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SECTION 01
INVITATION TO OFFERORS
COMPETITIVE SEALED PROPOSAL

RECEIPT OF PROPOSALS

Sealed proposals for the construction of **BURLESON WESTSIDE BUSINESS PARK LIFT STATION, FORCE MAIN, AND GRAVITY SEWER** will be received electronically by the City of Burleson's e-procurement system, Bonfire, at <https://burlesontx.bonfirehub.com> (registration required) until **3:00 PM CST, May 3, 2024**. *Extensions will not be granted and late submittals will not be accepted.*

GENERAL DESCRIPTION OF WORK

The major work will consist of the (approximate) following:

- 2.75 MGD Duplex Lift Station
- 1,019 LF of 21-Inch ASTM F679 PS-115 PVC Sanitary Sewer Pipe by Open Cut
- 40 LF of 30-Inch Steel Casing w/ 21-Inch PVC Carrier Pipe by Auger Bore
- 3,534 LF of 18-Inch ASTM F679 PS-115 PVC Sanitary Sewer Pipe by Open Cut
- 20 LF of 30-Inch Steel Casing w/ 18-Inch PVC Carrier Pipe by Auger Bore
- 9,170 LF of 16-inch HDPE DIPS DR-13.5 Force Main by Open Cut
- 370 LF of 24-Inch Steel Casing w/ 16-Inch HDPE Carrier Pipe by Auger Bore
- 829 LF of 15-Inch ASTM D3034 SDR-26 PVC Sanitary Sewer Pipe by Open Cut
- 80 LF of 27-Inch Steel Casing w/ 15-Inch PVC Carrier Pipe by Auger Bore

COMPETITIVE SEALED PROPOSAL

Submission requirements for the competitive sealed proposals shall be found in the Instructions to Offerors.

DOCUMENT EXAMINATION AND PROCUREMENTS

The Proposal and Contract Documents for this project shall be available for viewing and download in electronic (PDF) format at no cost beginning April 19, 2024.

Offerors are responsible for obtaining all addenda to the Proposal and Contract Documents prior to the receipt time, and acknowledging them in their proposal response. Any interpretations, corrections, clarifications, or changes to this Request for Proposals or specifications will be issued via addendum. Addenda will be posted at <https://burlesontx.bonfirehub.com>. It is the responsibility of the respondent to monitor the Bonfire website for addenda. **Bidders shall acknowledge receipt of each addendum by submitting a signed copy with their proposal.** *Oral explanations will not be binding.* Responses that do not acknowledge all applicable addenda may be rejected as non-responsive.

MANDATORY PRE-PROPOSAL CONFERENCE

A **mandatory** pre-proposal conference will be held as described in Section 2.0 - INSTRUCTIONS TO OFFERORS at the following location, date, and time:

LOCATION: Virtual via Microsoft Teams (link provided below)

DATE: April 29, 2024

TIME: 10:00 AM

Microsoft Teams

[Need help?](#)

[Join the meeting now](#)

Meeting ID: 214 755 290 228

Passcode: fwpNc7

RIGHT TO ACCEPT OR REJECT PROPOSALS

The City of Burleson reserves the right to reject any proposal and to waive defects in proposals. No officer or employee of the City of Burleson shall have a financial interest, direct or indirect, in this or any contract with the City of Burleson. Minority and small business vendors are encouraged to submit bids/proposals on applicable City solicitations.

INQUIRIES

All inquiries relative to this procurement should be addressed to the City of Burleson's Bonfire platform messaging feature.

ADVERTISEMENT DATES

April 19, 2024

April 26, 2024

It is anticipated that the Notice to Proceed will be issued no later than 10 days after the Contract is awarded.

END OF SECTION

SECTION 2.0

INSTRUCTIONS TO OFFERORS

1. Defined Terms

- 1.1. Terms used in these INSTRUCTIONS TO OFFERORS, which are defined in Special Provisions.
 - 1.1.1. Any reference to the term “Bidder” shall also mean “Offeror” and to “Bid” shall mean “Proposal” in the Proposal Documents.
- 1.2. Certain additional terms used in these INSTRUCTIONS TO OFFERORS have the meanings indicated below which are applicable to both the singular and plural thereof.
 - 1.2.1. OFFEROR: Any person, firm, partnership, company, association, or corporation acting directly through a duly authorized representative, submitting a proposal for performing the work contemplated under the Contract Documents.
 - 1.2.2. Nonresident OFFEROR: Any person, firm, partnership, company, association, or corporation acting directly through a duly authorized representative, submitting a proposal for performing the work contemplated under the Contract Documents whose principal place of business is not in the State of Texas.
 - 1.2.3. Successful OFFEROR: The Offeror that submits the Proposal that offers the Best Value to the City based on the Evaluation of Proposals published in these Instructions to Offerors.
 - 1.2.4. Purchasing Agent: City designated representative to assist in solicitation of proposals from vendors for City contracts.

