cut)	2	EA	_____	_____
8.	Remove exist storm pipe, manholes, Inlets, etc.	Lump Sum		_____	_____
9.	Traffic Control as per plan	Lump Sum		_____	_____

*NOTE: Manholes & inlets to include connections to existing pipes as per plan.*

Total Storm Sewer for 8<sup>th</sup> Street: (Sprague to Champion): \$ \_\_\_\_\_

**PAVING IMPROVEMENTS: 8<sup>th</sup> Ave. (Sprague to Champion)**

1.	Salvaged 8" compacted caliche Base w/prime coat	968	SY	_____	_____
2.	2" Hot mix asphaltic concrete With tack coat (2 courses 1" each)	968	SY	_____	_____

Total Paving Improvements: 8<sup>th</sup> Ave. (Sprague to Champion) \$ \_\_\_\_\_

**STORM SEWER IMPROVEMENTS: 12<sup>th</sup> Ave (Sprague to Champion)**

1.	24" Storm sewer (6'-8' cut)	240	LF	_____	_____
2.	24" Storm sewer (12'-14' cut)	730	LF	_____	_____
3.	60" Manhole (12'-14' cut)	2	EA	_____	_____
4.	72" Manhole (12'-14' cut)	1	EA	_____	_____
5.	Type "CC" grate inlet (6'-8' cut)	8	EA	_____	_____
6.	Traffic control as per plan	Lump Sum		_____	_____

*NOTE: Manholes & inlets to include connections to existing pipes as per plan.*

Total Storm Sewer Improvements: 12<sup>th</sup> Ave (Sprague to Champion) \$ \_\_\_\_\_

PAVING IMPROVEMENTS: 12<sup>th</sup> Ave. (Sprague to Champion)

- |    |   |         |       |       |
|----|---|---------|-------|-------|
| 1. | Salvaged 8" compacted caliche<br>Base w/prime coat                  | 1117 SY | _____ | _____ |
| 2. | Mill 1 ½" of undisturbed asphalt                                    | 2235 SY | _____ | _____ |
| 3. | 2" Hot mix asphaltic concrete<br>With tack coat (2 courses 1" each) | 3352 SY | _____ | _____ |
| 4. | Striping & markings (match existing) Lump Sum                       |         | _____ | _____ |

Total Paving Improvements: 12<sup>th</sup> Ave. (Sprague to Champion) \$ \_\_\_\_\_

STORM SEWER IMPROVEMENTS: 15<sup>th</sup> Ave. (Sprague to Champion)

- |    |                                   |          |    |       |       |
|----|-----------------------------------|----------|----|-------|-------|
| 1. | 24" Storm sewer (0'-6' cut)       | 30       | LF | _____ | _____ |
| 2. | 24" Storm sewer (6'-8' cut)       | 120      | LF | _____ | _____ |
| 3. | 24" Storm sewer (10'-12' cut)     | 227      | LF | _____ | _____ |
| 4. | 24" Storm sewer (12'-14' cut)     | 500      | LF | _____ | _____ |
| 5. | 60" Manhole (12'-14' cut)         | 1        | EA | _____ | _____ |
| 6. | 72" Manhole (10'-12' cut)         | 1        | EA | _____ | _____ |
| 7. | Type "CC" grate inlet (0'-6' cut) | 2        | EA | _____ | _____ |
| 8. | Type "CC" grate inlet (6'-8' cut) | 4        | EA | _____ | _____ |
| 9. | Traffic Control as per plan       | Lump Sum |    | _____ | _____ |



*NOTE: Manholes & inlets to include connections to existing pipes as per plan.*

Total Storm Sewer Improvements: 15<sup>th</sup> Ave (Sprague to Champion) \$ \_\_\_\_\_

PAVING IMPROVEMENTS: 15<sup>th</sup> Ave. (Sprague to Champion)

1.	Salvaged 8" compacted caliche Base w/prime coat	875 SY	_____	_____
2.	Mill 1 ½" of undisturbed asphalt	1750 SY	_____	_____
3.	2" Hot mix asphaltic concrete With tack coat (2 courses 1" each)	2625 SY	_____	_____
4.	Striping & markings (match existing) Lump Sum		_____	_____

Total Paving Improvements: 15<sup>th</sup> Ave. (Sprague to Champion) \$ \_\_\_\_\_

SANITARY SEWER IMPROVEMENTS: Sprague Street (14<sup>th</sup> Ave to 10<sup>th</sup> Ave)

1.	15" PVC SDR26 (0'-6' cut)	400	LF	_____	_____
2.	15" PVC SDR26 (6'-8' cut)	500	LF	_____	_____
3.	15" PVC SDR26 (8'-10' cut)	585	LF	_____	_____
4.	Manhole (0'-6' cut)	1	EA	_____	_____
5.	Manhole (6'-8' cut)	1	EA	_____	_____
6.	Manhole (8'-10' cut)	1	EA	_____	_____
7.	Bore 24" steel casing 6' deep (Closner Blvd)	1	EA	_____	_____
8.	Connect to existing manhole	2	EA	_____	_____
9.	4" Sanitary Sewer services	40	EA	_____	_____

*NOTE: Manholes & inlets to include connections to existing pipes as per plan.*

Total Sanitary Sewer Improvements: Sprague \$ \_\_\_\_\_

**WATER IMPROVEMENTS:**

1.	12" waterline	400	LF	_____	_____
2.	12" Coupling	10	EA	_____	_____
3.	12" Gate valves	10	EA	_____	_____
4.	¾" water services	40	EA	_____	_____
5.	6" waterline	800	LF	_____	_____
6.	6" Coupling	10	EA	_____	_____
7.	6" Gate valve	10	EA	_____	_____

Total Water Improvements: \$ \_\_\_\_\_

**CROSSING AT CLOSNER:**

1.	Grout and fill existing sanitary sewer line within TXDOT right-of-way	Lump Sum	\$ _____
----	---	----------	----------

Total Crossing at Closner: \$ \_\_\_\_\_

**Calendar Days:** \$ \_\_\_\_\_

**Total Improvements:** \$ \_\_\_\_\_

---

(Total In Words)

**ALTERNATE BID:**

Storm Sewer Improvements:

1.	24" Storm sewer HDPE pipe (0'-6' cut)	30 LF	_____	_____
2.	24" Storm sewer HDPE pipe (6'-8' cut)	510 LF	_____	_____
3.	24" Storm sewer HPP pipe (8'-10' cut)	100 LF	_____	_____
4.	24" Storm sewer HDPE pipe (10'-12' cut)	227 LF	_____	_____
5.	24" Storm sewer HDPE pipe (12'-14' cut)	1230 LF	_____	_____

Total Alternate Bid: \$ \_\_\_\_\_

The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by Paragraph 46 of the General Conditions. The Bid security attached in the sum \_\_\_\_\_ is to become the property of the Owner in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner cause thereby.

Respectfully submitted:

By: \_\_\_\_\_

(SEAL-if bid us by a corporation).

\_\_\_\_\_  
(Business Address & Zip Code)

## BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned  
as Principal, and \_\_\_\_\_ as Surety, are hereby held  
and firmly bound unto \_\_\_\_\_,  
Owner, \_\_\_\_\_ in the penal sum of  
\_\_\_\_\_ for the  
payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our  
heirs, executors, administrators, successors and assigns. Signed, the \_\_\_\_\_ day  
of \_\_\_\_\_, 20\_\_\_\_\_.

The condition of the above obligation is such that whereas the Principal has submitted  
to \_\_\_\_\_ a certain Bid, attached hereto and hereby made a  
part hereof to enter into a contract in writing for the \_\_\_\_\_.

NOW, THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and affect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

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

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

\_\_\_\_\_(L.S.)  
Principal

\_\_\_\_\_  
Surety

SEAL

By: \_\_\_\_\_

.  
.

## SALES TAX STATEMENT

Project Name: Old Townsite Drainage Improvements

1. The undersigned Contractor is a holder of a valid sales tax permit. The taxpayer number is \_\_\_\_\_.
2. This contract is a "Separated Contract" and the undersigned contractor provides the City of Edinburg with the following information:

Total Materials Cost Based Upon  
Estimated Quantities \$ \_\_\_\_\_

Total Services Cost Based Upon  
Estimated Quantities \$ \_\_\_\_\_

Total Contract Price Based  
Upon Estimated Quantities \$ \_\_\_\_\_

NOTE: The total materials cost based upon estimated quantities plus the total services cost based upon estimated quantities must equal the amount shown for the total contract price based upon estimated quantities.

The contract price does not include sales and excise tax by virtue of being a "Separated Contract".

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Address

STATE OF TEXAS

This instrument was acknowledged before me on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by  
\_\_\_\_\_  
President of \_\_\_\_\_ (a corporation), (a partnership), or  
(an individual) on behalf of said firm.

\_\_\_\_\_  
NOTARY PUBLIC FOR THE STATE  
OF TEXAS

OWNER

\_\_\_\_\_  
Secretary or Witness

**NON-COLLUSION AFFIDAVIT OF PRIME BIDDER**

State of Texas

County of \_\_\_\_\_

\_\_\_\_\_, being first duly sworn, deposes and says that:

(1) He is \_\_\_\_\_, of \_\_\_\_\_, the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of the 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, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid as 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 or 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 of 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 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) \_\_\_\_\_

\_\_\_\_\_  
(Title)

Subscribed and sworn to before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
(Title)

My Commission expires \_\_\_\_\_



## **SECTION III SELECTION AND SCHEDULES**

### **SELECTION PROCEDURES**

The RFP shall be submitted according to the schedule below.

### **PROPOSAL RANKING**

A selection committee will evaluate and rank the written RFPs on a per project basis. After the RFPs have been ranked, the committee will make a recommendation to the CITY Council.

### **RFP SUBMITTED TO**

An original and four (4) copies of RFPs should be submitted to:

**City of Edinburg  
c/o City Secretary  
415 West University  
P.O. Box 1079  
Edinburg, Texas 78541**

RFPs must be submitted by no later than 3:00 p.m. on Monday, January 28, 2019.



## SECTION IV FIRM and RFP EVALUATION

### RFP – EVALUATION

The evaluation system consists of a 100 Point system. The RFP will be ranked after evaluation. All RFP's submitted will be ranked and evaluated based on specified RFP criteria. The submittal evaluation will be based on the following criteria.

- **40 Points: Proposer's itemized and total proposed price**
  - Total estimated cost for base bid submitted\*

\*Alternates might be included based on what is most advantageous to City.
- **40 Points: Proposer's qualifications/experience and performance/references**
  - Demonstrated prior experience for similar projects (20 points)
  - Number of years in business (5 points)
  - Litigation History/Lawsuit History (5 points)
  - References (10 points)
- **10 Points: The Proposer's Team and Subcontractors.**
  - Resumes for Key Individuals (5 points)
    - Project Superintendent
    - Project Manager
  - List of Subcontractors (5 points)
- **10 Points: Schedule.**
  - Lowest total days (10 points)
  - Within 30 days of lowest (8 points)
  - Within 60 days of lowest (6 points)
  - More than 60 days from lowest (5 points)

### **Proposed Price (40 points):**

The price will be evaluated and scored based on the main proposal cost. The City reserves the right to include any and all alternate price proposals in the price evaluation process. The established budget will determine which, if any, alternates will be recommended and accepted as part of the overall price ranking evaluation. After the highest ranked firm is selected, negotiations on price and changes on the scope of work may occur with the firm that provides the best value to the City.

Points will be awarded based upon the total number of offers submitted. The lowest offeror will receive the maximum number of points and the highest offeror will receive the minimum number of points. A point spread system will be established once all the offers are tabulated. The closer the prices of the offers, the larger the point spread will be.

SAMPLE: Utilizing the 80% Spread Formula

Contractor	Price	Points
Offeror No. 01	\$1,000,000.00	40.0



Offeror No. 02	\$1,050,000.00	37.33
Offeror No. 03	\$1,100,000.00	34.67
Offeror No. 04	\$1,150,000.00	32.0

70% spread: $40 \times 70\% = 28.0$ points	Results: 12 points spread
75% spread: $40 \times 75\% = 30.0$ points	Results: 10 points spread
80% spread: $40 \times 80\% = 32.0$ points	Results: 8 points spread
85% spread: $40 \times 85\% = 34.0$ points	Results: 6 points spread
90% spread: $40 \times 90\% = 36.0$ points	Results: 4 points spread
95% spread: $40 \times 95\% = 38.0$ points	Results: 2 points spread

If the committee decided to utilize the 90% spread formula, Offeror No. 04 is only 4 points away from Offeror No. 1. The committee may feel that a 4 point difference is too close, and is unfair to the lowest price offeror. A 70% spread, or 12 point difference, may be too far spread out and may be considered unfair to the highest price offer. Especially since the prices are not too far apart on a \$1 Million project. The point spread could be very different on a \$300,000.00 project budget versus a \$30 million project budget.

After the percentage spread is agreed upon, in this case the 80% formula, the lowest offeror gets the maximum 40 points and the highest offeror gets 32 points. Everyone else in the middle will get their points scored proportionately (extrapolated). This is the scoring system which will be utilized by the ranking committee on the price category for all construction projects. The point system will vary from project to project depending on the project budget ranges, on the number of offers submitted, and on the price spread differences between all offerors.

## **RESPONDENT – EVALUATION**

The evaluation system consists of a 100-point system. The firms will be ranked after evaluation. Categories under the 100-point system include response to RFP. RFP submittal evaluation will be based on the following criteria.

## **STAFFING OF PROJECT TEAM**

The firms should provide information on their proposed professional team members, i.e., applicable certifications/registrations and other pertinent information that demonstrates their qualifications to perform the contract. The professional team members shall have experience in performing similar contracts for counties, cities, irrigation districts, TX DOT or other clients as stated in the Request for Proposals (RFP). Similar experience gained through other clients should be substantiated by reference. A list and scope of the various projects for comparative purposes shall be included in an appendix.

## **EXPERIENCE OF PROJECT TEAM/ABILITY TO COMMIT RESOURCES**

The provider shall designate experienced staff to completely and efficiently perform the work. Also, in this section, outline the firm's contingency plans for servicing the project in the event that one or more key personnel are not available for any reason during the period of performance.

## **METHODOLOGY**

The RFP should provide a description of the firm's approach to the methodology and management to the scope of services for the project.



## **UNDERSTANDING OF PROJECT/SIMILAR PROJECTS**

The proposal shall include the following:

1. Address appropriate Federal/State/Local regulations and policies
2. Identify information to be gathered or obtained

The respondents should provide as much background information as to its experience in providing similar services to State, CITY, County or any other governmental agencies. Reference information should be as current as possible, especially contact persons and telephone numbers.

## **FAMILIARITY WITH APPLICABLE RULES AND REGULATIONS**

The RFP should indicate, through past experience of the proposed Team, that they possess sufficient knowledge of governmental regulations, appropriate codes, guidelines, professional standards and policies (as required).



THE STATE OF TEXAS §  
COUNTY OF HIDALGO §  
SERVICE CONTRACT §

AGREEMENT FOR THE SOUTH CENTRAL  
ORIGINAL TOWNSITE DRAINAGE  
IMPROVEMENTS BETWEEN THE CITY  
OF EDINBURG AND X\_\_\_\_\_

The **City of Edinburg** (hereinafter called "City"), and **XXXXXX**(herein called "Contractor"), entered into an agreement for the Labor, Materials, permits, Traffic Control, Disposal, SWP3, and Equipment, necessary for the Construction of the McIntyre Pedestrian Crossing.

**RECITALS**

**WHEREAS**, the City desires to engage the Contractor for certain services in connection therewith; and,

**WHEREAS**, Contractor represents that it has the knowledge, ability, and personnel to properly provide construction and concrete services needed by the City;

**NOW, THEREFORE**, the City and Contractor do mutually agree as follows:

**SECTION I**  
**EMPLOYMENT OF CONTRACTOR**

City agrees to employ Contractor to provide the following basic services as stated in the following sections and upon receipt of such satisfactory services, City agrees to pay Contractor as stated in the sections to follow.

**SECTION II**  
**BASIC SERVICES OF CONTRACTOR**

The Contractor agrees to provide the Labor, Materials, permits, Traffic Control, Disposal, SWP3, and Equipment necessary for the construction of the McIntyre Pedestrian Crossing; at his/her (it's or their) own proper cost and expense to furnish all the labor, insurance and other accessories and services necessary to complete the said tasks in accordance with the conditions and prices stated in Exhibits "A & C" Scope of Works and Notice to Bids and Bid Form pertaining to Bid #2018-19 McIntyre Railroad Pedestrian Crossing.

**SECTION III**  
**TIME OF PERFORMANCE**

The Contractor shall perform services as identified in Exhibit "A & C". Work shall be completed upon request of the City and during the course of the City's fiscal year 2018-2019, with the contract terminating 90 calendar days from the Notice to Proceed. Contractor and City shall not be liable for any delay due to force majeure circumstance beyond its control.

**SECTION IV**  
**STANDARD OF PERFORMANCE**

Contractor warrants to City that all labor furnished to perform the Work under the Contract Documents will be competent to perform the tasks undertaken, that the product of such labor will yield only first-class results, that materials and /or equipment furnished will be of good quality and new unless otherwise permitted by the Contract Documents, and that the Work will be of good quality and workman like manner, free from faults and defects, and in strict conformance with the Contract Documents. Any Work not strictly conforming to these requirements shall be considered defective.

**SECTION V**  
**TERMS OF PAYMENT**

City agrees to pay Contractor for services herein contracted for as follows:

- A. Payment for basic services shall be upon thirty (30) days of receipt of invoice by City. Invoice shall be submitted to City upon completion and inspection of each project in accordance with the contract Documents in **Lump Sum** amount not to exceed \$\_\_\_\_\_.
- B. Invoice shall be completed and processed in accordance with City regulations. Contractor shall submit Applications for Payment in accordance with the City policies. Application for Payment will be processed by the Department of Public Works.
- C. City shall authorize all payments made for services rendered. Payment terms shall be net thirty (30) days from receipt of invoice.
- D. If changes in plans or specifications are necessary after the performance of the contract is begun or if it is necessary to decrease or increase the quantity of work to be performed or of materials, equipment, or supplies to be furnished, the governing body of the municipality must approve change orders before making the changes in accordance with City Code of Ordinance and applicable sections of the Texas Local Government Code and Texas Government Code.
- E. The total contract price may not be increased because of the changes unless additional money for increased costs is appropriated for that purpose from available funds or is provided for by the authorization of the issuance of time warrants.

**SECTION VI**  
**TIME OF COMPLETION**

City and the Contractor recognize that time is of the essence of this agreement and that the City may suffer financial loss if the WORK is not completed within the time

specified in Section III herein, plus any extensions thereof allowed in accordance with Bid #2018-74 Demolition of El Tule Building. Accordingly, instead of requiring any such proof, the City and the Contractor agree that not as a penalty, but as added expense for Engineering/Architectural supervision the Contractor shall pay the City for each day that expires after the time specified in Section III herein the amount corresponding below:

<b><u>FOR AMOUNT OF CONTRACT</u></b>	<b><u>COST PER DAY</u></b>
\$ 5,000.00 to \$ 25,000.00	\$100.00
<b>\$ 25,001.00 to \$ 100,000.00</b>	<b>\$200.00</b>
\$ 100,001.00 to \$ 500,000.00	\$250.00
\$ 500,001.00 to \$1,000,000.00	\$300.00
\$1,000,001.00 to \$2,000,000.00	\$400.00
\$2,000,001.00 to \$3,000,000.00	\$500.00
\$3,000,001.00 to \$4,000,000.00	\$600.00
\$4,000,001.00 to \$5,000,000.00	\$700.00
\$5,000,001.00 and over	\$800.00

#### **SECTION VII** **SCHEDULE REQUIREMENTS**

Whenever, in the opinion of City, the Work falls behind schedule, the Contractor shall, to the extent necessary to meet said schedule, increase its labor force and/or provide overtime, Saturday, and Sunday and/or holiday work, and shall have each Subcontractor do likewise, all at no additional cost to or compensation from City. Further, City shall have the right to offset against any amounts then or thereafter due to the Contractor, or to be reimbursed by the Contractor for, any additional costs City may incur as a direct result of said increase in labor force or overtime, Saturday, Sunday, and/or holiday work.