2. Copies of Proposal Documents

- 2.1. Neither City nor Engineer shall assume any responsibility for errors or misinterpretations resulting from the Offerors use of incomplete sets of Proposal Documents.
- 2.2. City and Engineer in making Proposal Documents available do so only for the purpose of obtaining Proposals for the Work and do not authorize or confer a license or grant for any other use.

3. Examination of Proposal and Contract Documents, Other Related Data, and Site

- 3.1. Before submitting a Proposal, each Offeror shall:

- 3.1.1. Examine and carefully study the Contract Documents and other related data identified in the Proposal Documents (including "technical data"). No information given by City or any representative of the City other than that contained in the Contract Documents and officially promulgated addenda thereto, shall be binding upon the City.
- 3.1.2. Visit the site to become familiar with and satisfy Offeror as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
- 3.1.3. Consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work.
- 3.1.4. Study all: (i) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in the Contract Documents as containing reliable "technical data" and (ii) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in the Contract Documents as containing reliable "technical data."
- 3.1.5. Be advised that the Contract Documents on file with the City shall constitute all of the information which the City will furnish. All additional information and data which the City will supply after promulgation of the formal Contract Documents shall be issued in the form of written addenda and shall become part of the Contract Documents just as though such addenda were actually written into the original Contract Documents. No information given by the City other than that contained in the Contract Documents and officially promulgated addenda thereto, shall be binding upon the City.
- 3.1.6. Perform independent research, investigations, tests, borings, and such other means as may be necessary to gain a complete knowledge of the conditions which will be encountered during the construction of the project. On request, City may provide each Offeror access to the site to conduct such examinations, investigations, explorations, tests and studies as each Offeror deems necessary for submission of a Proposal. Offeror must fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests and studies.
- 3.1.7. Determine the difficulties of the Work and all attending circumstances affecting the cost of doing the Work, time required for its completion, and obtain all information required to make a proposal. Offerors shall rely exclusively and solely upon their own estimates, investigation, research, tests, explorations, and other data which are necessary for full and complete information upon which the proposal is to be based. It is understood that the submission of a proposal is prima-facie evidence that the Offeror has made the investigation, examinations and tests herein required. Claims for additional compensation due to variations between conditions actually encountered in construction and as indicated in the Contract Documents will not be allowed.

- 3.1.8. Promptly notify City of all conflicts, errors, ambiguities or discrepancies in or between the Contract Documents and such other related documents. The Contractor shall not take advantage of any gross error or omission in the Contract Documents, and the City shall be permitted to make such corrections or interpretations as may be deemed necessary for fulfillment of the intent of the Contract Documents
- 3.2. The submission of a Proposal will constitute an incontrovertible representation by Offeror (i) that Offeror has complied with every requirement of this Paragraph 3, (ii) that without exception the Proposal is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, (iii) that Offeror has given City written notice of all conflicts, errors, ambiguities and discrepancies in the Contract Documents and the written resolutions thereof by City are acceptable to Offeror, and when said conflicts, etc., have not been resolved through the interpretations by City as described in this Section, and (iv) that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

4. Availability of Lands for Work, Etc.

- 4.1. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

5. Interpretations and Addenda

- 5.1. Offerors may submit to the City of Burleson, a written request for an interpretation of Proposal and Contract Documents prior to opening of proposals. The deadline for questions will be outlined in Bonfire. The person submitting the request will be responsible for its prompt delivery. Any interpretation of these documents will be made only by addendum posted publicly to Bonfire. Only questions answered by formal written Addenda are to be binding. Oral interpretations or clarification will be without legal effect. The City of Burleson will not be responsible for any other explanations or interpretations.
- 5.2. Addenda may also be issued to modify the Proposal Documents as deemed advisable by City.
- 5.3. A **mandatory** Pre-Proposal Conference will be held online via Microsoft Teams. A link will be posted publicly to Bonfire. Representatives of the City will be present to discuss the Project. Offerors are **required** to attend and participate in the pre-proposal conference. City will transmit to all prospective Offerors of record such Addenda as City considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