#### **SECTION VIII** **WRITTEN NOTICE OF ISSUE**

In the event that any issue arises relating to any of the provisions contained in this Agreement, including, but not limited to potential delays, change orders, time extensions, weather delays, etc., Contractor agrees to notify the City, in writing, immediately, relating to such issue and proposed resolution. Failure to give such notice shall constitute a waiver of any other remedies available to Contractor hereunder.

#### **SECTION IX** **NO DAMAGE FOR DELAY**

In the event of any delay, not the fault of the Contractor, the Contractor shall be entitled to an extension of time for completion only, and shall not be entitled to any additional payment on account of such delay. Without limiting the foregoing, the Contractor shall not be entitled to payment or compensation of any kind from the City for direct, indirect or impact damages, and/or consequential damages, including but not limited to costs of acceleration arising because of hindrance or from any cause or

whatsoever, whether such hindrances or delays be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable.

## **SECTION X**

### **UNREASONABLE SITE INSPECTION REQUIREMENTS**

The Contractor acknowledges that it has taken steps necessary to ascertain the nature and location of the Work and that it has investigated and satisfied itself as to the general and local conditions which can affect the Work and its costs. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered or difficulties or access insofar as this information is ascertainable from an inspection of the site, and available documents, including all information from exploratory work done by the City and its design consultants as well as from the Drawings and Specifications made a part of this Contract. The Contractor has the right to make any additional tests necessary to assure itself that the site conditions are satisfactory for the work contemplated.

## **SECTION XI**

### **DUTY TO COORDINATE AMONG SEPARATE PRIME CONTRACTORS**

The City reserves the right to engage separate contractors to perform aspects of the Project other than the Work under this Agreement. In such case, contractor shall coordinate sequence and schedule its work together and in cooperation with such other contractors. In the event of any difficulties caused by any such other separate contractor, this contractor shall look solely for relief to such other contractors and shall not make claim against City.

## **SECTION XII**

### **CONTRACT DOCUMENTS**

The Contract Documents which comprise the entire agreement between City and Contractor concerning the WORK consist of this Agreement and the following attachments to this Agreement:

- Notice to Bidders
- Addenda (Index)
- Instructions to Bidders
- Bid Proposal Forms including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits
- Special Provisions
- Agreement for Engineering/Architectural Construction
- Performance Bond
- Payment Bond
- General Conditions of Contract for Engineer/Architectural Construction
- Affidavit and Waiver of Lien Prime Contractor
- Affidavit of Release and Waiver by Subcontractor and Material Vendor
- Contractor's Affidavit as to Status of Lien
- Technical Specifications, as listed in the Table of Contents.



- Drawings
- Change Orders which may be delivered or issued after Effective Date of the Agreement and are not attached hereto.

Said attachments to be delivered before final payment is due. There are no Contract Documents other than those listed in this Section. The Contract Documents may only be amended by Change Order pursuant to the City's policies and or regulations.

### **SECTION XIII ASSIGNMENT**

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

### **SECTION XIV NON-APPROPRIATIONS**

Notwithstanding anything in the contract documents to the contrary, any and all payments which the City is required to make under this contract shall be subject to annual appropriation or other availability of funds, as certified by the Director of Finance.

If the City cannot appropriate sufficient funding, then either party has the right to terminate the contract by providing (10) ten days written notice to the other party.

Furthermore, execution of this contract does not automatically guarantee a renewal of contract upon expiration.

### **SECTION XV MINIMUM INSURANCE REQUIREMENTS**

In accordance with City ordinances, Contractor shall be required to hold the following minimum insurance coverage throughout the duration of this Agreement:

- A. Workers Compensation-  
In accordance with the State statute
- B. Employer's Liability
  - Bodily Injury by Accident: \$100,000 each accident
  - Bodily Injury by Disease: \$100,000 each employee  
\$500,000 policy limits

C. Comprehensive General Liability

<u>Bodily Injury</u>	\$250,000 each person \$500,000 each occurrence
<u>Property Damage</u>	\$100,000 each occurrence \$100,000 aggregate

-or- \$500,000 combined single limits

D. Comprehensive Auto Liability

<u>Bodily Injury</u>	\$250,000 each person \$500,000 each occurrence
<u>Property Damage</u>	\$100,000 each occurrence \$100,000 each aggregate

-or- \$500,000 combined single limits

E. City's Protective Liability

<u>Bodily Injury</u>	\$250,000 each person \$500,000 each occurrence
<u>Property Damage</u>	\$100,000 each occurrence \$100,000 each aggregate

-or- \$500,000 combined single limits

Evidence of the above insurance coverage shall be required prior to final execution of the agreement. The City shall be listed as an additional insured.

Contractor warrants that it is adequately insured and carries liability, worker's compensation, and automobile insurance for injury to its employees and others incurring loss or injury as a result of the acts of Contractor or its employees.

Contractor shall not commence work under this agreement until all insurance requirements have been obtained and proof of such insurance shall have been provided to the City, nor shall Contractor allow any Sub-Contractor to commence work until all insurance as noted above has been so obtained and provided to the City. Approval of the insurance by City shall not relieve or decrease the liability of the Contractor.

**SECTION XVI**  
**TERMINATION OF CONTRACT**

Either party to this agreement shall have the right to terminate this contract at any time, and for any reason, after 30 days' written notice and any payment requested shall be made on work completed and/or goods delivered and as provided for in the contract.

## **SECTION XVII**

### **SEVERABILITY**

If any term or provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

## **SECTION XVIII**

### **ALTERNATE DISPUTE RESOLUTION/NEUTRAL PARTY**

- A. Any controversy, claim or dispute between the parties arising out of or relating to the provisions of this Agreement or the breach, termination or validity thereof shall, upon written request of either party, immediately be referred jointly for resolution of the controversy by non-binding mediation.
- B. The mediation must be concluded within any period mutually agreed upon by the parties but in no event no later than within forty-five (45) days after written notice is given by either party of its intent to proceed to mediation. Unless the parties expressly agree otherwise, each party shall bear its own costs, legal and expert fees incurred in the mediation, and evenly share the costs of the mediator. If, after proceeding in good faith the parties, with the assistance of a neutral mediator, do not resolve the dispute within the forty-five (45) day period, the parties may proceed in accordance with paragraph (C) below.
- C. After exhausting the procedures set forth above, either party may initiate litigation to resolve the dispute. The Law of the State of Texas shall control the matter in controversy. Venue is mandatory in a State Court Hidalgo County, Texas.

## **SECTION XIX**

### **NOTICE**

All notices or other communications required under this Agreement may be affected either by personal delivery in writing or by Certified Mail, Return Receipt Requested. Notice shall be deemed to have been given when delivered or mailed to the parties at their respective addresses as set forth below or when mailed to the last address provided in writing to the other party by the addressee.

## **SECTION XX**

### **IDEMNIFICATION**

- A. Contractor agrees to and shall indemnify and hold harmless and defend the City of Edinburg, Texas, its elected and appointed officers, agents and employees from any and all claims, losses, causes of action and damages, suits and liability of every kind, including all expenses of litigation, court costs, and attorney's fees for injury to or death to any person or for damage to any property, arising out of or directly connected with the negligent operation of the Contractor, its agents, officers and employees, carried out in furtherance of this agreement.
- B. Contractor agrees to assist City in defense of claims or litigation brought against the

City related to this agreement, including any claims related to services.

**SECTION XXI**  
**CONFLICT OF TERMS**

In the Event that there is any conflict or inconsistency between the terms and conditions of this Agreement, and those of the exhibits and attachments to this agreement, the terms and conditions of this Agreement, shall control and govern the rights and obligations of the parties. All other provisions of exhibits and attachments to this agreement not specifically in conflict with this Agreement shall remain the same.

**SECTION XXII**  
**MISCELLANEOUS**

Any changes to this document must be approved by City and signed by both parties to the agreement.

EXECUTED by the parties in triplicate originals on this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

**CITY OF EDINBURG:**

BY: \_\_\_\_\_  
Juan G Guerra, CPA, City Manager  
City of Edinburg  
415 W. University Dr.  
Edinburg, Texas 78541  
Phone: (956)383-5661  
Fax: (956)383-7111

**ATTEST:**

BY: \_\_\_\_\_  
Ludivina Leal, City Secretary

**APPROVED AS TO FORM:**

**OXFORD AND GONZALEZ**

BY: \_\_\_\_\_  
Ricardo Gonzalez,  
City Attorney

**NAME OF COMPANY**

**BY:** \_\_\_\_\_

Name

Title

Address

City, State, Zipcode

Phone:

Fax:

Email:

**ATTACHMENTS:** Exhibit A: Scope of Work  
Exhibit B: Certificates of Insurance  
Exhibit C: Bid 2018-19  
Exhibit D

**PERFORMANCE BOND**

**(To be used in Texas under Govt Code Ch 2253)**

THE STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That we (1) \_\_\_\_\_  
a (2) \_\_\_\_\_ of \_\_\_\_\_ hereinafter called Principal and  
(3) \_\_\_\_\_ of \_\_\_\_\_, State of \_\_\_\_\_,  
hereinafter called the Surety, are held and firmly bound into (4) \_\_\_\_\_  
the Surety, are held and firmly bound unto (4) \_\_\_\_\_  
of \_\_\_\_\_, hereinafter called Owner, in the penal sum of \_\_\_\_\_  
\_\_\_\_\_ (\$ \_\_\_\_\_) Dollars in lawful money of the United

States, to be paid in (5) \_\_\_\_\_ 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 by these presents:

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a  
certain contract with (6) \_\_\_\_\_  
the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_\_, a copy of which is hereto  
attached and made a part hereof for the construction :

\_\_\_\_\_  
\_\_\_\_\_  
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, Partnership or Individual, as case may be
- (3) Correct Name of Surety
- (4) Correct Name of Owner
- (5) County and State
- (6) Owner

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 \_\_\_\_\_ 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 wise 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 \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_\_.

ATTEST:	_____ Principal
_____ (Principal) Secretary	BY _____
(SEAL)	_____ Address
_____ Witness as to Principal)	
_____ Address	
ATTEST	
_____ (Surety) Secretary	BY _____
(SEAL)	_____ Attorney-in-fact
_____ Witness as to Surety	_____ Address

## PAYMENT BOND

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

THE STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That we (1) \_\_\_\_\_

\_\_\_\_\_ a (2) \_\_\_\_\_ of \_\_\_\_\_

hereinafter called Principal and (3) \_\_\_\_\_

of \_\_\_\_\_, State of \_\_\_\_\_, hereinafter called the Surety,

are held and firmly bound unto (4) \_\_\_\_\_

\_\_\_\_\_ of \_\_\_\_\_, hereinafter called Owner, and unto all person, firms, and corporations who may furnish materials for, or perform labor upon the building or improvements hereinafter referred to in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) Dollars in lawful money of the United States, to be paid in (5) \_\_\_\_\_, 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 by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a \_\_\_\_\_ certain \_\_\_\_\_ contract \_\_\_\_\_ with (6) \_\_\_\_\_

the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_, a copy of which is hereto attached and made a part hereof for the construction of:

\_\_\_\_\_  
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



Payment-2

NOW, THEREFORE, the condition of this obligation is such that if the 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, Acts 56th legislature, Regular Session, 1959, 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 protection 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 Hidalgo County, State of Texas, and that the said surety, for value received hereby stipulates and agrees that no change, 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.

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

IN WITNESS WHEREOF, this instrument is executed in six counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_ A.D., 20\_\_.

\_\_\_\_\_  
Principal

ATTEST:

BY \_\_\_\_\_

(SEAL)

\_\_\_\_\_  
Address

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
Address

Payment-3

ATTEST:

\_\_\_\_\_  
Surety

\_\_\_\_\_  
(Surety) Secretary

BY \_\_\_\_\_

(SEAL)

\_\_\_\_\_

\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
Address

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

## **SECTION V**

### **AWARD OF CONTRACT, RESERVATION OF RIGHTS**

#### **Number of Contracts**

The CITY reserves the right to award one or no contract(s) in response to this RFP.

#### **Advantageous Contract**

The Contract/s, if awarded, will be awarded to the vendor/s submitting proposal for the South Central Original Townsite Drainage Improvements whose Submittal(s) is/are deemed most advantageous to the CITY and, as determined by the selection committee, upon approval of the CITY Council.

#### **Final Selection and City Council Approval**

The CITY may accept any Submittal in whole or in part. If subsequent negotiations are conducted, they shall not constitute a rejection or alternate RFP on the part of THE CITY. However, final selection of a company submitting proposal for the South Central Original Townsite Drainage Improvements is subject to City Council approval.

#### **Remedy of Technical Errors**

The CITY reserves the right to accept one or more submittals or reject any or all submittals received in response to this RFP, and to waive informalities and irregularities in the submittals received. The CITY also reserves the right to terminate this RFP, and reissue a subsequent solicitation, and/or remedy technical errors in the RFP process.

#### **Preparation Costs**

This RFP does not commit the CITY to enter into a Contract, award any services related to this RFP, nor does it obligate the CITY to pay any costs incurred in preparation or submission of a submittal or in anticipation of a contract.

#### **Insurance and Indemnity**

If selected, vendor/s submitting proposal for South Central Original Townsite Drainage Improvements will be required to comply with the Insurance and Indemnity Requirements established herein.

#### **Independent Contractor**

The company/s submitting proposal for the South Central Original Townsite Drainage Improvements agrees and understands that, if selected, it and all persons designated by it to provide services in connection with a contract, is (are) and shall be deemed to be (an) independent contractor(s), responsible for its (their) respective acts or omissions, and that THE CITY shall in no way be responsible for company submitting proposal for the South Central Original Townsite Drainage Improvements actions, and that none of the parties hereto will have authority to bind the other or to hold out to third parties.

#### **Purchase Orders, As Needed**

Execution of a contract does not obligate the CITY to engage any delivery orders, Purchase Orders, or other commitments for services. Service delivery shall be at the CITY's discretion, as needed, and will be communicated to the company submitting proposal for the South Central Original Townsite Drainage Improvements through individual Purchase Orders.



## **ATTACHMENT I**

### **Insurance Requirements**

The Respondent 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 in effect at all times during the term of this Contract:

- 1 Professional liability insurance policy with limits of at least One Million Dollars (\$1,000,000) per occurrence, or limited to claims made, include at least a five (5) year extended reporting period.
- 1 Automobile liability insurance policy with limits of at least Three Hundred Thousand Dollars (\$300,000) per person and \$500,000 per occurrence consistent with potential exposure to The CITY under the Texas Tort Claims Act. Coverage should include injury to or death of persons and property damage claims (with limits up to \$500,000) arising out of the services provided to The CITY hereunder.
- 1 Uninsured/Underinsured motorist coverage in an amount equal to the bodily injury limits set forth immediately above;
- 1 A Five Hundred Thousand Dollar (\$500,000) Comprehensive General Liability insurance policy providing additional coverage to all underlying liabilities of The CITY consistent with potential exposure of The CITY under the Texas Tort Claims Act;
- 1 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 The CITY as an additional insured shall be submitted to The CITY 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 CITY 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 that adequate replacement coverage is provided to The CITY. If replacement coverage is not provided within thirty (30) days following suspension of the Contract, the Contract shall automatically terminate.



**ATTACHMENT II**  
**Insurance Requirement Acknowledgement**

I, \_\_\_\_\_, authorized representative for \_\_\_\_\_,  
Company/Vendor

Hereby acknowledge the receipt of The CITY's required insurance limits. Said requirements:

- ☐ Will be acquired within 10 working days after notification from the Department of Utilities of proposal awarded by The CITY of Edinburg; (\*An insurance certificate for the required insurance limits shall be provided to the Director of Utilities in order to qualify for award of bid and to execute a contract between the Company and The CITY.)
- ☐ Will acquire additional amount needed to meet The CITY's requirements within 10 working days after notification from the Department of Utilities of bid awarded by The CITY of Edinburg; currently carry the following:

Professional Liability (Errors & Omissions): \$ \_\_\_\_\_

Automobile Liability: \$ \_\_\_\_\_ General Liability: \$ \_\_\_\_\_

(\* An insurance certificate for the required insurance limits shall be provided to the Director of Utilities in order to qualify for award of bid and to execute a contract between the Company and The CITY.) **OR**

- ☐ Have already been met (see attached copy of insurance certificate).

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Date

**Notice to Bidder:** Failure to provide Certificates of Insurance to the Director of Utilities will cause the bid award to be rescinded and then awarded to next lowest bidder. Certificates of Insurance will be monitored/verified on a **quarterly basis** to ensure that 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  
ATTACHMENT III**

**Project Requirements  
Acknowledgement**

This is to certify that I, \_\_\_\_\_, possess all of the **APPLICABLE:**

1. Licenses: \_\_\_\_\_
2. Bonds: \_\_\_\_\_
3. Certificates: \_\_\_\_\_
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 the bid, I may be eligible to enter a contract with the CITY and proceed to complete the project in a timely manner.

**\* Any license, 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

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip



## ATTACHMENT IV

### LITIGATION DISCLOSURE FORM

**Failure to fully and truthfully disclose the information required by this Litigation Disclosure form may result in the disqualification of your submittal from consideration or termination of the contract, once awarded.**

1. Have you or any member of your Firm or Team to be assigned to this engagement ever been indicted or convicted of a felony or misdemeanor greater than a Class C in the last five (5) years?

**Circle One**

**YES**

**NO**

2. Have you or any member of your Firm or Team to be assigned to this engagement ever been terminated (for cause or otherwise) from any work being performed for the CITY or any other Federal, State or Local Government, or Private Entity?

**Circle One**

**YES**

**NO**

3. Have you or any member of your Firm or Team to be assigned to this engagement ever been involved in any claim or litigation with the CITY or any other Federal, State or Local Government, or Private Entity during the last ten (10) years?

**Circle One**

**YES**

**NO**

**If you have answered "Yes" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your submittal.**



## ATTACHMENT V

### VENDOR/S PROVIDING PROPOSAL FOR SOUTH CENTRAL ORIGINAL TOWNSITE DRAINAGE IMPROVEMENTS QUALIFICATIONS GENERAL QUESTIONNAIRE

- 1 Name/Name of Agency/Company: \_\_\_\_\_  
(Full, correct legal name)
- 2 Address: \_\_\_\_\_  
\_\_\_\_\_
3. Telephone/Fax: \_\_\_\_\_
4. Does your Company anticipate any mergers, transfer of organization ownership, management reorganization, or departure of key personnel within the next twelve (12) months that may affect the organization's ability to carry out its submittal?  
  
Yes\_\_\_\_ No\_\_\_\_
5. Is your Company authorized and/or licensed to do business in Texas?  
Yes\_\_\_\_ No\_\_\_\_
6. Where is the Company's corporate headquarters located? \_\_\_\_\_
7. a. Does the Company have an office located in Edinburg, Texas?  
  
Yes\_\_\_\_ No\_\_\_\_  
  
b. If the answer to the previous question is "yes", how long has the Company conducted business from its Edinburg office?  
  
\_\_\_\_ (years)      \_\_\_\_ (months)  
  
c. State the number of full-time employees at the Edinburg office. \_\_\_\_\_
8. a. If the Company does not have an Edinburg office, does the Company have an office located in Hidalgo County, Texas?  
  
Yes\_\_\_\_ No\_\_\_\_  
  
b. If the answer to the previous question is yes, how long has the Company conducted business from its Hidalgo County office?  
  
\_\_\_\_ (years)      \_\_\_\_ (months)  
  
c. State the number of full-time employees at the Hidalgo County office. \_\_\_\_\_





9. Has the Company or any of its principals been debarred or suspended from contracting with any public entity? Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, identify the public entity and the name and current phone number of a representative of the public entity familiar with the debarment or suspension, and state the reason for or circumstances surrounding the debarment or suspension, including but not limited to the period of time for such debarment or suspension. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Indicate person whom The CITY may contact concerning your submittal or setting dates for meetings.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

#### 11. Surety Information

Have you or the Company ever had a bond or surety instrument "called," canceled, or forfeited?

Yes ( ) No ( ).

If yes, state the name of the bonding company, date, amount of bond and reason for such bond being "called," or its cancellation or forfeiture. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### 12. Bankruptcy Information

Have you or the Company ever been declared bankrupt or filed for protection from creditors under state or federal proceedings? Yes ( ) No ( )

If yes, state the date, court, jurisdiction, cause number, amount of liabilities and amount of assets. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

13. Provide any other names under which your business has operated within the last 10 years.

\_\_\_\_\_  
\_\_\_\_\_



**ATTACHMENT VI**  
**HOUSE BILL 89 VERIFICATION**

I, \_\_\_\_\_, the undersigned representative of \_\_\_\_\_, (Company or Business name) (hereafter referred to as company) **being an adult over the age of eighteen (18) years of age, verify that the company named-above, under the provisions of Subtitle F, Title 10, Government Code Chapter 2270:**

- 1. Does not boycott Israel currently; and**
- 2. Will not boycott Israel during the term of the contract.**
- 3) Is not currently listed on the State of Texas Comptroller's Companies that Boycott Israel List located at <https://comptroller.texas.gov/purchasing/publications/divestment.php>**

*Pursuant to Section 2270.001, Texas Government Code:*

*1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and*

*2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.*

---

\_\_\_\_\_  
**SIGNATURE OF COMPANY REPRESENTATIVE:**

\_\_\_\_\_  
**TYPE/PRINT NAME AND TITLE:**

\_\_\_\_\_  
**DATE:**

\_\_\_\_\_



## ATTACHMENT VII

### SUBMITTAL CHECKLIST

This checklist is to help the company submitting proposal for the South Central Original Townsite Drainage Improvements ensure that all required documents have been included in its submittal.

Document and Location in Submittal	Check or Initial to Indicate Document is Attached to Submittal
Tab A – Interest Statement	
Tab B – Company submitting proposal for the South Central Original Townsite Drainage Improvements Qualification General Questionnaire (Attachment VI in RFP)	
Tab C – *Project Requirements Acknowledgement (Attachment V in RFP)	
Tab D – Litigation Disclosure (Attachment IV in RFP)	
Tab E – Proof of Insurability (Letter from Insurance Provider and copy of current Insurance Certificate)	
Tab F – *Insurance Requirement Acknowledgement (Attachment II in RFP)	
Tab G – Letter of Intent from Surety Company to provide Payment and Performance Bonds. (Section II in RFP Requirements)	
Tab H – Submittal Checklist (Attachment VI in RFP)	
Tab I - *House Bill 89 Verification (Attachment VI)	
Tab J- *Formal Proposal for the South Central Original Townsite Drainage Improvements	
1 Original* and 2 Copies of Submittal	

**\*Documents marked with an asterisk on this checklist require a signature. Be sure they are signed prior to submittal.**



## GENERAL CONDITIONS OF THE AGREEMENT

1. OWNER. Whenever the word OWNER, or the expression, Party of the First Part, or First Party, is used in this contract, it shall be understood as referring to City of Edinburg.

2. CONTRACTOR. Whenever the work CONTRACTOR, or the expression, Party of the Second Part or Second Party, is used, it shall be understood to mean the person, persons, co-partnership or corporations, to-wit:

                     who has agreed to perform the work embraced in this contract, or to his or their legal representatives.

3. ENGINEER. Whenever the word ENGINEER is used in this contract, it shall be understood as referring to Melden and Hunt, Inc., Consulting Engineers, ENGINEER of the OWNER, or such other ENGINEER, supervisor or inspector as may be authorized by said OWNER to act in any particular.

4. INTERPRETATION OF PHRASES. Whenever the words "Directed", "Required", "Permitted", "Designated", "Considered", "Necessary", "Prescribed", or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation or prescription of the ENGINEER is intended; and, similarly, the words "Approval", "Acceptable", "Satisfactory", or words of like import shall mean approved by or acceptable or satisfactory to the ENGINEER.

Whenever in the specifications or drawings accompanying this Agreement the terms or descriptions of various qualities relative to finish, workmanship, or other qualities of similar kind which cannot, from their nature, be specifically and clearly described and specified, but are necessarily described in general terms, the fulfillment of which must depend on individual judgment, then in all such cases, any question of the fulfillment of said specifications shall be decided by the ENGINEER, and said work shall be done in accordance with his interpretations of the meaning of the words, terms or clauses defining the character of the work.

5. EXHIBITS. All work shall be done and all materials furnished in strict conformity with the appended advertisement (Notice to Bidders), "Instruction to Bidder", "Proposal", "Specifications", and "Construction Plans", all of which are hereto attached (or considered as if attached and are hereby made a part of this contract.

6. KEEPING OF PLANS AND SPECIFICATIONS ACCESSIBLE. The CONTRACTOR shall be furnished with three (3) copies of all plans, profiles, and specifications without expense to him, and shall keep one copy of the same constantly accessible on the work.

7. RIGHT OF ENTRY. The OWNER reserves the right to enter the property or locations on which the works herein contracted for are to be constructed or installed, by such agent or agents as it may elect, for the purpose of supervising and inspecting the work, or for the purpose of constructing or installing such collateral work as said OWNER may desire.

8. QUANTITIES AND MEASUREMENTS. No extra or customary measurements of any kind will be allowed, but the actual length, area, solid contents, number and weight only shall be considered, unless otherwise specifically provided.

9. LINES AND GRADES. Base lines and grades shall be established by the ENGINEER. Whenever necessary, work shall be suspended to permit of this work, but such suspension will be as brief as practicable and the CONTRACTOR shall be allowed no extra compensation therefore. The CONTRACTOR shall give the ENGINEER ample notice of the time and place where lines and grades will be needed. All stakes, marks, etc., shall be carefully preserved by the CONTRACTOR, and in case of careless destruction or removal by him or his employees, such stakes, marks, etc., shall be replaced by the ENGINEER at the CONTRACTOR'S expense.

10. SUPERINTENDENCE AND INSPECTION. It is agreed by the CONTRACTOR that the OWNER shall be and is hereby authorized to appoint from time to time such ENGINEERS, supervisors, or inspectors as the said OWNER may deem proper, to inspect the material furnished and the work done under this Agreement, and to see that the said material is furnished, and said work is done in accordance with the specifications therefore. The CONTRACTOR shall furnish all reasonable aid and assistance required by the ENGINEER, supervisors and inspectors for the proper inspection and examination of the work and all parts of the same. The CONTRACTOR shall regard and obey the directions and instructions of any ENGINEERS, supervisors or inspectors so appointed, when the same are consistent with the obligations of this Agreement and the accompanying specifications, provided, however, should the CONTRACTOR object to any order by any subordinate engineer, supervisor or inspector, the CONTRACTOR may within six (6) days make written appeal to the ENGINEER for his decision.

11. DISCREPANCIES AND OMISSIONS. It is further agreed that it is the intent of this contract that all work must be done and all material must be furnished in accordance with the generally accepted practice, and in the event of any discrepancies between

the plans and specifications, or otherwise, or in the event of any doubt as to the meaning and intent of any portion of the contract, specifications or plans, the ENGINEER shall define which is intended to apply to the work.

12. COLLATERAL CONTRACTS. The OWNER agrees to provide by separate rate contract or otherwise all labor and material essential to the completion of the work that is not included in this contract, in such manner as not to delay its progress or damage said CONTRACTOR.

13. DAMAGES. In the event the CONTRACTOR is damaged in the course of the completion of the work by the neglect, omission, mistake or default of the OWNER, or of any other contractor employed by the OWNER upon the work, thereby causing loss to the CONTRACTOR, the OWNER agrees that he will reimburse the CONTRACTOR for such loss. In the event the OWNER is damaged in the course of the work by the act, negligence, omission, mistake or default of the CONTRACTOR, or work being done by others on the job, so as to cause loss for which the OWNER becomes liable, then the CONTRACTOR shall reimburse the OWNER for such loss.

14. LOSSES FROM NATURAL CAUSES. All losses or damage arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstances in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work shall be sustained and borne by the CONTRACTOR at his own cost and expense.

15. ESTIMATED QUANTITIES. This Agreement, including the specifications, plans and estimate, is intended to show clearly all work to be done and material to be furnished hereunder. The estimated quantities of the various classes of work to be done and material to be furnished under this contract are approximate and are to be used only as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of the work to be done and the material to be furnished under this contract may differ somewhat from these estimates, and that the basis for payment under this contract shall be the actual amount of such work done and the material furnished.

The CONTRACTOR agrees that he will make no claims for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this contract and the estimated quantities contemplated and contained in the proposal, provided, however, that in case the actual quantity of any item should become as much as 25% more than, or 25% less than, estimated or contemplated quantity for such items, then either party to this Agreement upon demand, shall be entitled to a

revised consideration upon the portion of the work above or below 25% of the estimated quantities; such revised consideration to be determined by agreement between the parties, otherwise by the terms of this Agreement, as provided under EXTRA WORK.

16. CHANGES AND ALTERATIONS. The CONTRACTOR further agrees that the OWNER may make such changes and alterations as the OWNER may see fit, in the line, grade, form, dimensions, plans or materials for the work herein contemplated, or any part thereof, either before or after the beginning of the construction, without affecting the validity of this contract and the accompanying bonds.

If such changes or alterations diminish the quantity of the work to be done, they shall not constitute the basis of a claim for damages, or anticipated profits on the work that may be dispensed with. If they increase the amount of work, and the increased work can fairly be classified under the specifications, such increase shall be paid for according to the quantity actually done and at the unit price established for such work under this contract; otherwise such additional work shall be paid for as provided under EXTRA WORK. In case the OWNER shall make such changes or alterations as shall make useless any work already done or material already furnished or used in said work, then the OWNER shall recompense the CONTRACTOR for any material or labor so used, and for any actual loss occasioned by such change, due to actual expenses incurred in preparation for the work as originally planned.

17. EXTRA WORK. The term "Extra Work" as used in this contract shall be understood to mean and include all work that may be required by the ENGINEER or OWNER to be done by the CONTRACTOR to accomplish any change, alteration or addition to the work shown upon the plans, or reasonably implied by the specifications, and not covered by the CONTRACTOR'S Proposal, except as provided under Changes and Alterations in Paragraph 16 herein above.

It is agreed that the CONTRACTOR shall perform all Extra Work under the direction of the ENGINEER when presented with a Written Work Order signed by the ENGINEER; subject, however, to the right of the CONTRACTOR to require a written confirmation of such Extra Work Order by the Owner. It is also agreed that the compensation to be paid the CONTRACTOR for performing said EXTRA WORK shall be determined by one or more of the following methods:

Method (A) - By agreed unit prices; or

Method (B) - By agreed lump sum; or

Method (C) - If neither Method (A) nor Method (B) be agreed upon before the Extra Work is commenced, then the CONTRACTOR shall be paid the "actual field cost" of the work plus fifteen (15%) percent.

In the event said Extra Work be performed and paid for under Method (C), then the provisions of this paragraph shall apply and the "actual field cost" is hereby defined to include the cost of all workmen, such as foremen, timekeepers, mechanics and laborers, and materials, supplies, teams, trucks, rentals on machinery and equipment, for the time actually employed or used on such Extra Work, plus actual transportation charges necessarily incurred, if the kind of equipment or machinery be not already on the job, together with all power, fuel, lubricants, water and similar operating expenses, also all necessary incidental expenses incurred directly on account of such Extra Work, including Social Security, Old Age Benefits and other payroll taxes, and a rateable proportion of premiums on Construction and Maintenance Bonds, Public Liability and Property Damage and Workmen's Compensation, and all other insurance as may be required by any law or ordinance, or directed by the ENGINEER or OWNER, or by them agreed to. The ENGINEER may direct the form in which accounts of the "actual field cost" shall be kept and may also specify in writing, before the work commences, the method of doing the work and the type and kind of machinery and equipment to be used, otherwise these matters shall be determined by the CONTRACTOR. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using 100 percentage of the latest schedule of Equipment Ownership Expense adopted by the Associated General Contractors of America. Where practicable the terms and prices for the use of machinery and equipment shall be incorporated in the Written Extra Work Order. The fifteen (15%) percent of the "actual field cost" to be paid the CONTRACTOR shall cover and compensate him for his profit, overhead, general superintendence and field office expense, and all other elements of cost and expense not embraced within the "actual field cost" as herein defined, save that where the CONTRACTOR'S Camp or Field Office must be maintained primarily on account of such Extra Work, then the cost to maintain and operate the same shall be included in the "actual field cost".

No claim for Extra Work of any kind will be allowed unless ordered in writing by the ENGINEER. In case any orders or instructions, either oral or written, appear to the CONTRACTOR to involve Extra Work for which he should receive compensation, he shall make written request to the ENGINEER for written order authorizing such Extra Work. Should a difference of opinion arise as to what does or does not constitute Extra Work, or as to the payment therefore, and the ENGINEER insists upon its performance, the CONTRACTOR shall proceed with the work after making written request for written order and shall keep an accurate account of the "actual field cost" thereof, as provided under Method (C). The CONTRACTOR will thereby preserve the right to submit the matter of payment to arbitration, as herein below provided.



18. **PRELIMINARY APPROVAL.** No ENGINEER, supervisor or inspector shall have any power to waive the obligations of this contract for the furnishing by the CONTRACTOR of good material, and of his performing good work as herein described, and in full accordance with the plans and specifications. No failure or omission of any ENGINEER, supervisor or inspector to condemn any defective work or material shall release the CONTRACTOR from the obligations to at once tear out, remove and properly replace the same at any time prior to final acceptance upon the discovery of said defective work, or material provided, however, that the ENGINEER, his assistant or inspector, shall, upon request of the CONTRACTOR, inspect and accept or reject any material furnished, and in event the material has been once accepted by the ENGINEER, his assistant or inspector, such acceptance shall be binding on the OWNER, unless it can be clearly shown that such material furnished does not meet the specifications for this work.

Any questioned work may be ordered taken up or removed for re-examination, by the ENGINEER, prior to final acceptance, and if found not in accordance with the specifications for said work, all expense of removing, re-examination, and replacement shall be borne by the CONTRACTOR; otherwise, the expense thus incurred shall be allowed as EXTRA WORK, and shall be paid for by the OWNER.

19. **DEFECTS AND THEIR REMEDIES.** It is further agreed that if the work or any part thereof, or any material brought on the ground for use in the work or selected for the same shall be deemed by the ENGINEER, as unsuitable or not in conformity with the specifications, the CONTRACTOR shall, after receipt of written notice thereof from the ENGINEER, forthwith remove such materials and rebuild or otherwise remedy such work so that it will be in full accordance with this contract.

20. **TIME AND ORDER OF COMPLETION.** It is the meaning and intent of this contract, unless otherwise herein specifically provided, that the CONTRACTOR shall be allowed to prosecute his work at such time and seasons, in such order of precedence, and in such manner as shall be most conducive to economy of construction; provided, however, that the order and time of prosecution shall be such that the work shall be substantially completed as a whole and in part, in accordance with this contract, plans and specifications and within the time of completion hereafter designated; provided, also, that when the OWNER is having other work done, either by contract or by his own force, the ENGINEER may direct the time and manner of constructing the work done under this contract, so that conflict will be avoided and the construction of the various works being done for the OWNER shall be harmonized.

The CONTRACTOR further agrees that he will commence work within ten (10) days after the date written notice to do so shall have been given to the CONTRACTOR, and will progress therewith so that the work shall be substantially completed in accordance with the terms of this Agreement.

A "working day" is defined as a calendar day, not including Sundays, or any legal holiday, in which weather or other conditions, not under the control of the CONTRACTOR, will permit construction of the principal units of the work for a continuous period of not less than seven (7) hours between 7:00 A.M. and 6:00 P.M.

By the term "substantially completed" is meant that the structure has been suitable for use or occupancy and is in condition to serve its intended purpose, but still may require minor miscellaneous work and adjustment.

21. EXTENSION OF TIME. Should the CONTRACTOR be delayed in the completion of the work by any act or neglect of the OWNER or ENGINEER, or of any employee of either or by other Contractors employed by the OWNER, or by changes ordered in the work, or by strikes, lockouts, fire, and unusual delays by common carriers, and unavoidable cause or causes beyond the CONTRACTOR'S control, or by any cause which the ENGINEER shall decide justifies the delay, then an extension of time shall be allowed for completing the work, sufficient to compensate for the delay, the amount of the extension to be determined by the ENGINEER; provided, however, that the CONTRACTOR shall give the ENGINEER prompt notice in writing of the cause of such delay.

22. HINDRANCES AND DELAYS. No charge shall be made by the CONTRACTOR for hindrances or delays from any cause (except where the work is stopped by order of the OWNER) during the progress of any portion of the work embraced in this contract. In case said work shall be stopped by the act of the OWNER, then such expense as in the judgment of the ENGINEER is caused by such stopping of said work shall be paid by the OWNER to the CONTRACTOR.

23. PRICE FOR WORK. In consideration of the furnishing of all the necessary labor, equipment and material, and the completion of all work by the CONTRACTOR, and on the completion of all work and the delivery of all material embraced in this contract in full conformity with the specifications and stipulations herein contained, the OWNER agrees to pay the CONTRACTOR the prices set forth in the PROPOSAL hereto attached, which has been made a part of this contract. And the CONTRACTOR hereby agrees to receive such prices in full for furnishing all material and all labor required for the aforesaid work, also for all expense incurred by him and for well and truly performing the same and the whole thereof in the manner and according to this Agreement, the attached specifications and requirements of the ENGINEER.

24. PARTIAL PAYMENTS. Once a month the CONTRACTOR shall prepare a statement showing as completely as practicable the total value of the work done by the CONTRACTOR up to and including the last day of the preceeding month; said statement shall also include the value of all sound materials delivered on the ground that are to be fabricated into the work. Statement shall be submitted to ENGINEER for his approval.

The OWNER shall then pay the CONTRACTOR within 15 days of the engineer's approval, the total amount of the statement as approved by the ENGINEER, less ten (10%) percent of the amount thereof, which ten (10%) percent shall be retained until final payment, and further less all previous payments, and further less all further sums that may be retained by the OWNER under the terms of this Agreement. It is understood, however, that in case the whole work is near to completion and some unexpected and unusual delay occurs due to no fault or neglect on the part of the CONTRACTOR, the OWNER may --- upon written recommendation of the ENGINEER---pay a reasonable and equitable portion of the retained percentage to the CONTRACTOR; or the CONTRACTOR at the OWNER'S option, may be relieved of the obligation to fully complete the work and, thereupon, the CONTRACTOR shall receive payment of the balance due him under the contract subject only to the conditions stated in paragraph 26 hereof.

25. FINAL COMPLETION AND ACCEPTANCE. Within ten (10) days after the CONTRACTOR has given the ENGINEER written notice that the work has been completed, or substantially completed, the ENGINEER and the OWNER shall inspect the work and within said time, if the work be found to be completed or substantially completed in accordance with the Plans and Specifications, the ENGINEER shall issue to the OWNER and the CONTRACTOR his Certificate of Completion, and thereupon it shall be the duty of the OWNER within said ten (10) days to issue a Certificate of Acceptance of the work to the CONTRACTOR.

26. FINAL PAYMENT. Upon the issuance of the Certificate of Completion, the ENGINEER shall proceed to make final measurements and prepare final statement of the value of all work performed and materials furnished under the terms of the Agreement and shall certify same to the OWNER, who shall pay to the CONTRACTOR on or before the 15th day after the date of the Certificate of Completion the balance due the CONTRACTOR under the terms of this Agreement, provided he has fully performed his contractual obligations under the terms of this contract; the said payment shall become due in any event upon said performance by the CONTRACTOR.

27. DELAYED PAYMENTS. Should the OWNER fail to make payment to the CONTRACTOR of the sum named in any partial or final statement, when payment is due, then the OWNER shall pay to the CONTRACTOR, in addition to the sum shown as due by such statement, interest thereon at the rate of six (6%) percent per annum from date due as provided in Paragraphs 24 and 26, until fully paid, which shall fully liquidate any injury to the CONTRACTOR growing out of such delay in payment, but the right is expressly reserved to the CONTRACTOR in the event payments be not promptly made, as provided in Paragraph 24, to at any time thereafter treat the contract as abandoned by the OWNER and recover compensation, as provided by Paragraph 45 of this contract.