6. Proposal Security

- 6.1. Each Proposal for projects over \$100,000, must be accompanied by Offeror's Bond made payable to City in an amount of five (5) percent of Offeror's maximum price proposed Proposal Form attached, issued by a surety meeting the requirements of the Contract Documents.
- 6.2. The Offeror's Bond of all Offerors will be retained until the conditions of the Notice of Award have been satisfied. If the Successful Offeror fails to execute and deliver the complete Agreement within 10 days after the Notice of Award, City may consider Offeror to be in default, rescind the Notice of Award, and the Offeror's Bond of that Offeror will be forfeited. Such forfeiture shall be City's exclusive remedy if Offeror defaults. The Offeror's Bond of all other Offerors whom City believes to have a reasonable chance of receiving the award will be retained by City until final contract execution.

7. Contract Times

- 7.1. The Contract will be a Calendar Day contract, and the provisions of the Contract Documents related to Calendar Days will apply.
- 7.2. The Contract Time for Substantial Completion will be the number of Calendar Days specified in the Agreement, together with time extensions authorized in accordance with applicable provisions of the Contract Documents.
- 7.3. The Contract Time for Final Completion will be the number of Calendar Days specified in the Agreement, together with time extensions authorized in accordance with applicable provisions of the Contract Documents.

8. Liquidated Damages

- 8.1. Provisions for liquidated damages are set forth in the Agreement.

9. Subcontractors, Suppliers and Others

- 9.1. No Contractor shall be required to employ any Subcontractor, Supplier, other person or organization against whom Contractor has reasonable objection.

10. Submittal Requirements – *A complete proposal will consist of a document or documents that respond to each element of this section **AND** the Proposal Form described in Section 11 below.*

- 10.1. **As this is a Request for a Competitive Sealed Proposal, please note that in addition to price, other factors will be considered.** The project's weighted evaluation criteria is outlined in Section 18. Each of the following requirements demonstrating the Offeror's qualifications and experience must be provided in the Offeror's Bonfire submissions:

- 10.2. **In addition to completing all required sections of the Proposal Documents, the Offeror shall provide documentation demonstrating the Offeror's qualifications and experience. This documentation shall be included with the Offeror's Bonfire submissions. The Offeror shall address each of the following items in the same order in which they are set forth below.** Qualification and experience documentation shall be submitted on letter-size (8-1/2" x 11") PDF. The qualifications and experience data provided shall include, but may not be limited to the following:

10.2.1. **Proposal Form** – Provide the information as required in Section 6.0 – Proposal Form, to establish:

- 10.2.1.1. Offeror's General Information
- 10.2.1.2. Proposal Price
- 10.2.1.3. All criteria outlined below

- 10.3. **Offeror's Past Experience Form - Quality, Reputation, and Ability to Complete Similar Projects on Schedule and Within Budget:** The Offeror shall demonstrate experience in delivering similar work as expressed in the Proposal Documents on schedule and within budget. Submit details of three (3) lift stations of similar size and complexity completed by Offeror (or Offeror's Lift Station Contractor if applicable) within the last five (5) years. Additionally, submit details of three (3) pipeline projects with similar size and complexity completed within the last five (5) years. The Offeror shall provide the completed form found attached in Bonfire and include the following items for each project submitted:

- 10.3.1.1. Project Name
- 10.3.1.2. Owner Name
- 10.3.1.3. Project Owner Contact Name, Phone Number, and Email Address
- 10.3.1.4. Contract Time and Actual Completion Time
- 10.3.1.5. Original Contract Cost and Final Contract Cost
- 10.3.1.6. Detailed Project Description.
- 10.3.1.7. The Offeror should present projects that demonstrate experience in the following categories:
 - Sanitary Sewer Lift Stations w/ pumping capacity greater than 2.0 MGD
 - Sanitary Sewer Force Mains 12-inches and larger
 - Gravity Sanitary Sewer Pipelines Installations 15-inch and larger

- 10.4. **Offeror's Key Personnel Resume:** The Offeror shall include an organizational chart (maximum of 1 page) for key team members that will be assigned to the Project. The Offeror should also, at a minimum, provide personnel experience for the Project Manager, Superintendent, Safety Manager, Scheduler, Manager in charge of Submittals and Requests for Information and the Foreman/Foremen. The Key Personnel information should include the following information:

- 10.4.1.1. Name and Job Title
- 10.4.1.2. Role and Responsibility
- 10.4.1.3. Total number of years of experience and total number of years with current firm.