28. ENGINEER'S AUTHORITY AND DUTY. It is mutually agreed between the parties of this Agreement that the ENGINEER shall supervise all work included herein. In order to prevent delays and disputes and to discourage litigation, it is further agreed by and between the parties of this contract, that if it cannot be otherwise agreed, the ENGINEER shall in all cases determine the amounts and quantities of the several kinds of work, which are to be paid for under this contract, and he shall determine all questions in relation to said work, and the construction thereof, and he shall in all cases decide every question which may arise relative to the execution of this contract on the part of said CONTRACTOR, that his estimates and findings shall be the conditions precedent to the right of the parties hereto to arbitration or to any action on the contract, and to any rights of the CONTRACTOR to receive any money under this contract; provided, however, that should the ENGINEER render any decision or give any direction, which in the opinion of either party hereto, is not in accordance with the meaning and intent of this contract, either party may file with said ENGINEER within thirty (30) days his written objection to the decision or direction so rendered, and by such action may reserve the right to submit the question so raised to arbitration as herein provided. It being the intent of this Agreement that there shall be no delay in the executing of the work, and the decision or directions of the ENGINEER as rendered, shall be promptly carried out, and any claim arising therefrom shall be thereafter adjusted by arbitration as hereinafter provided.

The ENGINEER shall, within a reasonable time, render and deliver to both the OWNER and the CONTRACTOR a written decision on all claims of the parties hereto and on all questions which may arise relative to the execution of the work or the interpretation of the contract, specifications and plans. Should the Engineer fail to make such decision within a reasonable time, an appeal to arbitration may be taken as if his decision has been rendered against the party appealing.

29. CONTRACTOR'S DUTY. The CONTRACTOR shall give personal attention to the faithful prosecution and completion of this work and shall be present either in person or by duty authorized representative on the site of the work continually during its progress. He shall maintain an office on or adjacent to the site of the work if so requested by the ENGINEER.

30. CONTRACTOR'S AGENT. The CONTRACTOR during his absence from the work shall keep a competent superintendent or foreman upon the work fully authorized to act for him in his absence, and to receive such orders as may be given for the proper continuance of the work. Notice to do any work, to alter work, to cease work which the CONTRACTOR is obligated to do; or concerning any imperfections in work or any material furnished when given to any foreman or agent of the CONTRACTOR in charge of any operation of the work in the absence of the CONTRACTOR shall be considered as notice to the CONTRACTOR, provided any notice given under this paragraph shall be in writing.

31. CHARACTER OF WORKMEN. The CONTRACTOR agrees to employ only orderly, competent and skillful men to do the work, and that whenever the ENGINEER shall inform him in writing that any man or men on the work are, in his opinion, incompetent, unfaithful or disorderly, such man or men shall be discharged from the work and shall not again be employed on the same without the ENGINEER'S written consent.

32. CONSTRUCTION PLANT. The CONTRACTOR shall provide all labor, tools, equipment, machinery and material necessary in the prosecution and completion of this contract where it is not otherwise specifically provided that the OWNER will furnish the same, and it is also understood that the OWNER shall not be held responsible for the care, preservation, conservation, or protection of any material, tools, or machinery or any part of the work until it is finally completed and accepted.

33. RIGHT OF ENGINEER TO MODIFY METHODS AND EQUIPMENT. If at any time the methods or equipment used by the CONTRACTOR are found to be inadequate to secure the quality of work or the rate of progress required under this contract, the ENGINEER may order the CONTRACTOR in writing to increase their safety or improve their character and efficiency, and the CONTRACTOR shall comply with such order.

If at any time the working force of the CONTRACTOR is inadequate for securing the progress herein specified, the CONTRACTOR shall, if so ordered in writing increase his force or equipment, or both, to such an extent as to give reasonable assurance of compliance with the schedule of progress.

34. SANITATION. Necessary sanitary conveniences for the use of laborers on the work, properly secluded from public observation, shall be constructed and maintained by the CONTRACTOR in such manner and at such points as shall be approved by the ENGINEER, and their use shall be strictly enforced.

35. CONTRACTOR'S BUILDINGS. The building of structures for housing men, or the erection of tents or other forms of protection, will be permitted only at such places as the ENGINEER shall direct, and the sanitary conditions of the grounds in or about such structures shall at all times be maintained in a manner satisfactory to the ENGINEER.

36. PROTECTION AGAINST ACCIDENT TO EMPLOYEES AND THE PUBLIC. The CONTRACTOR shall maintain such insurance as will protect the CONTRACTOR, the OWNER, and the ENGINEER from claims under Workmen's Compensation Acts, and any amendments thereof, and from any other claims for damages from personal injury, including death, which may arise from operations under this Agreement, whether such operations be by himself or by any subcontractor, or anyone directly or indirectly employed by either of them. Certificate of such insurance shall be filed with the OWNER, if so required, and shall be subject to his approval for adequacy of protection.

36a. PUBLIC LIABILITY AND PROPERTY DAMAGE. The CONTRACTOR shall maintain such insurance as will protect him and the OWNER against any and all claims and demands arising from injury to person or persons not in the employ of the CONTRACTOR, and against any and all claims and demands resulting from damage to any property due to any act or omission the CONTRACTOR or OWNER may be liable, in the operation of the work or the execution of this contract. Such insurance shall remain in effect on portions of the work which have been completed and which may or may not be occupied or utilized by the OWNER, if so required, and shall be subject to his approval for adequacy of protection.

37. PROTECTION OF ADJOINING PROPERTY. The said CONTRACTOR shall take proper means to protect the adjacent or adjoining property or properties in any way encountered, or which might be injured or seriously affected by any process of construction, to be undertaken under this Agreement, from any damage or injury be reason of said process of construction; and he shall be liable for any and all claims for such damage on account of his failure to fully protect all adjoining property.

38. PROTECTION AGAINST CLAIMS OR SUB-CONTRACTORS, LABORERS, MATERIALMEN AND FURNISHERS OF MACHINERY, EQUIPMENT AND SUPPLIES. The CONTRACTOR agrees that he will indemnify and save the OWNER harmless from all claims growing out of the lawful demands of

sub-contractors, laborers, workmen, mechanics, materialmen and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. When so desired by the OWNER, the CONTRACTOR shall furnish satisfactory evidence that all obligations of the nature here in above designated have been paid, discharged or waived. If the CONTRACTOR fails so to do, then the OWNER may at the option of the CONTRACTOR either pay unpaid bills, of which the OWNER has written notice, direct or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to liquidate any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payments to the CONTRACTOR shall be resumed in full, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligation upon the OWNER by either the CONTRACTOR or his SURETY.

39. PROTECTION AGAINST ROYALTIES OR PATENTED INVENTION. The CONTRACTOR shall protect and save harmless the OWNER from all and every demand for damages, royalties or fees on any patented invention used by him in connection with the work done or material furnished under this contract; provided, however, that if any patented materials, machinery, appliance or invention is clearly specified in this contract, then, and in that event, the cost of procuring the rights of use and the legal release or indemnity shall be borne and paid by the OWNER direct, unless such cost is determined and directed to be included in the bid price at the time the proposal is submitted.

40. LAWS AND ORDINANCES. The CONTRACTOR shall at all times observe and comply with all Federal, State and local laws, ordinances and regulations, which in any manner affect the contract or the work, and shall indemnify and save harmless the OWNER against any claim arising from the violation of any such laws and ordinances, whether by the CONTRACTOR or his employees. In case the OWNER is a body politic and corporate, the law from which it derives its powers, insofar as the same regulates the objects for which, or the manner in which, or the conditions under which, the OWNER may enter into contract, shall be controlling, and shall be considered as part of this Contract, to the same effect as though embodied herein.

41. LIQUIDATED DAMAGES FOR DELAY. And the CONTRACTOR agrees that time is the essence of this contract, and that for each day of delay beyond the number of working days herein agreed upon for the completion of the work herein specified and contracted for (after due allowance for such extension of time as is provided

for under Extension of Time herein above the OWNER may withhold permanently from the CONTRACTOR'S total compensation, the sum of \_\_\_\_\_ hundred dollars per day Dollars ( \$ \_\_\_\_\_ /day ) as stipulated damages for such delay.

42. RECIPROCAL REWARD FOR DELAYED OR EARLY COMPLETION -----

**DELETED**

43. ASSIGNMENT AND SUBLETTING. The CONTRACTOR further agrees that he will retain personal control and will give his personal attention to the fulfillment of this contract and that he will not assign by Power of Attorney, or otherwise, nor sublet said contract without the written consent of the OWNER, and that no part or feature of the work will be sublet to anyone objectionable to the ENGINEER or the OWNER. The CONTRACTOR further agrees that the subletting of any portion or feature of the work, or materials required in the performance of this contract, shall not relieve the CONTRACTOR from his full obligations to the OWNER, as provided by this Agreement.

44. ABANDONMENT BY CONTRACTOR. In case the CONTRACTOR should abandon and fail or refuse to resume work within ten (10) days after written notification from the OWNER, or the ENGINEER, or if the CONTRACTOR fails to comply with the orders of the ENGINEER, when such orders are consistent with his contract, or with this Agreement or with the Specifications hereto attached, then, and in that case, the Surety of the bond shall be notified in writing and directed to complete the work, and a copy of said notice shall be delivered to the CONTRACTOR.

After receiving said notice of abandonment the CONTRACTOR shall not remove from the work any machinery, equipment, tools, materials or supplies then on the job, but the same, together with any materials and equipment under contract for the work, may be held for use on the work by the OWNER or the SURETY on the construction bond, or another contractor, in completion of the work; and the CONTRACTOR shall not receive any rental or credit therefore, (except when used in connection with Extra Work), where credit shall be allowed as provided for under Paragraph 17, Extra Work); it being understood that the use of such equipment and materials will ultimately reduce the cost to complete the work and be reflected in the final statement.



In case the Surety should fail to commence compliance with the notice for completion herein before provided for, within ten (10) days after service of such notice, then the OWNER may provide for completion of the work in either of the following election manners:

(a) The OWNER may thereupon employ such force of men and use such machinery, equipment, tools, materials, and supplies as said OWNER may deem necessary to complete the work and charge the expense of such labor, machinery, equipment, tools, materials and supplies to said CONTRACTOR, and the expense so charged shall be deducted and paid by the OWNER out of such monies as may be due, or that may thereafter at any time become due to the CONTRACTOR under and by virtue of this Agreement. In case such expense is less than the sum which would have been payable under this contract, if the same had been completed by the CONTRACTOR, then said CONTRACTOR shall receive the difference. In case such expense is greater than the sum which would have been payable under this contract, if the same had been completed by said CONTRACTOR, then the CONTRACTOR and/or his SURETY shall pay the amount of such excess to the OWNER; or

(b) The OWNER under sealed bids, after five (5) days notice published one or more times in a newspaper having a general circulation in the county of the location of the work, may let the contract for the completion of the work under substantially the same terms and conditions which are provided in this contract. In case of any increase in cost to the OWNER under the new contract as compared to what would have been the cost under this contract such increase shall be charged to the CONTRACTOR and the SURETY shall be and remain bound therefore. However, should the cost to complete any such new contract prove to be less than what would have been the cost to complete under this contract, the CONTRACTOR and/or his SURETY shall be credited therewith.

When the work shall have been substantially completed the CONTRACTOR and his SURETY shall be so notified and Certificates of Completion and Acceptance, as provided in Paragraph 25 hereinabove shall be issued. A complete itemized statement of

the contract accounts, certified to by the ENGINEER as being correct, shall then be prepared and delivered to the CONTRACTOR and his SURETY, whereupon the CONTRACTOR and/or his SURETY, or the OWNER as the case may be, shall pay the balance due as reflected by said statement, within fifteen (15) days after the date of such Certificate of Completion.

In the event the statement of accounts shows that the cost to complete the work is less than that which would have been the cost to the OWNER had the work been completed by the CONTRACTOR under the terms of this contract; or when the CONTRACTOR and/or his SURETY shall pay the balance shown to be due by them to the OWNER, then all machinery, equipment, tools, materials or supplies left on the site of the work shall be turned over to the CONTRACTOR and/or his SURETY. Should the cost to complete the work exceed the contract price, and the CONTRACTOR and/or his SURETY fail to pay the amount due the OWNER within the time designated hereinabove, and there remains any machinery, equipment, tools, materials or supplies on the site of the work, notice hereof, together with an itemized list of such equipment and materials shall be mailed to the CONTRACTOR and his SURETY at the respective addresses designated in this contract; provided, however, that actual written notice given in any manner will satisfy this condition. After mailing or other giving of such notice, such property shall be held at the risk of the CONTRACTOR and his SURETY subject only to the duty of the OWNER to exercise ordinary care to protect such property. After fifteen (15) days from the date of said notice the OWNER may sell such machinery, equipment, tools, materials or supplies and apply the net sum derived from such sale to the credit of the CONTRACTOR and his SURETY. Such sale may be made at either public or private sale, with or without notice, as the OWNER may elect. The OWNER shall release any machinery, equipment, tools, materials, or supplies, which remain on the work, and belong to persons other than the CONTRACTOR or his SURETY, to their proper owners.

45. ABANDONMENT BY OWNER. In case the OWNER shall fail to comply with the terms of this contract, and should fail or refuse to comply with said terms within ten (10) days after written notification by the CONTRACTOR, then the CONTRACTOR may suspend or wholly abandon the work, and may remove therefrom all machinery, tools and equipment, and all materials on the ground that have not been included in payments to the CONTRACTOR and have not been brought into the work. And thereupon the ENGINEER shall make an estimate of the total amount earned by the CONTRACTOR, which estimate shall include the value of all work actually completed by said CONTRACTOR at the prices stated in the attached proposal, the value of all partially completed work at a fair and equitable price, and the amount of all Extra Work performed at the prices agreed upon, or provided for by the terms

of this contract, and a reasonable sum to cover the cost of any provisions made by the CONTRACTOR to carry the whole work to completion and which cannot be utilized. The ENGINEER shall then make a final statement of the balance due the CONTRACTOR by deducting from the above estimate all previous payments by the OWNER and all other sums that may be retained by the OWNER who shall pay to the CONTRACTOR on or before thirty (30) days after the date of the notification by the CONTRACTOR the balance shown by said final statement as due the CONTRACTOR, under the terms of this Agreement.

46. BOND. IT is further agreed by the parties to this contract that the CONTRACTOR will execute a bond in an amount equal to one hundred (100%) percent of the contract price for the satisfactory performance of the work in accordance with this contract in the form provided for this purpose, and it is agreed that this contract shall not be in effect until such bond is furnished and approved by the OWNER.

47. TIME OF FILING CLAIMS. It is further agreed by both parties hereto that all questions of dispute or adjustment presented by the CONTRACTOR shall be in writing and filed with the ENGINEER within a reasonable time after the ENGINEER has given any directions, order or instruction to which the CONTRACTOR desires to take exception. The ENGINEER shall reply to such written exceptions by the CONTRACTOR and render his final decision, any demand for arbitration shall be filed with the ENGINEER and the OWNER in writing within ten (10) days after the date of the ENGINEER'S final decision. It is further agreed that final acceptance of the work by the OWNER and the acceptance by the CONTRACTOR of the final payment shall be a bar to any claims by either party, except as follows:

Contractor guarantees all workmanship, materials, and equipment, furnished under this contract, against defect or failure for a period of 12 months following date of final acceptance.

48. ADEQUACY OF DESIGN. It is understood that the OWNER has selected the ENGINEER named in this Agreement to prepare the plans and specifications, and all Supplements thereto; and agreed that the OWNER will be responsible for the adequacy of the design, sufficiency of the plans and specifications, and the safety of the structure, provided the CONTRACTOR has complied with said plans and specifications, all modifications thereof, and additions and alterations thereof, approved by the ENGINEER. The burden of proof shall be upon the CONTRACTOR to show that he has complied with this contract, said plans, specifications, and all modifications thereof, and all additions and alterations thereto.

49. ARBITRATION. All questions of dispute under this Agreement shall be submitted to arbitration at the request of either party to the dispute. The parties may agree upon one arbiter, otherwise, there shall be three; one named in writing by each party, and the third chosen by the two arbiters so selected; or if the arbiters fail to select a third within ten (10) days, he shall be chosen by the ENGINEER. Should the party demanding arbitration fail to name an arbiter within ten (10) days of the demand, his right to arbitrate shall lapse, and the decision of the ENGINEER shall be final and binding on him. Should the other party fail to choose an arbiter within ten (10) days, the ENGINEER shall appoint such arbiter. Should either party refuse or neglect to supply the arbiters with any papers or information demanded in writing, the arbiters are empowered by both parties to take ex-parte proceedings.

The arbiters shall act with promptness. The decision of any two shall be binding on both parties to the contract. THE DECISION OF THE ARBITERS UPON ANY QUESTION SUBMITTED TO ARBITRATION UNDER THIS CONTRACT WILL BE A CONDITION PRECEDENT TO ANY RIGHT OF LEGAL ACTION. The decision of the arbiter or arbiters may be filed in court to carry it into effect.

The arbiters, if they deem the case demands it, are authorized to award the party whose contention is sustained, such sums as they deem proper for the time, expense and trouble incident to the appeal, and if the appeal was taken without reasonable cause, they may award damages for any delay occasioned thereby. The arbiters shall fix their own compensation, unless otherwise provided by agreement, and shall assess the cost and charges of the arbitration upon either or both parties. The award of the arbiters must be made in writing, and shall not be open to objection on account of the form of proceedings or award.

49.INDEMNIFICATION. To the fullest extent permitted by law, the Contractor shall waive any right of contribution and shall indemnify and hold harmless the Owner and the Engineer and their agents and employees and consultants from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from or in connection with the performance of the Work, provided that any such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission of the 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. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in the Agreement.

The Indemnity by the Contractor in favor of Owner and Engineer shall extend to (1) all attorneys fees and costs incurred in bringing an action to enforce the provisions of this indemnity or any other indemnity contained in the General Conditions; and (2) time expended by the party being indemnified and their employees, at their usual rates plus costs of travel, long distance telephone and reproduction of documents.

## **GENERAL PREVAILING WAGE LEGAL REQUIREMENTS**

The Contractor's attention is called to Articles 5159A and 5160 of the Revised Civil Statutes of Texas, which Statutes must be complied with. These articles are as follows:

### Article 5159A:

Section 1. Not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed, and not less than the general prevailing rate of per diem wages for legal holiday and overtime work, shall be paid to all laborers, workmen and mechanics employed by or on behalf of the State of Texas, or by or on behalf of any county, city and county, city, town, district, or other political subdivision of the State, engaged in the construction of public works, exclusive of maintenance work. Laborers, workmen, and mechanics employed by contractors or subcontractors in the execution of any contract or contracts for public works with the State, or any officer or public body thereof, or in the execution of any contract or contracts for public works, with any county, city and county, city, town, district or other political subdivision of this State, or any officer or public body thereof, shall be deemed to be employed upon public works.

Section 2. The public body awarding any contract for public work on behalf of the State, or on behalf of any county, city and county, city, town, district or other political subdivision thereof, or otherwise undertaking any public work, shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be performed for each craft or type of workman or mechanic needed to execute the contract, and shall specify in the call for bids for said contract, and in the contract itself, what the general prevailing rate of per diem wages in the said locality is for each craft or type of workman needed to execute the contract, also the prevailing rate of legal holiday and overtime work, and it shall be mandatory upon the contractor to whom the contract is awarded, and upon any subcontractor under him, to pay not less than the said specified rates to all laborers, workmen and mechanics employed by them in the execution of the contract. The contractor shall forfeit as a penalty to the state, county, city and county, city, town, district or other political subdivision on whose behalf the contract is made or awarded, Ten Dollars (\$10.00) for each laborer, workman or mechanic employed, for each calendar day, or portion thereof, such laborer, workman or mechanic is paid less than the said stipulated rates for any work done under said contract, by him,

or by any subcontractor under him, and the public body awarding the contract shall cause to be inserted in the contract a stipulation to this effect. It shall be the duty of such public body awarding the contract, and its agents and officers to take cognizance of complaints of all violations of the provisions of this Act committed in the course of the execution of the contract, and, when making payments to the contractor of monies becoming due under said contract, to withhold and retain therefrom all sums and amounts which shall have been forfeited pursuant to the herein said stipulation and the terms of this Act; provided, however, that no sum shall be so withheld, retained or forfeited, except from the final payment, without a full investigation by the awarding body. It shall be lawful for any contractor to withhold from any subcontractor under him sufficient sums to cover any penalties withheld, retained or forfeited, except from the final payment, without a full investigation by the awarding body. It shall be lawful for any contractor to withhold from any subcontractor under him sufficient sums to cover any penalties withheld from him by the awarding body on account of the said subcontractor's failure to comply with the terms of this Act, and if payment has already been made to him the contractor may recover from him the amount of the penalty or forfeiture in a suit at law.

Section 3. The contractor and each subcontractor shall keep, or cause to be kept, an accurate record showing the names of occupations of all laborers, workmen and mechanics employed by him, in connection with the said public work, and showing also the actual per diem wages paid to each of such workers, which record shall be open at all reasonable hours to the inspection of the public body awarding the contract, its officers and agents.

Section 4. Any construction or repair work done under contract, and paid for in whole or in part out of public funds, other than work done directly by any public utility company pursuant to order of the Railroad Commission or other public authority, whether or not done under public supervision or direction, or paid for wholly or in part out of the public funds, shall be held to the "public works" within the meaning of this Act. The terms "locality in which the work is performed" shall be held to mean the county, city and county, city, town, district or other political subdivision of this State in which the building, highway, road, excavation or other structure, project, development or improvement is situated in all cases in which the contract is awarded by the State, or any public body thereof, and shall be held to mean the limits of the county, city and county, city, town, district, or other political subdivision on whose behalf the contract is awarded in all other cases. The term "general prevailing rate of per diem wages" shall be the rate determined upon as such rate by the public body awarding the contract, or authorizing the work, whose decision in the matter shall be final. Nothing in this Act, however, shall be construed to prohibit the payment of any laborer, workman, or mechanic

employed on any public work as aforesaid of more than the said general prevailing rate of wages. Acts 1933, 43rd Leg., p. 91, ch. 45.

Section 5. Any officer, agent or representative of the State, or any political subdivision, district or municipality thereof, who willfully shall violate, or omit to comply with any of the provisions of this Act, and any contractor or subcontractor, or agent or representative thereof, doing public work as aforesaid, who shall neglect to keep, or cause to be kept, an accurate record of the name, occupation and actual wages paid to each laborer, workman and mechanic employed by him in connection with the said public work, or who shall refuse to allow access to same at any reasonable hour to any person authorized to inspect same under this Act, shall be guilty of a misdemeanor, and upon conviction, shall be punished by a fine not exceeding Five Hundred Dollars (\$500.00), or by imprisonment not exceeding six (6) months, or by both such fine and imprisonment, in the discretion of the Court.

Section 6. If any section, sentence, clause or part of this Act is for any reason held to be unconstitutional such decision shall not affect the remaining portions of this Act. The Legislature hereby declares that it would have passed this Act, and each section, sentence, clause or part thereof, irrespective of the fact that one or more section, sentences, clauses or parts thereof be declared unconstitutional.

Article 5160:

A. Any person or persons, firm or corporation, hereinafter referred to as "prime contractor", entering into a formal contract in excess of Twenty Five Thousand Dollars (\$25,000) with this State, any department, board or agency thereof; or any county of this state, department, board or agency thereof; or any municipality of this State, department, board or agency thereof; or any school district in this State, common or independent, or subdivision thereof; or any other governmental or quasi-governmental authority, whether specifically named herein or not, authorized under any law of this State, general or local, to enter into contractual agreements for the construction, alteration or repair of any public building or the prosecution or completion of any public work, shall be required before commencing such work to execute to the aforementioned governmental authority or authorities, as the case may be, the statutory bonds as hereinafter prescribed but no governmental authority may require a bond if the contract does not exceed the sum of \$25,000. Each such bond shall be executed by a corporate surety or corporate sureties duly authorized to do business in this state.

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In the case of contracts of the State or a department, board, or agency thereof, the aforesaid bonds shall be payable to the State and shall be approved by the Attorney General as to form.

In

case of all other contracts subject to this Act, the bonds shall be payable to the governmental awarding authority concerned, and shall be approved by it as to form. Any bond furnished by any

prime contractor in an attempted compliance with this Act shall be treated and construed as in conformance with the requirements of this Act as to rights created, limitations thereon, and remedies provided.

(a) A Performance Bond in the amount of the contract conditioned upon the faithful performance of the work in accordance with the plans, specifications and contract documents. Said bond shall be solely for the protection of the State or the governmental authority awarding the contract, as the case may be.

(b) A Payment Bond, in the amount of the contract, solely for the protection of all claimants supplying labor and material as hereinafter defined, in the prosecution of the work provided for in said contract, for the use of each such claimant.

B. Every claimant who has furnished labor or material in the prosecution of the work provided for in such contract in which a Payment Bond is furnished as required hereinabove, and who has not been paid in full therefore, shall have the right, if his claim remains unpaid after the expiration of sixty (60) days after the filing of the claim as herein required, to sue the principal and the surety or sureties on the Payment Bond jointly or severally for the amount due on the balance thereof unpaid at the time of filing the claim or of the institution of the suit; provided.

(a) Notices Required for Unpaid Bills, other than notices solely for Retainages as hereinafter described.

Such claimant shall have given within ninety (90) days after the 10th day of the month next following each month in which the labor was done or performed, in whole or in part, or material was delivered, in whole or in part, for which such claim is made, written notices of the claim by certified or registered mail, addressed to the prime contractor at his last known business address, or at his residence, and to the surety or sureties. Such notices shall be accompanied by a sworn statement of account stating in substance that the amount claimed is just and correct and that all just and lawful offsets, payments, and credits known to the affiant have been allowed. Such statement of account shall include therein the amount of any retainage or retainages applicable to the amount that have not become due by virtue of terms of the contract between the claimant and the prime contractor or between the claimant and a subcontractor. When the claim is based on a written agreement, the claimant shall have the option to enclose with the sworn statement of account, as such notice a true copy of such agreement and advising completion or value of partial completion of same.



(1) When no written contract or written agreement exists between the claimant and the prime contractor or between the claimant and a subcontractor, except as provided in subparagraph B (a) (2) hereof, such notices shall state the name of the party for whom the labor was done or performed or to whom the material was delivered, and the approximate dates of performance and delivery, and describing the labor or materials or both and amount due therefore. The claimant shall generally itemize his claim and shall accompany same with true copies of documents, invoices or orders sufficient to reasonably identify the labor performed or material delivered for which claim is being made. Such documents and copies thereof shall have thereon a reasonable identification or description of the job and destination of delivery.

(2) When the claim is for multiple items of labor or material or both to be paid for on a lump sum basis such notice shall state the name of the party for whom the labor was done or performed or to whom the material was delivered, the amount of the contract and whether written or oral, the amount claimed and the approximate date or dates of performance or delivery or both and describing the labor or materials or both in such a manner so as to reasonably identify the said labor or materials.

(3) When a claimant who is a subcontractor or materialman to the prime contractor or to a subcontractor has written unit price agreement, completed or partially completed, such notices shall be sufficient if such claimant shall attach to his sworn statement of such units completed and of such units partially completed.

(b) Additional Notices Required of Claimants Who Do Have a Direct Contractual Relationship with the Prime Contractor.

Excepting an individual mechanic or laborer who is a claimant for wages, no right of action shall be legally enforceable, nor shall any suit be maintained under any provision of this Act by a claimant not having a direct contractual relationship with any prime contractor for material furnished or labor performed under the provisions of this Act unless such claimant has complied with those of the following additional requirements which are applicable to the claim.

(1) If any agreement exists between the claimant and any subcontractors by which payments are not to be made in full, therefore, in the month next following each month in which the labor was performed or the materials were delivered or both, such claimant shall have given written notice by certified or registered mail addressed to the prime contractor at his last known business address, or at his residence, within thirty-six (36) days after the 10th day of the month next following the commencement of the delivery of materials of the performance of

labor that there has been agreed upon between the claimant and such subcontractors such retention of funds. Such notice shall indicate generally the nature of such retainage.

(2) Such Claimant shall have given written notice by certified or registered mail as described in the preceding subparagraph B (b) (1), to the prime contractor within thirty-six (36) days after the 10th day of the month next following each month in which the labor was done or performed, in whole or in part, or material delivered, in whole or in part, that payment therefore has not been received. A copy of the statement sent to the subcontractor shall suffice as such notice.

(3) If the basis of the claim is an undelivered specially fabricated item or items as described in paragraph C (b) (2), such claimant shall have given written notice by certified or registered mail as described in the preceding subparagraph B (b) (1) to the prime contractor within forty-five (45) days after the receipt and acceptance of an order for hereinafter described specially fabricated material that such an order has been received and accepted.

(c) Notices of Unpaid Retainages Required. Retainage Defined.

Retainage as referred to in this Act is defined as any amount representing any part of the contract payments which are not required to be paid to the claimant within the month next following the month in which the labor was done or material furnished or both.

When a contract between the prime contractor and such claimant, or between a subcontractor and such claimant provided for retainage, such claimant shall have given, on or before ninety (90) days after the final completion of the contract between the prime contractor and the awarding authority, written notices of the claim for such retainage by certified or registered mail to the prime contractor at his last known business address, or at his home address, and to the surety or sureties. Such notices shall consist of a statement showing the amount of the contract, the amount paid, if any, and the balance outstanding. No claim for such retainage contained in such notices shall be valid to an extent greater than the amount specified in the contract between the prime contractor or the subcontractor and the claimant to be retained, and in no event greater than ten percent (10%) of such contract. However, such notices shall not be required if the amount claimed is part of a prior claim which has been made as heretofore described.

C. A claimant is defined as anyone having direct contractual relationship with the Prime Contractor, or with a subcontractor, to perform the work or a part of the work or to furnish labor or materials or both as a part of the work as follows

(a) Labor is to be construed to mean labor used in the direct prosecution of the work.

(b) Material is to be construed to mean any part or all of the following:

(1) Material incorporated in the work, or consumed in the direct prosecution of the work, or ordered and delivered for such incorporation or such consumption.

(2) Material specially fabricated on the order of the Prime Contractor or of a subcontractor for use as a component part of said public building, or other public work so as to be reasonably unsuitable for use elsewhere, even though such material has not been delivered or incorporated into the public building or public work, but in such extent only to the extent of its reasonable costs, less its fair salvage value, and only to the extent that such specially fabricated material is in conformity and compliance with the plans, specifications and contract documents for same.

(3) Rent at a reasonable rate and actual running repairs at a reasonable cost for construction equipment, used in the direct prosecution of the work at the project site, or reasonably required and delivered for such use.

(4) Power, water, fuel and lubricants, when such items have been consumed or ordered and delivered for consumption, in the direct prosecution of the work.

(c) A subcontractor is any person or persons, firm or corporation who has furnished labor or materials or both as defined above to fulfill an obligation to the prime contractor or to a subcontractor to perform and install all or part of the work required by the prime contractor.

A subcontractor shall have a claim, but such claim, including previous payments, however, shall not exceed that proportion of the subcontract price which the work done bears to the total of the work covered by the subcontract.

(d) When a claim is assigned to a third party then and in that event such third party shall stand in the same position as a claimant, provided the notices required in this Act are given.

D. Any person who shall willfully file a false and fraudulent claim hereunder shall be subject to the penalties for false swearing.

E. In the event any contractor, who shall have furnished the bonds provided in this Statute, shall abandon performance of his contract or the awarding authority shall lawfully terminate his right to proceed with performance thereof because of a default or defaults on his part, no further proceeds of the contract shall be payable to him unless and until all costs of completion of the work shall have been paid by him. Any balance remaining shall be payable to him or his surety as their interest may appear, as may be established by agreement or judgment of a court of competent jurisdiction.

F. The contracting authority is authorized and directed to furnish to any person making application therefore who submits an affidavit that he has supplied labor, rented equipment, or materials for such work, or that he has entered into a contract for specially fabricated material, and payment therefore has not been made, or that he is being sued on any such bond, a certified such payment bond and the contract for which it was given, which copy shall be prima facie evidence of the contents, execution and delivery of the original. Applicants shall pay for such certified copies such reasonable fees as the contracting authority may fix to cover the actual cost of preparation thereof.

G. All suits instituted under the provisions of this Act shall be brought in a court of competent jurisdiction in the county in which the project or work, or any part thereof, is situated. No suit shall be instituted on the performance bond after the expiration of one (1) year after the date of final completion of such contract. No suit shall be instituted by a claimant on the payment bond after the expiration of one (1) year after the date suit may be brought thereon under the provisions of Section 1.B. hereof. The State of Texas shall not be liable for the payment of any cost or the expenses of any suit instituted by any party or parties on the payment bond. Acts 1913, p. 185; Acts 1929, 41st Leg., p. 481, ch. 226(,) 1; Acts 1959, 56th Leg., p. 155, ch. 93.(,) 1.

## **TECHNICAL SPECIFICATIONS**

# **GENERAL CONSTRUCTION AND SPECIFICATIONS**

## **INTENT OF PLANS AND SPECIFICATIONS**

The intent of the plans and specifications is to prescribe a complete work or improvements which the Contractor undertakes to do, in full compliance with the plans, specifications, special provisions, proposal and contract. The Contractor shall do all work as provided in the plans, specifications, special provisions, proposal and contract and shall do such additional extra work as may be considered necessary to complete the work in a satisfactory and acceptable manner. The Contractor shall furnish all labor, tools, materials, machinery, equipment and incidentals necessary to the prosecution of the work.

## **FINAL CLEAN-UP**

Upon the completion of the work and before acceptance and final payment will be made, the Contractor shall clean and remove from the site of the work surplus and discarded materials, temporary structures and debris of every kind. He shall leave the site of the work in a neat and orderly condition equal to that which originally existed. Surplus and waste materials removed from the site of the work shall be disposed of at locations satisfactory to the Engineer. Grounds around any structures shall be dressed to final grade as shown on plans.

## **EXISTING STRUCTURES**

The plans show the locations of all known surface and subsurface structures. However, the exact location of gas mains, water mains, conduits, sewers, etc., is unknown and the Owner assumes no responsibility for failure to show any of these structures on the plans or to show them in their exact location. It is mutually agreed such failure will not be considered sufficient basis for claims for additional compensation for extra work or for increasing the pay quantities in any manner whatsoever, unless the obstruction encountered is such as necessitates or requires the building of special work, provision for work is not made in the plans and proposal, in which case the provisions in these specifications for extra work shall apply.

## **COORDINATION OF PROJECT**

The plans, specifications, the proposal, special provisions and all supplementary documents are intended to describe a complete work and are essential parts of the contract. A requirement occurring in any of them is binding. In case of discrepancies, figured dimensions shall govern over specifications; special provisions shall govern over both general and standard specifications; and plans and quantities shown on the plans shall govern over those shown in the proposal. The Contractor shall not take advantage of any apparent error or omission in the plans and specifications and the Engineer shall

be permitted to make such corrections or interpretations as may be deemed necessary for the fulfillment of the intent of the plans and specifications. In the event the Contractor discovers an apparent error or discrepancy, he shall immediately call this to the attention of the Engineer.

#### COOPERATION OF THE CONTRACTOR

The Contractor shall give to the work the consistent attention necessary to facilitate the progress thereof, and he shall cooperate with the Engineer, his inspectors, and with other contractors in every way possible.

#### WAGES

All employees directly employed on the work shall be paid the prevailing wage scale for work of a similar character in this locality. Minimum wage scale is also included in these specifications.

#### MATERIALS-GENERAL

The materials shall be the best procurable, as required by the plans, specifications and special provisions. The material shall be used only after approval has been given by the Engineer and only so long as the quality of said materials remains equal to the requirements of the specifications. The Contractor shall furnish approved materials from other sources, if for any reason the product from any source at any time before commencement or during the prosecution of the work proves unacceptable. After approval, any materials which has become mixed with or coated with dirt or any other foreign substances during its delivery and handling will not be permitted to be used in the work.

#### MATERIALS STORAGE

Any and all materials, such as cement, lime, mill work, or other materials or equipment subject to deterioration by exposure to weather or other factors, shall be stored in such a manner to protect them from deterioration or damage preceding the time they become a permanent part of final structures.

#### **"OR EQUAL" CLAUSE**

Whenever a material or article is required is specified or shown on the plans by using the name of the proprietary product, or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design and

will be considered equal and satisfactory, provided the material or article so proposed is of equal substance and function, and only after written approval by the Engineer.

Except where otherwise specifically prescribed herein, all provisions except for Measurement and Payment of the following Texas State Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges, dated June 1, 2004, shall cover the work to be done under the specifications:

Item 100	Preparing ROW
Item 204	Sprinkling
Item 210	Rolling
Item 216	Proof Rolling
Item 247	Flexible Base
Item 251	Reworking Base Courses
Item 260	Lime Treatment (Road-Mixed)
Item 263	Lime Treatment (Plant-Mixed)
Item 300	Asphalts, Oils, & Emulsions
Item 310	Prime Coat
Item 340	Dense-Graded Hot Mix Asphalt (Method)
Item 341	Dense-Graded Hot Mix Asphalt (QC/QA)
Item 400	Excavation and Backfill for Structures
Item 404	Driving Pile
Item 409	Prestressed Concrete Piling
Item 420	Concrete Structures
Item 421	Hydraulic Cement Concrete
Item 425	Precast Prestressed Concrete Structural Members



Item 426	Prestressing
Item 428	Concrete Surface Treatment
Item 440	Reinforcing Steel
Item 450	Railing
Item 502	Barricades, Signs, and Traffic Handling
Item 506	Temporary Erosion, Sedimentation, and Environmental Controls
Item 529	Concrete Curb, Gutter, and Combined Curb and Gutter
Item 530	Intersections, Driveways, and Turnouts

## PAVING SPECIFICATIONS

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### Texas Highway Department Specifications:

Except where otherwise specifically prescribed herein, all provisions of the following items of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges dated June 1, 2004 shall govern the work to be done under these specifications.

Item 100	Preparing Right-of-Way
Item 104	Removing Concrete
Item 152	Road Grader Work
Item 204	Sprinkling
Item 210	Rolling
Item 247	Flexible Base (Caliche Type F Grade 3
Item 251	Reworking Base Courses
Item 300	Asphalts, Oils and Emulsions
Item 302	Aggregates for Surface Treatment
Item 305	Salvaging, Hauling & Stockpiling Reclaimable Asphalt Pavement
Item 310	Prime Coat
Item 316	Surface Treatments
Item 320	Equipment for Asphalt Concrete Pavement
Item 340	Dense Graded Hot-Mix Asphaltic
Item 529	Concrete Curb and Gutter, Gutter, and Combined Curb and Gutter
Item 531	Sidewalks

### Clearing and Grubbing:

The roadway will be cleared of all brush, trees, stumps and other objectionable materials.

### Preparation of Subgrade:

The roadway shall be excavated to the prescribed grade and all surplus excavated material not required shall be used to replace caliche and asphalt removed from the excavation.

Prior to the placement of any flexible base material, the subgrade shall be brought to a true, uniform surface by sprinkling, rolling, and blading with a self-propelled motor grader of approved design. All unstable or loose material shall be removed from the subgrade and replaced with selected, stable material as directed by the Engineer. Subgrade shall be compacted to 95% Standard Proctor Density at a moisture content in the range of +3 to -2 percentage points of the optimum moisture content as determined by a testing laboratory approved by the Engineer.

## PAVING SPECIFICATIONS

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### Compacted Caliche Base

The new flexible base courses for this project as specified in the proposal Compacted Caliche Base as detailed on the plans or these specifications utilizing Type F Grade 3 caliche as per Texas Department of Transportation specifications.