- 10.4.1.4. Licenses and Certifications.
- 10.4.1.5. Project Role and Responsibilities.
- 10.4.1.6. Relevant experience for the categories listed in 13.1.2.7, specifically within the last 5 years. Identify if projects were completed with current firm or previous firm.
- 10.4.1.7. List of other active projects Key Personnel will be assigned to for the duration of this project and include percentage of time allocated for each.

10.5. Detailed Schedule and Written Plan to Achieve Substantial Completion and Final Acceptance within the Contract Time: The Offeror shall demonstrate means and methods to achieve Substantial Completion and Final Acceptance within the Contract Time. The Offeror shall include the following:

- 10.5.1.1. Baseline Schedule – The Offeror shall submit a detailed Baseline Schedule. The schedule should provide a preliminary phasing plan for the project and demonstrate the Offeror’s ability to complete the Project within the Contract Time. The Plan should clearly identify the Critical Path Items and the Plan to keep the project on schedule. The Plan should include, but not be limited to:

10.5.1.2. Critical Path and Preliminary Phasing Plan

10.5.1.2.1. Project Specific Tasks:

- *Lift Station Pump Startup*
- *Steel casing pipe installation*
- *Pipeline installation by STA*

10.5.1.2.2. Equipment and material delivery

- *Pump shop drawing submittal and procurement schedule*
- *Pipeline shop drawing submittal and procurement schedule*
- *Steel casing pipe*
- *Electrical gear shop drawings and procurement schedule*

10.5.1.2.3. Hours of Operation – shall follow City’s Noise Ordinance as outlined in the city’s Code of Ordinances §34-191(d).

10.5.1.2.4. Offeror’s Resources to reach Substantial Completion, including the number of shifts or crews working in parallel.

10.6. In addition to the information provided above the Offeror shall submit the following forms as part of the Proposal:

- Section 4.0 – Affidavit Against Prohibited Acts
- Section 4.1 - Conflict of Interest Form
- Section 4.2 – Offeror Acknowledgement
- Section 5.0 – Proposal Form
- Section 5.1 – Offeror’s Bond
- Section 5.3 – Vendor Compliance to State Law Non-Resident Offeror
- Section 5.4 – Proposed Subcontractors Form

11. Proposal Form

- 11.1. The Proposal Form is included with the Proposal Documents; additional copies may be obtained from the City.
- 11.2. All blanks on the Proposal Form must be completed and the Proposal Form signed. Erasures or alterations shall be initialed by the person signing the Proposal Form. A Proposal price shall be indicated for each proposed item, alternative, and unit price item listed therein. In the case of optional alternatives, the words "No Proposal," "No Change," or "Not Applicable" may be entered. Offeror shall state the prices, in both words and numerals, for which the Offeror proposes to do the work contemplated or furnish materials required. If handwritten, all prices shall be written legibly. In case of discrepancy between price in written/typed words and the price in written/typed numerals, the price in written/typed words shall govern.
- 11.3. Proposals by corporations shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign, shall execute bids by corporations in the corporate name and the corporate seal shall be affixed and attested by the Secretary or an Assistant Secretary. The corporate address and state of incorporation shall be shown below the signature.
- 11.4. Proposals by partnerships shall be executed in the partnership name and signed by a partner, whose title must appear under the signature accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- 11.5. Proposals by limited liability companies shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 11.6. Proposals by individuals shall show the Offeror's name and official address.
- 11.7. Proposals by joint ventures shall be executed by each joint venturer in the manner indicated on the Proposal Form. The official address of the joint venture shall be shown.
- 11.8. All names shall be typed below the signature.
- 11.9. The Proposal shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Proposal Form.
- 11.10. Postal and e-mail addresses and telephone number for communications regarding the Proposal shall be shown.
- 11.11. Evidence of authority to conduct business as a Nonresident Offeror in the state of Texas shall be provided in accordance with Section 5.3 – Vendor Compliance to State Law Non Resident Offeror.

12. Submission of Proposals

- 12.1. Only electronic proposals will be accepted.

- 12.2. Proposals shall be submitted on the prescribed Proposal Form, provided with the Proposal Documents, at the time and place indicated in the Advertisement or INVITATION TO OFFERORS.