The caliche base shall be spread and worked with a maintainer of approved design in layers not exceeding four inches loose, and layers will be sprinkled and rolled with sheepfoot and pneumatic tired rollers until the finished base course is compacted to 95% of Standard Proctor Density as determined by an Independent Testing Laboratory. For purposes of determining compaction, the percent moisture shall be within  $\pm 3$  percentage points of the optimum moisture content determined by an approved geotechnical laboratory.

### Prime Coat

All finished Caliche Base surfaces will be primed with MC-30 at a rate of 0.20 gallons per square yard.

### Tack Coat

All "Hot-Mix" surfaces will be preceded by an application of RC-2, tack coat, at a rate not to exceed 0.10 gallons per square yard.

### Hot-Mix Asphaltic Concrete Pavement, Type "F"

Hot-mix will be laid at the thickness or lb/sy by an asphalt paving machine of approved design, as detailed on plans or these specifications.

### Concrete Curb and Gutter & Valley Gutter

The new concrete curb and gutter and concrete valley gutter shall be of the widths and reinforcement as shown on the paving details. Concrete shall be Class "A", 5 sack 3000 lbs psi.

### **SEAL COAT & OVERLAYS:**

#### Cracks & Holes

Cracks and holes will be patched by the contractor prior to seal coat or overlays operations. Material used to do this patch work will be hot mix, hot lay asphaltic concrete, or other asphaltic materials as approved by the Engineer.

## PAVING SPECIFICATIONS

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### Cleaning Existing Surfaces:

Prior to placing the seal coat or overlays, loose dirt, and other objectionable material shall be removed from the existing surface. The surface will be cleaned with a rotary broom. Hand brooms will be used in areas not accessible to rotary brooms. The Engineer must approve all streets before application of any asphalt.

Seal coat shall consist of an application of liquid asphalt on a primed base course covered with Type PB Grade 4 crushed stone aggregate (pre-coated). The following table indicates the approximate rates to be used. Within 24-48 hours after application of aggregate the Contractor shall use a drag broom to spread all loose rock.

<u>Asphalt</u>	<u>Gal/SY</u>	<u>Aggregate</u>	<u>SY/CY</u>
EA-CRS-2 or AC5	.20-.35	Type PB, Grade 4 crushed stone aggregate (pre-coated)	80-100

Aggregate to be used shall meet specifications as set forth in the Texas Highway Department specification under Aggregate for Surface Treatment Item 302.

When tested by Test Method TEX-200-F, Part I, the gradation requirements of Grade 4 shall be as follows:

#### Percent by Weight

Retained on 5/8" Sieve	0
Retained on 1/2" Sieve	0-2
Retained on 3/8" Sieve	20-35
Retained on No. 4	95-100
Retained on No. 10	99-100

### Overlays

The overlay of HMAC shall use Type D HMAC at the thickness or lb/sy specified in the proposal.

## PAVING SPECIFICATIONS

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### Scarifying and Reshaping Base:

Where specified, existing base and pavement shall be scarified to depth of two inches. Where necessary additional caliche shall be added to bring base to proper shape and grade. Finished base shall have a slope of 3/8 inch per foot from a point equal to two thirds of the depth of proposed surfacing toward center on a uniform slope to a V-shaped crown.

### Water for Sprinkling:

All water required for the project shall be provided by the Contractor at his own expense.

### Traffic:

Traffic will be routed through the construction and it will be the Contractor's responsibility to maintain barricades, flagmen, signs and adequate traffic ways.

### Transitions from New Pavement to Existing Streets and Alleys:

When new pavement is found to be of different elevation that abutting existing streets or alleys, it will be the Contractor's responsibility to make a satisfactory transition from the new pavement to such existing street or alley, the maximum allowable grade being 10%. This condition sometimes occurs when parts of the paving program are not paved, or when excessive cuts are necessary for drainage and the abutting streets and alleys are left too high.

### Making Existing Driveways Accessible:

After the road excavation has been made and the new curb and gutter has been poured, all existing earth or gravel driveways will be made easily accessible to the new street either by excavation or fill, and returned to as good or better condition as originally found. This work will be paid for at the unit price bid for driveway repair.

In the case of existing paved driveways, it will be the Contractor's responsibility to remove as much of the existing pavement as necessary to give easy access to the new streets and to replace same with either asphalt or concrete, depending on the original condition of the driveway. Asphalt driveways are to have a minimum of 6" Compacted caliche base and 1" of asphalt surface.

Concrete driveways are to have a minimum thickness of 6" with 6 x 6 No. 6 wire mesh and neatly connected to proposed concrete curb and gutter with 1/2" pre-molded expansion material.

Payment for repairing existing asphalt or concrete driveways will be by the square yard under the Bid Items - "Repairing Existing Asphalt or Concrete Driveways".

## PAVING SPECIFICATIONS

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### Removing Existing Base and/or Base Paving:

The Contractor shall scarify and remove the existing paving and base when necessary as shown on the plans to conform to new grades. The amount of material to be removed will only be that amount necessary to provide a new 8" compacted base conforming to the new grade. The removed material shall be disposed of off site and will be the property of the Contractor or, if shown on the plans or called for in the proposal, the salvaged material shall be incorporated thoroughly with sufficient new caliche and reused to form the proposed base.

### Adjustment of Existing Manholes and Catch Basins and Valve Boxes:

The Contractor will be required to reset to street or gutter grades all existing manhole rings and covers, water valve boxes, and grate inlets for catch basins wherever they do not conform to the established grades. The cost for this item will be included in items in the line item in the proposal.

### Testing:

All testing required for this project will be paid for by the Owner, unless otherwise stated in the various specifications.

### Curb and Gutter Adjacent to Existing Pavement:

Where concrete curb and gutter is to be constructed adjacent to existing pavement, it will be the Contractor's responsibility to repair the area between the curb and gutter and the existing pavement. No specific payment will be made for this work, but the cost for this item will be included in items in which specific payment will be made.

### Alternate Method Pavement Rehabilitation-Recycling of Existing Materials:

Where specified by the Engineer and shown in the proposal, Contractor shall bid the following method for street rehabilitation based on in-place recycling of existing asphalt and base material. Method of rehabilitation is as follows. The Contractor must use a pulverizing machine of approved design that has the capability of pulverizing and mixing existing materials to a depth of 8 inches. The equipment must also have the capability of grading crushed material to sizes less than one and one-half (1 1/2) inches. The machine will thoroughly mix and pulverize the HMA and base material. The recycled base material and new materials will then be compacted with a sheepfoot roller, followed by pneumatic roller to achieve 95% STP compaction. The surface will then receive a tack coat followed by Hot mix asphalt concrete.

## PAVING SPECIFICATIONS

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### **PAYMENT**

Payment for the work prescribed in this item shall be in accordance with the unit price bid as stated in the proposal. The price shall be full compensation for all material labor, equipment and incidentals necessary to complete the work.

Payment for clearing and grubbing will be included in the Contractor's price for Excavation for Subgrade and Backfill Preparation and will not be paid for directly.

Compacted Caliche Base will be paid for by the square yard in place and shall be full compensation for all blading, grading, sprinkling, rolling, etc.

Payment for subgrade shall include all costs of labor, equipment, tools and materials required for excavation and disposing of the material, and fine grading, shaping, sprinkling and rolling in accordance with typical section as shown on plans.

## STORM SEWER SYSTEM

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### 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.



## STORM SEWER SYSTEM

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### Trench Excavation

Unless otherwise ordered by the 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 a 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.

## STORM SEWER SYSTEM

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- (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 of 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.

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.

## STORM SEWER SYSTEM

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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 Proctor.

### 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 date of cutting or crossing the Highway, after permission to cross has been obtained.

### Railroad Crossings

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.

## STORM SEWER SYSTEM

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### 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 to 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.

### Payment

Payment for the work prescribed in this item shall be in accordance with the unit price bid as stated in the proposal. The price shall be full compensation for all material, labor, equipment and incidentals necessary to complete the work.

## **SALVAGE SPECIFICATION**

### **Lime Treated Caliche Base**

The base shall meet all the requirements of untreated caliche base. In addition the base shall be treated with a minimum one and a half (1 ½) percent lime or Portland cement by weight. Lime shall meet the requirements of TxDOT 2014 Specification Item 260. Portland cement shall be Type I meeting ASTM C150 or Type IP meeting ASTM C595. Lime treatment will be in accordance with TxDOT 2014 Specification Item 260 or 263 for base courses and Item 260 for subgrades. Cement treatment shall be in accordance with TxDOT 2014 Specification Item 275 or 276. The base shall be compacted to a minimum 98 percent of the maximum dry density as determined by the standard moisture density relation (ASTM D 698) at moisture contents ranging between minus two (-2) and plus two (+2) percentage points of the optimum moisture content. The base shall be placed in loose lifts not to exceed 8 inches (6 inches compacted) and not less than 5 ½ inches (4 inches compacted).

### **Salvage Use of Flexible Pavements**

The existing pavement materials in this project include the asphaltic concrete layer and the caliche base. Both of these materials may be reused in the proposed caliche base layer of the proposed pavement. **As a replacement for new untreated flexible base the salvage base may be used at a 1:1 ratio respectively. As a replacement for lime treated flexible base the salvage base may be used at a 1:2 ratio respectively.** The following recommendations are given when using salvaged materials:

The existing asphalt pavement shall be crushed and/or broken by mechanical means into pieces no larger than 2 inches in any dimension. The material should be inspected and tested to insure that larger pieces are not utilized in the salvage base layer. The crushed asphalt pavement shall be scarified and worked into the existing salvage caliche base uniformly. The product of the crushed asphalt pavement and salvage caliche base shall be considered equivalent to new base when treated with the addition of three (3) percent lime by dry weight of salvage material. Lime shall meet the requirements of TxDOT 2014 Specification Item 260. Lime treatment will be in accordance with TxDOT 2014 Specification Item 260 or 263 for base courses and Item 260 for subgrades. The salvage base shall be compacted to a minimum 98 percent of the maximum dry density as determined by the standard moisture density relation (ASTM D 698) at moisture contents ranging between minus two (-2) and plus three (+3) percentage points of the optimum moisture content. The salvage base shall be placed in accordance with the requirements of TxDOT 2014 Specification Item 251 and in loose lifts not to exceed 8 inches (6 inches compacted) and not less than 5 ½ inches (4 inches compacted).

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**Working for You!**



Project Name:

**South Central Original Townsite Drainage**

Improvements: Install Storm Lines and Inlets

Start Date: - -19

Project End Date: - -19

**Mayor Richard Molina**

Mayor Pro Tem - David Torres

Councilmember Place 1 - Jorge Salinas

Councilmember Place 2 - Gilbert Enriquez

Councilmember Place 3 - Homer Jasso Jr.

City Manager - Juan G. Guerra, CPA



## CONSTRUCTION IDENTIFICATION SIGN

CONSTRUCTION IDENTIFICATION SIGNS TO BE ERECTED PRIOR TO BEGINNING OF ACTUAL CONSTRUCTION.

WOOD FOR SIGNS SHALL BE 3/4" WATERPROOF RESIN BONDED EXTERIOR GRADE PLYWOOD, DOUGLAS FIR PLYWOOD ASSOCIATION OR EQUAL.

PAYMENT FOR FURNISHING ERECTING, MAINTAINING AND REMOVING CONSTRUCTION IDENTIFICATION SIGNS WILL NOT BE MADE DIRECTLY SUCH COSTS SHALL BE INCLUDED IN THE OVERALL BID SUBMITTED.



CONSTRUCTION  
IDENTIFICATION  
SIGN DETAILS

PROJECT NAME	FILE NAME	SHEET OF
SOUTH CENTRAL DRAINAGE	DRAINAGE	1
DEPARTMENT	MONTH	YEAR
COMPLETION	JANUARY	2019





**Geotechnical Engineering Report**  
**Old Townsite South Central Drainage Improvements**  
**Edinburg, Texas**  
August 23, 2018  
Terracon Project No. 88185067

Prepared for:  
Melden & Hunt  
Edinburg, Texas

Prepared by:  
Terracon Consultants, Inc.  
Pharr, Texas

[terracon.com](http://terracon.com)

**Terracon**

Environmental



Facilities



Geotechnical



Materials

August 23, 2018



Melden & Hunt  
115 W. MyIntyre St  
Edinburg, Texas 78541

Attn: Mario Reyna  
P: [956] 381-0981  
E: mario@meldenandhunt.com

Re: Geotechnical Engineering Report  
Old Townsite South Central Drainage Improvements  
Sprague Street  
Edinburg, Texas  
Terracon Project No. 88185067

Dear Mr. Reyna:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. P88185067 dated June 1, 2018. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and pavements for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,  
Terracon Consultants, Inc.  
(Texas Firm Registration No.: F-3272)

A handwritten signature in cursive script, appearing to read "S Chacón".

Stephany Chacón, E.I.T.  
Staff Engineer

A handwritten signature in cursive script, appearing to read "Alfonso A. Soto".

Alfonso A. Soto, P.E., D.GE.  
Principal

Terracon Consultants, Inc. 1506 Mid Cities Drive Pharr, TX 78577  
P [956] 283 8254 F [956] 283 8279 [terracon.com](http://terracon.com)

Environmental


Facilities

Geotechnical

Materials

## REPORT TOPICS

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**Note:** This report was originally delivered in a web-based format. Orange Bold text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the  logo will bring you back to this page. For more interactive features, please view your project online at [client.terracon.com](http://client.terracon.com).

## ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

SITE LOCATION AND EXPLORATION PLANS

EXPLORATION RESULTS (Boring Logs and Laboratory Data)

SUPPORTING INFORMATION (General Notes and Unified Soil Classification System)

## Geotechnical Engineering Report

Old Townsite South Central Drainage Improvements ■ Edinburg, Texas

August 23, 2018 ■ Terracon Project No. 88185067



## REPORT SUMMARY

Topic <sup>1</sup>	Overview Statement <sup>2</sup>
Project Description	The project will include the construction of a water and sewer system (approx. 3,300 lf) and pavements.
Geotechnical Characterization	<ul style="list-style-type: none"><li>■ Groundwater was not observed either during or upon completion of drilling operations.</li><li>■ The subsurface soils at this site generally consist of Sandy Lean Clay (CL) and Sandy Fat Clay (CH).</li></ul>
Pavements	Both rigid (concrete) and flexible (asphalt) pavement sections were considered for this project. Anticipated traffic was not available at the time of this proposal.
Earthwork	The subgrade should be prepared as noted in the Earthwork section.
General Comments	This section contains important information about the limitations of this geotechnical engineering report. Close observation of the construction operations discussed herein will be critical in achieving the design subgrade support. Therefore, we recommend that Terracon be retained to observe this portion of work.

1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.
2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.

**Geotechnical Engineering Report**  
**Old Townsite South Central Drainage Improvements**  
**Sprague Street**  
**Edinburg, Texas**  
**Terracon Project No. 88185067**  
**August 23, 2018**

## **INTRODUCTION**

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed Old Townsite South Central Drainage Improvements to be located in Edinburg, Texas. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- |  |  |
|--|--|
| ■ Subsurface soil conditions                 | ■ Pavement design guidelines                               |
| ■ Groundwater conditions                     | ■ Excavation considerations                                |
| ■ Site preparation and earthwork             | ■ Demolition considerations                                |
| ■ Underground utility design recommendations | ■ Selection and placement of bedding and backfill material |

The geotechnical engineering scope of services for this project included the advancement of 11 test borings to depths between 10 and 25 feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs in the **Exploration Results** section of this report.

## **SITE CONDITIONS**

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

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Item	Description
Parcel Information	The project will be located between Sprague Street and Champion Street and between S. 8th Avenue and S. 20th Avenue in Edinburg, Texas. Approx. GPS coordinates: Latitude: 26.2949639° N Longitude: 98.1607161° W. See Site Location
Existing Improvements	Developed streets.
Current Ground Cover	Native grasses, soils, pavements and sidewalks.
Existing Topography	Relatively flat and level.
Geology	Based on the Geologic Atlas of Texas, McAllen – Brownsville prepared by The University of Texas, the site is located on the Lissie Formation of the Pleistocene Period of the Quaternary Age. The soils are mostly composed of clay, silt, sand, gravel and caliche. The soils are gray to brown to pale yellow in color. The gravel is mainly siliceous and locally cemented by and interbedded with sandy caliche. The caliche is massive to nodular. The surface is characterized by many undrained circular to irregular depressions, by relic clay dunes, and by stabilized northwest-trending longitudinal dunes.

## PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed in the project planning stage. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	By Mr. Mario Reyna via email on May 30, 2018.
Project Description	The project will include the construction of a water and sewer system (approx. 3,300 lf) and pavements.
Construction Type	The storm sewer line may be PVC material.
Grading	We understand that excavation depths are expected to be between 5 and 20 feet below existing grade.
Pavements	Pavement areas will be reconstructed as a result of new pipe installation. New pavements are also planned.
Estimated Start of Construction	Information was not provided at this time.

## GEOTECHNICAL CHARACTERIZATION

### Subsurface Profile

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting and planned construction. The following table provides our geotechnical characterization.

Description	Depth (ft)	Plasticity Index (%)	In-situ Moisture Content (%)	Moisture content vs. Plastic limit <sup>1</sup> (%)		SPT N-Value <sup>2</sup> (bpf)	Fines <sup>3</sup> (%)
				Dry	Wet		
Asphalt and Base Material	0 - 1	-	-	-	-	-	-
Sandy Lean Clay/ Lean Clay with Sand (CL)	1 - 25	18 - 39	11 - 24	-	1 - 9	4 - 20	43 - 91
Sandy Fat Clay (CH)	1 - 20	31 - 49	16 - 24	1 - 2	2 - 5	7 - 26	65 - 95

1. The difference between a soil sample's in-situ moisture content and its corresponding plastic limit.

2. bpf = blows per foot.

3. Amount of material in-soil finer than the No. 200 mesh (75- $\mu$ m) sieve.

Conditions encountered at each boring location are indicated on the individual boring logs shown in the Exploration Results section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

### Groundwater Conditions

The boreholes were drilled to their full depths using dry drilling techniques to aid in the observation of groundwater. Groundwater was not observed in the borings while drilling, or for the short duration that the borings were allowed to remain open. The boreholes can be found on the boring logs in Exploration Results.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. The boreholes were backfilled with on-site soil cuttings and bentonite chips upon completion patched with cold asphalt mix.

## **GEOTECHNICAL OVERVIEW**

The following recommendations are based upon the data obtained from our field and laboratory programs, project information provided to us and on our experience with similar subsurface and site conditions.

Borings for the proposed storm drainage alignment encountered Sandy Lean Clay underlain by Sandy Fat Clay. These materials will form the trench subgrade for the proposed drainage lines and pavements. It is our opinion that existing soils encountered in the test borings drilled along the storm drainage alignment appear to be suitable for use as engineered backfill, provided oversized and deleterious materials are removed.

Groundwater was not observed at this site during drilling activities. However, groundwater seepage may be present in utility trenches or deep cut areas during construction excavation or at other times in the life of the storm drainage alignment may be higher or lower than the levels indicated on the boring log and a permanent groundwater control system may be needed at this site. The recommendations contained in this report are based upon the results of data presented herein, engineering analyses, and our current understanding of the proposed project.

The General Comments section provides an understanding of the report limitations.

### **Demolition Considerations**

We understand that some of the existing pavement sections at this site should be demolished prior to trench excavation. As a result, abandoned underground utilities or void spaces may be present along the trench excavation alignment. Utilities and associated backfill and granular bedding material can provide avenues for groundwater to enter to the new trench excavation. We recommend that all abandoned utility lines, if any, be completely removed from the proposed waterline alignment. Abandoned pipes which remain underground should be grouted. Any structures removed during demolition will likely create large subsurface voids. It is very important that all subsurface voids formed from the removal of the foundation system be backfill completely with moisture conditioned, compacted, engineered backfill as described in the Earthwork section of this report. It is our experience that improperly backfilled excavations can cause significant settlement under and around the proposed trench excavation.

As an alternative to compacted soil backfill, a flowable fill material may be considered. Flowable fill, or slurry, when properly designed provides a competent subgrade and can still be readily excavated if the utilities require repair or maintenance. In addition, flowable fill does not need to be placed in lifts, compacted, or tested.



## **Environmental Considerations**

During geotechnical activities performed at the site on July 24, 2018, boring P-3, located near the intersection of Sprague Street and Closner Blvd. (see Exploration Plan), exhibited strong petroleum odors in the upper 8 feet within the boring samples collected., in which Terracon contacted the client via email upon discovery.

Terracon does not have knowledge as to the reason for such odors. Please note that petroleum products may be present in the soils and groundwater underlying the site, therefore, Terracon recommends further subsurface investigation to evaluate the extent of impacts.

## **EARTHWORK**

The following presents recommendations for site preparation and placement of engineered backfills on the project. Earthwork on the project should be observed and evaluated by Terracon. The evaluation of earthwork should include observation and testing of engineered backfill and other geotechnical conditions during construction operations.

### **Site Preparation**

Construction operations may encounter difficulties due to the wet or soft surface soils becoming a general hindrance to equipment due to rutting and pumping of the soil surface, especially during and soon after periods of wet weather.

Prior to placing any fill, all loose material and any otherwise unsuitable materials should be removed from the construction area. Wet or dry material should either be removed or moisture conditioned and re-compacted. After stripping and grubbing, the subgrade should be proof-rolled where possible to aid in locating loose or soft areas. Proof-rolling can be performed with a 15-ton roller or fully loaded dump truck. Soft, dry and low-density soil should be removed or compacted in place prior to placing fill.

### **Fill Material Types**

Engineered fill should consist of approved materials, free of organic material, debris and particles larger than about 2 inches. The maximum particle size criteria may be relaxed by the geotechnical engineer of record depending on construction techniques, material gradation, allowable lift thickness and observations during fill placement. Soils for use as engineered fill material should conform to the following specifications:

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Fill Type <sup>1</sup>	USCS Classification	Acceptable Location for Placement
Granular Select Fill <sup>2</sup>	Varies	Can be used in pavement areas.
Select Fill	CL and/or SC (7≤PI≤20)	Can be used to construct all grade adjustments within the proposed development and pavement areas.
On-Site Soils	CL/SC	The on-site CL and SC appear suitable for use as fill; however, if they do not meet the criteria for select fill soils, they should not be utilized within 2 feet of base course beneath pavement areas.
Flowable Fill <sup>3</sup>	---	Flowable fill should be meeting the applicable City of Edinburg criteria or 2014 TxDOT Item 401 requirements. Confined areas and backfill existing utility trenches.
Cement-Stabilized Backfill <sup>4</sup>	---	City of Edinburg criteria.

1. Prior to any filling operations, samples of the proposed borrow and on-site materials should be obtained for laboratory moisture-density testing. The tests will provide a basis for evaluation of fill compaction by in-place density testing. A qualified soil technician should perform sufficient in-place density tests during the filling operations to evaluate that proper levels of compaction, including dry unit weight and moisture content, are being attained.
2. Granular select fill should consist of 2014 TxDOT Item 247, Type A or B, Grade 1-2 or 3 crushed limestone or gravel base material. Granular select fill may also consist of crushed concrete meeting the criteria specified in the 2014 TxDOT Item 247, Type D, Grade 1-2, or 3 or pit-run material (caliche) having a Plasticity Index (PI) between 5 and 12.
3. Flowable fill should have a 28-day strength between 80 and 150 psi and meet the requirements for 2014 TxDOT Item 401. Although usually more costly, flowable fill does not require placement in lifts or mechanical compaction.
4. Cement-Stabilized Backfill should consist of a non-plastic sand or caliche as aggregate with a minimum of 2 sacks of Type I Portland cement per cubic yard based on the dry weight of the aggregate or as indicated by the City of Edinburg criteria. No mixing will be allowed on the street surface.

## Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Description
Fill Lift Thickness	All fill should be placed in thin, loose lifts of about 8 inches, with compacted thickness of not exceeding 6 inches.
Compaction of On-site and Select Fill Materials	95% of the material's maximum dry density (TEX 114E).
Compaction of Granular Materials	98% of the material's maximum dry density (TEX 113E).

Item	Description
<b>Moisture Content of Pavement Subgrade, Select Fill and Granular Materials</b>	Unless indicated otherwise, the materials should be moisture conditioned between -2 and +3 percentage points of the optimum moisture content.

## UNDERGROUND UTILITY

The recommendations and criteria presented in the following subsections can be used to aid in the design and analysis of buried pipes and utilities at this site.

### Trench Bearing Pressures

The subsurface soils have sufficient bearing capacity to support buried pipes. A net allowable bearing pressure of 2,000 pounds per square foot (psf) may be used to support the buried pipes. This bearing pressure includes a factor of safety of 3. The bearing pressure also assumes that the bearing surface will be relatively free and clean of any soft or moist material and loose debris.

### Modulus of Soil Reaction

A modulus of soil reaction for the in-situ soil,  $E_s$  or  $E_n$ , of at least 800 psi may be used in the design of the flexible pipe. Additionally, the modulus of soil reaction,  $E_b$  or sometimes referred to as  $E'$ , of the backfill material supporting the sides of the pipe is also used in the design of the flexible piping. This value is a function of several variables that include:

- Soil type that comprises the backfill material supporting the pipe sides;
- Degree of compaction of the backfill material supporting the pipe sides; and
- Lift thickness of the backfill material supporting the pipe sides.

Values for  $E_b$  vary, depending on the pipe backfill and bedding materials. Fine-grained soils consisting of primarily clay and silt should not be used for bedding materials and backfill around the pipe. More specific information regarding this design parameter is included in ASTM D2321 entitled "Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications". The following table presents typical modulus of soil reaction values,  $E_b$ , for various backfill materials at different compaction ranges.

Type of Material	Modulus of Soil Reaction, $E_b$ <sup>1</sup> , psi, For Degrees of Compaction			
	Dumped (no compaction)	Slight <85%	Moderate 85% to 95%	High >95%
Fine Grained Soil (LL<50): CL, ML	NR	NR	NR	NR
Fine Grained Soil (LL<50) with >25% Coarse-Grained Material: CL, ML  or Coarse-Grained Soil with fines: GM, GC, SM, SC	NR	NR	1000	2000
Coarse-Grained Soil with <12% fines: GW, GP, SW, SP	NR	1000	2000	3000
Crushed Rock	1000	3000		

1. These values do not include a factor of safety. A factor of safety may be needed for design purposes. These values are for use in predicting the initial deflections only. If a high degree of compaction is not achieved in the backfill adjacent to the sides of the pipe, an approximate deflection lag factor should be applied for long-term deflection estimates. It should be noted that LL refers to the Liquid Limit, and NR means that the use of these materials is Not Recommended by ASTM D2321 for the backfill envelope.

## Excavations

Various excavations are planned for site improvements. The actual excavation depths were not provided to us at the time of this report submittal. However, shoring, bracing, sloping, benching or a combination of each will be required during excavation or trenching of the surrounding soils during construction operations. Excavations and trenches should follow Occupational Safety and Health Administration (OSHA) Safety and Health Standards (29 CFR Part 1926 Revised, 1989), state and federal standards and guidelines. All excavation and safety health issues are responsibility of the contractor.

## Trench Backfill

Appropriate trench backfill is generally determined by several factors including the bearing capacity of the soil supporting the pipe, requirements of the pipe manufacturer regarding support of the pipe, and the proposed improvements at the ground surface along the trench. Pipe manufacturers generally require a specified bedding and granular material around the pipe.

Typically, the bedding and embedment material around buried utilities is designed to support and protect the piping. The material above this material (which we call backfill) also helps to protect the piping and to support any overlying structure, roadway, or other improvement. Inadequate compaction of this material can lead to excessive settlement of the backfill, stress in the pipe, and premature distress to any overlying improvement. Therefore, we recommend that the embedment

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and backfill material be properly placed, moisture conditioned, and compacted in accordance with the City of Edinburg 2014 Standards Manual.

Backfill beneath roadways should attempt to match the soil type exposed in the excavation sidewalls. As a compaction guideline, we recommend that all trench backfill be placed in loose lifts of about 8 inches, moisture conditioned between -2 and plus +3 percentage points of the optimum moisture content, and compacted to at least 95 percent of the maximum dry density as evaluated by TEX 114E.

Flowable fill can be used as an alternative to soil backfill, particularly beneath roadways. Flowable fill typically consists of a mixture of sand, portland cement, fly ash, and water and is readily available from ready-mixed concrete suppliers. This very low strength cementitious fill is placed in a slurry form and readily takes the shape of the excavation. Properly designed and placed, it can be trenched through by a backhoe for future repairs or modifications as required.

Embedment backfill along the sides to the top of the pipe and possibly 12 to 24 inches above the pipe should consist of materials that are acceptable to the project civil engineer or materials meeting those requirements established by the City of Edinburg 2014 Standards Manual. To avoid potential damage to the pipe, the embedment material should not contain materials exceeding 3 inches in maximum dimension. On-site soils should be suitable as backfill above the embedment material provided that the soils do not contain deleterious material or particles exceeding 3 inches in maximum dimension and in conformance with the City of Edinburg 2014 Standards Manual.

Construction equipment with wheel or gross loads exceeding the pipe's design strength should not be driven over or close to the pipeline. Additional cover placed on top of the pipe or an alternate route should be provided for machinery producing excessive loads.

## **PAVEMENTS**

Both flexible and rigid pavements may be considered for this project. Pavement subgrade preparations are included in this section to limit changes in soil moisture conditions to help mitigate the effects of soil movement. However, even if these recommendations are followed some pavement distress could still occur.

### **General Pavement Comments**

Traffic conditions and pavement life conditions were not available at the time of this report. A critical aspect of pavement performance is site preparation. Pavement designs, noted in this section, must be applied to the site, which has been prepared as recommended in the Earthwork section.

We recommend the moisture content and density of the top 6 inches of the subgrade be evaluated and the pavement subgrades be proofrolled within two days prior to commencement of actual paving operations. Areas not in compliance with the required ranges of moisture or density should be moisture conditioned and re-compacted.

Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the materials with properly compacted fills.

If a significant precipitation event occurs after the evaluation or if the surface becomes disturbed, the subgrade should be reviewed by qualified personnel immediately prior to paving. The subgrade should be in its finished form at the time of the final review.

Based on the subsurface conditions, we anticipate that the pavement subgrade will generally consist of the on-site soils. The top 6 inches of the finished subgrade soils directly beneath the pavements may be chemically treated. Chemical treatment will increase the supporting value of the subgrade and decrease the effect of moisture on subgrade soils. These 6 inches of treatment should be considered as required part of the pavement design and is not a part of site and subgrade preparation for wet/soft subgrade conditions.

If chemical treatment of the subgrade is chosen, we anticipate that the on-site surficial soils should be treated with about 4 percent of lime or cement. This percentage is given as application by dry weight and is typically equivalent to about 18 pounds modifier per square yard per 6-inch depth. The recommended percentage of modifier is for estimating and planning. The actual quantity of modifier required should be determined at the time of construction by laboratory tests on bulk samples of the subgrade soils. Specifications for treated subgrade are presented later in this section. An alternative pavement section without treated subgrade is also provided.

After proofrolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified and developed as recommended in Earthwork section of this report to provide a uniform subgrade for pavement construction. Areas that appear severely desiccated following site stripping may require further undercutting and moisture conditioning. If a significant precipitation event occurs after the evaluation or if the surface becomes disturbed, the subgrade should be reviewed by qualified personnel immediately prior to paving. The subgrade should be in its finished form at the time of the final review.

### **Pavement Design Considerations**

Traffic patterns and anticipated loading conditions were not available at the time that this report was prepared. However, we anticipate that traffic loads will be produced primarily by light traffic, buses and occasional delivery and trash removal trucks. Pavement thickness can be determined using

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AASHTO, Asphalt Institute and/or other methods if specific wheel loads, axle configurations, frequencies, and desired pavement life are provided.

Terracon can provide thickness recommendations for pavements subjected to loads other than the above mentioned traffic if this information is provided.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to parking lots and drives should slope down from pavement edges at a minimum 2%;
- The subgrade and the pavement surface should have a minimum ¼ inch per foot slope to promote proper surface drainage;
- Install pavement drainage surrounding areas anticipated for frequent wetting (e.g., garden centers, wash racks);
- Install joint sealant and seal cracks immediately;
- Seal all landscaped areas in, or adjacent to pavements to reduce moisture migration to subgrade soils;
- Place compacted, low permeability backfill against the exterior side of curb and gutter; and,
- Place curb, gutter and/or sidewalk directly on low permeability subgrade soils rather than on unbound granular base course materials.

### Estimated Minimum Pavement Thickness

As a minimum, we recommend the following typical pavement sections be considered.

Pavement Area	Traffic Design Index	Description
Automobile Parking Areas	DI-1	Light traffic (Few vehicles heavier than passenger cars, no regular use by heavily loaded two axle trucks). (EAL <sup>(1)</sup> < 6)
Driveways	DI-2	Light to medium traffic (Similar to DI-1 including not over 50 loaded two axle trucks or lightly loaded larger vehicles per day. No regular use by heavily loaded trucks with three or more axles). (EAL = 6-20)
Driveways for Truck Traffic Areas	DI-3	Medium to heavy traffic (Including not over 300 heavily loaded two axle trucks plus lightly loaded trucks with three or more axles and no more than 30 heavily loaded trucks with more than three axles per day). (EAL = 21-75)

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Pavement Area	Traffic Design Index	Description
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1. Equivalent daily 18-kip single-axle load applications.

Listed below are pavement component thicknesses, which may be used as a guide for pavement systems at the site for the traffic classifications stated herein. These systems were derived based on general characterization of the subgrade. Specific testing (such as CBR's, resilient modulus tests, etc.) was not performed for this project to evaluate the support characteristics of the subgrade.

Minimum Recommended <u>Flexible</u> Pavement Section Thickness, inches		
Component	DI-1 <sup>1</sup>	DI-2 <sup>1</sup>
Hot Mix Asphaltic Concrete (HMAC) <sup>2, 3</sup>	2	2½
Granular Base Material <sup>2</sup>	6	8
Treated Subgrade <sup>2</sup>	6	6

1. See Pavements for more specifics regarding traffic classifications.
2. All materials should meet the current Department of Transportation (TxDOT) Standard Specifications for Highway and Bridge Construction.
3. A minimum 2-inch surface course should be used on ACC pavements.

Alternative Minimum Recommended <u>Flexible</u> Pavement System, inches		
Component	DI-1 <sup>1</sup>	DI-2 <sup>1</sup>
Hot Mix Asphaltic Concrete (HMAC) <sup>2, 3</sup>	2	2½
Granular Base Material <sup>2</sup>	8	10
Moisture Conditioned Subgrade	6	6

1. See Pavements for more specifics regarding traffic classifications.
2. All materials should meet the current Department of Transportation (TxDOT) Standard Specifications for Highway and Bridge Construction.
3. A minimum 2-inch surface course should be used on ACC pavements.



<b>Minimum Recommended <u>Rigid</u> Pavement Section Thickness, inches</b>			
<b>Component</b>	<b>DI-1 <sup>1</sup></b>	<b>DI-2 <sup>1</sup></b>	<b>DI-3 <sup>1, 3</sup></b>
Reinforced PC concrete <sup>2</sup>	5	6	7
Granular Base Material <sup>3</sup>	4	4	4
Moisture conditioned subgrade	6	6	6

1. See Pavements for more specifics regarding traffic classifications.
2. All materials should meet the current Department of Transportation (TxDOT) Standard Specifications for Highway and Bridge Construction.
3. In areas of anticipated heavy traffic, delivery trucks, or concentrated loads (e.g. dumpster pads), and areas with repeated turning or maneuvering of heavy vehicles.

The listed pavement component thicknesses should be used as a guide for pavement systems at the site for the traffic classifications stated herein. These recommendations assume a 20-year pavement design life. If pavement frequencies or loads will be different than that specified Terracon should be contacted and allowed to review these pavement sections.

We recommend a Portland Cement Concrete (PCC) pavement be utilized in the main access lanes, parking lots, dumpster pads or other areas where extensive wheel maneuvering are expected.

We recommend that waste dumpster areas be constructed of at least 7-inches of reinforced concrete pavement. The concrete pad areas should be designed so that the vehicle wheels of the collection truck are supported on the concrete while the dumpster is being lifted to support the large wheel loading imposed during waste collection.

Although not required for structural support of rigid pavement systems, a base course layer may be considered to help reduce potentials for slab curl, shrinkage cracking, and subgrade “pumping” through joints.

Proper joint spacing will also be required to prevent excessive slab curling and shrinkage cracking. All joints should be sealed to prevent entry of foreign material and dowelled where necessary for load transfer.

Presented below are our recommended material requirements for the various pavement sections.

**Reinforced Concrete Pavement** – The materials and properties of reinforced concrete pavement shall meet applicable requirements in the ACI Manual of Concrete Practice. The Portland cement concrete mix should have a minimum 28-day compressive strength of 4,000 psi.

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Reinforcing Steel - Reinforcing steel should consist of the following:

DI-1: #3 bars spaced at 18 inches or #4 bars spaced at 24 inches on centers in both directions.

DI-2: #3 bars spaced at 12 inches or #4 bars spaced at 18 inches on centers in both directions.

DI-3: #4 bars spaced at 12 inches on centers in both directions.

Control Joint Spacing – ACI recommendations indicate that control joints should be spaced at about 30 times the thickness of the pavement. Furthermore, ACI recommends a maximum control joint spacing of 12.5 feet for 5-inch pavements and a maximum control joint spacing of 15 feet for 6-inch or thicker pavements. Saw cut control joints should be cut within 6 to 12 hours of concrete placement or as soon as it is practical.

Expansion Joint Spacing – ACI recommendations indicate that regularly spaced expansion joints may be deleted from concrete pavements. Therefore, the installation of expansion joints is optional and should be evaluated by the design team.

Dowels at Expansion Joints – The dowels at expansion joints should be spaced at 12-inch centers and consist of the following:

DI-1: 5/8-inch diameter, 12-inches long with 5-inch embedment

DI-2: 3/4-inch diameter, 14-inches long with 6-inch embedment

DI-3: 7/8-inch diameter, 14-inches long with 6-inch embedment

Hot Mix Asphaltic Concrete Surface Course – The asphaltic concrete surface course should be plant mixed, hot laid Type C or D (Fine Graded Surface Course) meeting the specifications requirements in 2014 TxDOT Standard Specifications Item 340. Specific criteria for the job specifications should include compaction to within an air void range of 5 to 9 percent calculated using the maximum theoretical gravity mix measured by TxDOT Tex-227-F. The asphalt cement content by percent of total mixture weight should be within  $\pm 0.5$  percent asphalt cement from the job mix design.

Granular Base Material: Base material should be composed of crushed limestone or crushed concrete meeting the requirements of 2014 TxDOT Standard Specifications Item 247, Type A or D, Grade 1.

As an alternate to the Type A base, treated "caliche" material meeting the requirements of 2014 TxDOT Standard Specification Manual Item 247, Type B, Grade 1 or 2 may be used.

The granular base should be compacted to at least 95 percent of the maximum dry density determined in accordance with the modified moisture-density relationship (ASTM D 1557) at moisture content within 2 percentage points of the optimum moisture content.

Re-use of Existing Asphaltic Concrete and Base Material in Proposed Pavement Areas - We understand that demolition of existing pavements is planned at the site. We anticipate that the reuse of the existing HMAC and base material in proposed pavement areas may be desired.

Existing HMAC and base material may be considered for reuse as a base material in new pavement sections provided the material is properly processed as stated below.

To incorporate the existing HMAC into the base, they should be properly pulverized to reduce the maximum particle size to 2 inches or less, with the resulting mix of asphalt and base exhibiting a uniform gradation. (The gradation should be reviewed by Terracon for proper grain size distribution.) The HMAC should be thoroughly mixed with the underlying base for a minimum depth of 3 to 4 inches (deeper in areas where the asphalt is thicker) such that a uniform blend of HMAC particles and base material results.

Care should be exercised to prevent mixture of the underlying clay subgrade with the base during the mixing operations. When removing the existing asphalt/base mixture for reuse, extreme care should be taken to avoid mixing of the asphalt/base with the underlying clay subgrade. Such mixing will likely render the material unsuitable for reuse as subbase/base.