13. Modification and Withdrawal of Proposals

- 13.1. Submitted Proposals may be withdrawn in Bonfire prior to the time set for Proposal opening. After all Proposals are opened and publicly read aloud, no proposals may be withdrawn.

14. Opening of Proposals

- 14.1. Proposals will be opened, and the name of each Offeror will be read aloud publicly at the place where Proposals are to be submitted. **An abstract of the amounts of the base price proposals and major alternates (if any) will be made available to Offerors only after Proposals have been evaluated in accordance with this Section.**

15. Proposals to Remain Subject to Acceptance

- 15.1. All Proposals will remain subject to acceptance for the time period specified for Notice of Award and execution and delivery of a complete Agreement by Successful Offeror. City may, at City's sole discretion, release any Proposal and nullify the Proposal security prior to that date.

16. Rejection of Proposals

- 16.1. The City reserves the right to reject any or all Proposals, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Proposals and to reject the Proposal of any Offeror if City believes that it would not be in the best interest of the Project to make an award to that Offeror, whether because the Proposal is not responsive or the Offeror is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by City.

17. Disqualification of Proposals

- 17.1. The City reserves the right to waive informalities in a Proposal not involving price. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- 17.2. Any of the following **shall** be cause to disqualify a Proposal:
 - 17.2.1. The Proposal is not signed by a person empowered to bind the Offeror.
 - 17.2.2. The Proposal is not accompanied by an acceptable Offeror's Bond, with Power of Attorney attached.

- 17.2.3. The Proposal is submitted by an Offeror that has submitted more than one Proposal.
- 17.2.4. There is evidence of collusion between the Offeror submitting the Proposal and one or more other Offerors.
- 17.2.5. The Offeror did not attend or have an authorized agent attend a mandatory Pre-Proposal Conference, if applicable.
- 17.2.6. The Offeror is under debarment or suspension by the Owner.
- 17.2.7. The Offeror or a principal of the Offeror is currently debarred or suspended by a Federal, State or local governmental agency. (Applicable for Proposal amounts equal to or in excess of \$25,000.00)
- 17.2.8. The Offeror is an interested party to any litigation against City, or City or Offeror may have a claim against the other or be engaged in litigation, or Offeror is in arrears on any existing contract or has defaulted on a previous contract.
- 17.2.9. The Offeror has performed a prior contract in an unsatisfactory manner.
- 17.2.10. The Offeror has uncompleted work which in the judgement of the City will prevent or hinder the prompt completion of additional work if awarded.
- 17.2.11. Incompleteness or an omission, alteration of form, or addition, or the inclusion of a qualification or condition not called for or authorized in the Proposal Documents.
- 17.2.12. Ambiguity or lack of clarity in a Proposal, in which case the City reserves the right to interpret the Proposal in the most advantageous manner for the City, or to reject the Proposal.
- 17.2.13. Failure to acknowledge receipt of Addenda.
- 17.2.14. Failure to identify a dollar amount for one or more unit prices required to be provided in the Unit Price Proposal Form.
- 17.2.15. Failure to submit post-Proposal information within the allotted time(s).
- 17.2.16. Failure to timely execute and deliver the Contract to the City after award.

18. Evaluation of Proposals

- 18.1. Proposals will be evaluated by a Selection Team from the relevant City Departments. The Selection Team will score the received Proposals based on the evaluation criteria below to determine the Offeror that provides the Best Value.
 - 18.1.1. In evaluating a Proposal from a Nonresident Offeror, Proposal Prices and/or evaluation scores will be adjusted to the extent practicable to offset the advantage, if any, the Nonresident Offeror would have over a Texas-resident offeror in the Nonresident Offeror's state.
 - 18.1.2. The City will process and evaluate the received Proposals expeditiously, based on the evaluation criteria below to determine the Offeror that provides the Best Value for the City. The City will not be liable to any Offeror, however, for any delays in connection with the evaluation, award or execution of the Contract.
- 18.2. Evaluation shall be based on the highest scoring of the Proposals with a maximum score of 100 points apportioned as follows:

Evaluation Criteria	Points	Requirements
Proposal Price	40	10.2 & 18.3.1
Firm Profile, Financial Capability, and history of projects in similar size and scope	15	10.3 & 18.3.2
Offeror's Key Personnel	20	10.4 & 18.3.3
Project Approach - Detailed Schedule, Phasing Plan, and Written Plan to achieve Substantial and Final Acceptance within the Contract Time	20	10.5 & 18.3.4
Compliance with RFCSP	5	10,11,12
Maximum Score:		100

18.3. Evaluation criteria will be as follows:

18.3.1. Proposal Price (40 Points): Points for Proposal Price shall be based on prices submitted by Offerors. The lowest responsible Offeror's Proposal Price receive the highest score in this category. All other Offeror's Proposal Prices will receive decreasing points in order of increasing Proposal Price.