The subbase/base should be compacted to at least 95 percent of the ASTM D 1557 maximum dry density to within 2 percent of the optimum moisture content. If the existing asphalt is pulverized and incorporated into the subbase/base, field density tests with a nuclear-density gauge will be difficult (due to variations in the asphalt/base mix and the fact that nuclear density gauges interpret hydrocarbons in the asphalt as containing moisture) and a specialized program of checking for proper compaction in the field will likely be required.

Treated Subgrade: The subgrade soils should be treated with lime or cement in accordance with 2014 TxDOT Standard Specifications Items 260 or 275, respectively. The recommended percentage of modifier is for estimating and planning. The actual quantity of modifier required should be determined at the time of construction by laboratory tests on bulk samples of the subgrade soils.

If chemical treatment of the subgrade is chosen, we anticipate that the on-site surficial soils be treated with about 4 percent of lime or cement. This percentage is given as application by dry weight and is typically equivalent to about 18 pounds of modifier per square yard per 6-inch depth. The subgrade should be compacted to a minimum of 95 percent of the Standard Effort (ASTM D 698) maximum dry density within 2 percentage points of the optimum moisture content. Preferably, traffic, should be kept off the treated subgrade for about 3 to 5 days to facilitate curing of the soil - chemical mixture; in addition, the subgrade is not suitable for heavy construction traffic prior to paving.

Post-construction subgrade movements and some cracking of the pavements are not uncommon for subgrade conditions such as those observed at this site. Although chemical treatment of the subgrade will help to reduce such movement/cracking, this movement/cracking cannot be economically eliminated.

Moisture Conditioned Subgrade: The subgrade should be scarified to a depth of 8 inches and moisture conditioned between -2 and +3 percentage points of the optimum moisture content. The subgrade should then be compacted to at least 95 percent of the maximum dry density determined in accordance with ASTM D 698. This should result in a compacted, moisture conditioned layer about 6 inches thick.

### **Pavement Drainage**

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.

### **Pavement Maintenance**

The pavement sections provided in this report represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program.

Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g. crack and joint sealing and patching) and global maintenance (e.g. surface sealing). Preventive maintenance is usually the first priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost effective program. Even with periodic maintenance, some movements and related cracking may still occur and repairs may be required.

## **GENERAL COMMENTS**

As the project progresses, we address assumptions by incorporating information provided by the design team, if any. Revised project information that reflects actual conditions important to our services is reflected in the final report. The design team should collaborate with Terracon to confirm these assumptions and to prepare the final design plans and specifications. This facilitates the incorporation of our opinions related to implementation of our geotechnical recommendations.

## **Geotechnical Engineering Report**

Old Townsite South Central Drainage Improvements ■ Edinburg, Texas  
August 23, 2018 ■ Terracon Project No. 88185067



Any information conveyed prior to the final report is for informational purposes only and should not be considered or used for decision-making purposes.

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in the final report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our scope of services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third party beneficiaries intended. Any third party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

## **ATTACHMENTS**

## EXPLORATION AND TESTING PROCEDURES

### Field Exploration

Number of Borings	Planned Boring Depth (feet) <sup>1</sup>	Planned Location
4	20	Water & Sewer Lines/ Pavements
2	25	
5	10	Pavements

1. Below ground surface

The drilling depths were based on topographic conditions at the time of our drilling operations.

**Boring Layout and Elevations:** Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±20 feet).

**Subsurface Exploration Procedures:** We advanced the soil borings with a truck-mounted drill rig using continuous flight augers (solid stem). Five samples were obtained in the upper 10 feet of the borings and at intervals of 5 feet thereafter. Soil sampling was performed using thin-wall tube and/or split-barrel sampling procedures. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, the borings were backfilled with auger cuttings after their completion and patched with cold-mix asphalt, as necessary.

The sampling depths, penetration distances, and other sampling information were recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer. Our exploration team prepared field boring logs as part of the drilling operations. The field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field log. The final boring logs represent the geotechnical engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

**Property Disturbance:** We backfilled borings with auger cuttings after completion. Pavements were patched with asphalt cold mix, as appropriate. Our services did not include repair of the site beyond backfilling our boreholes, and patching pavements. Because backfill material often settles below the surface after a period, we recommend boreholes are checked periodically and backfilled, if necessary.

### Laboratory Testing

The project engineer reviewed the field data and assigned various laboratory tests to better understand the engineering properties of the various soil strata as necessary for this project.

**Geotechnical Engineering Report**

Old Townsite South Central Drainage Improvements ■ Edinburg, Texas

August 23, 2018 ■ Terracon Project No. 88185067



Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods are applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified soil samples in accordance with the Unified Soil Classification System (USCS).



## **SITE LOCATION AND EXPLORATION PLANS**

**SITE LOCATION**  
Old Townsite South Central Drainage Improvements ■ Edinburg, TX  
August 2, 2018 ■ Terracon Project No. 88185067

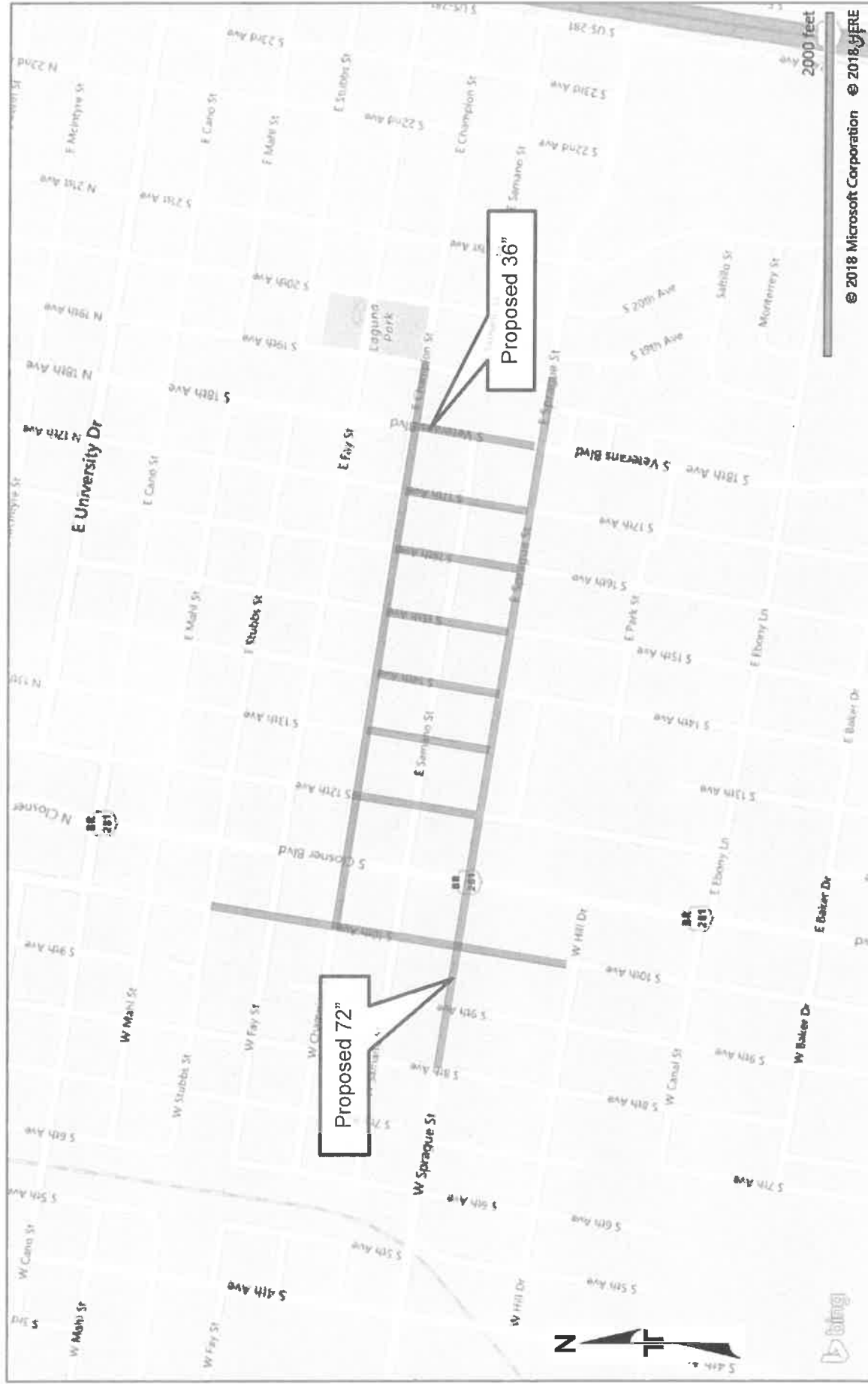


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT  
INTENDED FOR CONSTRUCTION PURPOSES

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EXPLORATION PLAN  
Old Townsite South Central Drainage Improvements ■ Edinburg, TX  
August 2, 2018 ■ Terracon Project No. 88185067



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT  
INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY  
MICROSOFT BING MAPS

## **EXPLORATION RESULTS**

**Boring Logs**  
**Laboratory Data**



# BORING LOG NO. P-1

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2949° Longitude: -98.1661°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	1.0											
	Asphalt (3½") and Base Material (5½")											
	<b>SANDY LEAN CLAY (CL)</b> , brown to light brown, medium stiff to stiff				3-2-2 N=4				21			
					4-6-7 N=13				21		42-16-26	
					5-5-8 N=13				20			54
	6.0				7-8-12 N=20				20		68-21-47	
	<b>FAT CLAY (CH)</b> , light reddish-brown to tan, very stiff to stiff				9-10-11 N=21				22			95
					8-7-5 N=12				22		48-17-31	
	- with Lean Clay (CL) seams at 13½ feet				4-6-7 N=13				24			
	20.0											
<b>Boring Terminated at 20 Feet</b>												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

**Notes:**

**Abandonment Method:**  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUTH - B.G.P.J. TERRACON DATATEMPLATE.GDT 8/13/18



# BORING LOG NO. P-3

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2945° Longitude: -98.1632°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (ksf)	STRAIN (%)				
	DEPTH											
	1.0 Asphalt (3") and Base Material (5½")											
	<b>LEAN CLAY WITH SAND (CL)</b> , gray, medium stiff to very stiff - strong petroleum odors up to 8 feet				2-2-3 N=5							
					3-3-4 N=7							
	- grades to tan below 4½ feet	5			4-6-7 N=13							
					5-7-9 N=16							
	- grades to light brown and tan below 8½ feet	10			5-9-11 N=20				17			
	- with Fat Clay (CH) seams at 13½ feet	15			7-10-10 N=20				19		56-17-39	
		20			5-5-7 N=12				21			76
		25.0			6-7-6 N=13				20		48-17-31	
	<b>Boring Terminated at 25 Feet</b>	25										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

**Notes:**

**Abandonment Method:**  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT - B.G.P.J. TERRACON\_DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-4

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.294° Longitude: -98.1605°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	1.0 Asphalt (3") and Base Material (5")											
	<u>SANDY LEAN CLAY (CL)</u> , brown to light brown and tan, medium stiff to stiff				3-2-2 N=4				11			
					3-3-5 N=8				16			
		5			5-4-5 N=9				16		39-15-24	58
	6.0 <u>FAT CLAY (CH)</u> , light brown and tan to reddish-brown, very stiff				7-9-12 N=21				16		67-18-49	
					8-11-10 N=21				19			
		10										
					10-10-13 N=23				23		66-20-46	
		15										
					9-12-14 N=26				22			
	20.0 <b>Boring Terminated at 20 Feet</b>	20										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT - B.GPJ TERRACON\_DATATEMPLATE.GDT 8/13/18



# BORING LOG NO. P-5

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2937° Longitude: -98.1583°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (lbf)	STRAIN (%)				
	DEPTH											
	1.0				Asphalt (3") and Base Material (5½")							
					<b>LEAN CLAY WITH SAND (CL)</b> , brown to light brown, medium stiff to stiff							
					3-3-4 N=7				20		39-17-22	
					5-6-8 N=14				17			73
		5			6-6-7 N=13				16		49-15-34	
					5-7-9 N=16				20			
		10			8-9-8 N=17				22		57-19-38	
					6-7-6 N=13				16			89
		20			5-6-7 N=13				16		33-13-20	
	20.0				<b>Boring Terminated at 20 Feet</b>							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

**Notes:**

**Abandonment Method:**  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT - B.GPJ TERRACON\_DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-6

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2932° Longitude: -98.1546°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-Pi	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	1.0 Asphalt (3½") and Base Material (4½")											
	<b>SANDY LEAN (CL)</b> , light brown and tan, stiff to medium stiff				4-5-7 N=12				18			
					5-7-7 N=14				18		48-17-31	
		5			5-6-7 N=13				21			68
					2-2-4 N=6				24		38-15-23	
		10			3-4-3 N=7				21			
		15			4-5-4 N=9				17		34-14-20	
		20			3-4-4 N=8				20			
	<b>Boring Terminated at 20 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT: GEO SMART LOG-NO WELL: 88185067 OLD TOWNSITE SOUT - B.GPJ TERRACON\_DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-7

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2966° Longitude: -98.1643°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (ksf)	STRAIN (%)				
	DEPTH											
	1.0 Asphalt (3") and Base Material (5")											
	<b>SANDY FAT CLAY (CH)</b> , light brown to tan, medium stiff to stiff				3-4-3 N=7				22			65
					3-3-7 N=10				21		52-18-34	
		5			4-5-4 N=9				21			80
	- grades to light reddish-tan below 6½ feet				5-5-6 N=11				20		51-16-35	
					6-7-8 N=15				21			
	10.0	10										
	<b>Boring Terminated at 10 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUJ - B.G.P. TERRACON\_DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-8

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2953° Longitude: -98.1621°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
DEPTH												
1.0	Asphalt (3") and Base Material (6½")											
	<b>SANDY LEAN CLAY (CL)</b> , dark brown to brown, medium stiff to stiff			X	3-2-3 N=5				17		31-13-18	
				X	3-3-4 N=7				21			60
		5		X	4-3-4 N=7				21		47-18-29	
	- grades to light reddish-tan below 6½ feet			X	5-7-9 N=16				20			72
				X	6-8-7 N=15				17		47-15-32	
10.0	<b>Boring Terminated at 10 Feet</b>	10										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

**Notes:**

**Abandonment Method:**  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

**Cave-in depth**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT -B.GPJ TERRACON DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-9

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2959° Longitude: -98.1597°	DEPTH (ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (ksf)	STRAIN (%)				
	DEPTH											
	1.0 Asphalt (3½") and Base Material (5½")											
	<b>SANDY LEAN CLAY (CL)</b> , light brown to tan, medium stiff to stiff				3-3-4 N=7				20			64
					4-4-6 N=10				17		46-16-30	
		5			5-6-8 N=14				17			
	6.0 <b>FAT CLAY (CH)</b> , reddish-tan, stiff, with calcareous deposits				5-7-9 N=16				20		56-18-38	
					6-7-7 N=14				21			88
	10.0 <b>Boring Terminated at 10 Feet</b>	10										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT - B.GPJ TERRACON\_DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-10

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2947° Longitude: -98.1578°	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	1.0											
	Asphalt (3½") and Base Material (5½")											
	<b>LEAN CLAY (CL)</b> , brown to light reddish-tan, medium stiff to very stiff, with loose Clayey Sand (SC) seams to 2½ feet				3-2-2 N=4				11			43
					3-3-4 N=7				18		33-15-18	
		5			4-3-3 N=6				19			88
					6-5-7 N=12				19		41-17-24	
					7-9-9 N=18				17			91
	10.0											
	<b>Boring Terminated at 10 Feet</b>											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

 Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT -B.GPJ TERRACON\_DATATEMPLATE.GDT 8/13/18

# BORING LOG NO. P-11

Page 1 of 1

**PROJECT:** Old Townsite South Central Drainage Improvements

**CLIENT:** Melden & Hunt, Inc.  
Edinburg, TX

**SITE:** Sprague Street  
Edinburg, TX

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 26.2954° Longitude: -98.1558°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						TEST TYPE	COMPRESSIVE STRENGTH (tsf)	STRAIN (%)				
	DEPTH											
	1.0	Asphalt (2½") and Base Material (6")										
		<b>LEAN CLAY WITH SAND (CL)</b> , light gray to tan, stiff to very stiff			4-4-8 N=12				16		42-14-28	
					4-6-8 N=14				16			76
	5				5-6-7 N=13				17		46-15-31	
					6-7-10 N=17				18			77
	10.0	<b>Boring Terminated at 10 Feet</b>			5-8-11 N=19				19		48-17-31	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

**Advancement Method:**  
Dry augered to termination depth.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

**Notes:**

**Abandonment Method:**  
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

## WATER LEVEL OBSERVATIONS

Groundwater not encountered

**Terracon**

1506 Mid Cities Dr  
Pharr, TX

Boring Started: 07-24-2018

Boring Completed: 07-24-2018

Drill Rig: CME-55

Driller: SWD

Project No.: 88185067

Cave-in depth

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 88185067 OLD TOWNSITE SOUT -B.GPJ TERRACON\_DATATEMPLATE.GDT 8/13/18

## **SUPPORTING INFORMATION**

### **General Notes** **Unified Soil Classification System (USCS)**







# GENERAL NOTES

## DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

Old Townsite South Central Drainage Improvements ■ Edinburg, TX

Terracon Project No. 88185067

**Terracon**  
**GeoReport**

SAMPLING	WATER LEVEL	FIELD TESTS
 Split Spoon	 Water Level Initially Encountered  Water Level After a Specified Period of Time  Water Level After a Specified Period of Time <p>Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.</p>	(N) Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer (UC) Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

## DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

## LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

## STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength Qu, (tsf)	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	Percent of Dry Weight	Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	<15	Trace	<5
With	15-29	With	5-12
Modifier	>30	Modifier	>12
GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	Particle Size	Term	Plasticity Index
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300mm to 75mm)	Low	1 - 10
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)	Medium	11 - 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm)	High	> 30
Silt or Clay	Passing #200 sieve (0.075mm)		

# UNIFIED SOIL CLASSIFICATION SYSTEM

Old Townsite South Central Drainage Improvements ■ Edinburg, Texas

August 23, 2018 ■ Terracon Project No. 88185067

**Terracon**  
**GeoReport**

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification			
				Group Symbol	Group Name <sup>B</sup>		
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels:	Cu ≥ 4 and 1 ≤ Cc ≤ 3 <sup>E</sup>	GW	Well-graded gravel <sup>F</sup>		
		Less than 5% fines <sup>C</sup>	Cu < 4 and/or 1 > Cc > 3 <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>		
		Gravels with Fines:	Fines classify as ML or MH	GM	Silty gravel <sup>F, G, H</sup>		
		More than 12% fines <sup>C</sup>	Fines classify as CL or CH	GC	Clayey gravel <sup>F, G, H</sup>		
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands:	Cu ≥ 6 and 1 ≤ Cc ≤ 3 <sup>E</sup>	SW	Well-graded sand <sup>I</sup>		
		Less than 5% fines <sup>D</sup>	Cu < 6 and/or 1 > Cc > 3 <sup>E</sup>	SP	Poorly graded sand <sup>I</sup>		
		Sands with Fines:	Fines classify as ML or MH	SM	Silty sand <sup>G, H, I</sup>		
		More than 12% fines <sup>D</sup>	Fines classify as CL or CH	SC	Clayey sand <sup>G, H, I</sup>		
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	PI > 7 and plots on or above “A”	CL	Lean clay <sup>K, L, M</sup>		
			PI < 4 or plots below “A” line <sup>J</sup>	ML	Silt <sup>K, L, M</sup>		
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay <sup>K, L, M, N</sup>	
			Liquid limit - not dried			Organic silt <sup>K, L, M, O</sup>	
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above “A” line	CH	Fat clay <sup>K, L, M</sup>		
			PI plots below “A” line	MH	Elastic Silt <sup>K, L, M</sup>		
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay <sup>K, L, M, P</sup>	
			Liquid limit - not dried			Organic silt <sup>K, L, M, Q</sup>	
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat		

<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.