18.3.2. Firm Profile and Financial Capability (15 Points): Points will be awarded based on the Offeror's experience relevant to this Project, the reputation of the Offeror in performance of similar past projects, and overall reputation and experience of the Offeror. The City will evaluate the projects submitted in accordance with the Submittal Requirements Paragraph, to determine relevancy to the specified scope of this Project and review the Offeror's performance on the submitted projects. The City may contact the references provided by the Offeror, as well as any other additional references, as may be necessary to verify the qualifications, experience, and reputation of the Offeror.

18.3.2.1. List the categories of work that your organization normally performs with its own forces. At this point, do you anticipate self-performing any work or bidding all construction work to subcontractors?

18.3.2.2. Demonstrate ability to meet bonding and insurance requirements

18.3.2.3. List any subcontractors in which your organization has some ownership and list the categories of work those subcontractors normally perform.

18.3.2.4. Has your organization ever failed to complete any work awarded to it? (If that answer is yes, please attach details.)

18.3.2.5. Are there any judgments, claims, arbitration proceedings or suits filed or outstanding against your organization or its officers for the last 5 years? (If the answer is yes, please attach details.)

18.3.2.6. Has your organization, whether under its current or previous names, filed any lawsuits or requested arbitration with regard to construction contracts within the last five years? (If the answer is yes, please attach details.)

18.3.2.7. Within the last 5 years, has any officer or principal of your organization

ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)

18.3.2.8. List construction projects your organization has in progress giving the name and location of project, owner, engineer, contract amount, percent complete and scheduled completion date

18.3.2.9. Has your organization, an officer, or principal violated or been required to invoke a payment or performance bond? (If the answer is yes, please attach details.)

18.3.3. Offeror's Key Project Staff & Subcontractors (20 Points): Key Staff will be awarded points for the listed role and responsibility that the resume demonstrates with a maximum score of twenty (20) points.

18.3.3.1. Provide an organizational chart for proposed Project personnel (including contractors, if applicable)

18.3.3.2. Provide key personnel proposed for this Project (names, proposed roles, relevant licensure/certifications, office locations, and resume summaries (1 page max per person)

18.3.3.3. Provide proposed staff availability to perform services on this Project

18.3.3.4. Provide the proposed project manager's experience with similar size projects

18.3.4. Project Approach – Detailed Schedule and Written Plan to achieve Substantial Completion and Final Acceptance within the Contract Time (20 Points): The schedule and plan should clearly show the Critical Path and Preliminary Phasing, and the means and methods the Offeror will use to achieve Substantial Completion and Final Acceptance within the Contract Time. Scoring will be based on the Offeror's ability to communicate the plan and schedule.

18.3.5. Compliance with CSP (5 Points).

18.4. City may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Contract Documents or upon the request of the City. City also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

- 18.5. City may conduct such investigations as City deems necessary to assist in the evaluation of any Proposal and to establish the responsibility, qualifications, and financial ability of Offerors, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time.
- 18.6. Contractor shall perform with his own organization, work of a minimum value of 35% of the total Contract Price and demonstrate this in Section 5.4 – Proposed Subcontractors Form, unless otherwise approved by the City. Contractor shall complete and submit Section 5.4 – Proposed Subcontractors Form.

19. Award of Contract

- 19.1. If the Contract is to be awarded, it will be awarded to the Offeror whose evaluation by City indicates that the Award will provide the Best Value for the City.
- 19.2. Pursuant to Texas Government Code Chapter 2252.001, the City will not award contract to a Nonresident Offeror unless the Nonresident Offeror's Proposal is lower than the lowest Proposal submitted by a responsible Texas Offeror by the same amount that a Texas resident Offeror would be required to underbid a Nonresident Offeror to obtain a comparable contract in the state in which the nonresident's principal place of business is located.
- 19.3. A contract is not awarded until formal City Council authorization. If the Contract is to be awarded, City will award the Contract within 120 days after the day of the Proposal opening unless extended in writing. No other act of City or others will constitute acceptance of a Proposal. Upon the contractor award a Notice of Award will be issued by the City.
- 19.4. Failure or refusal to comply with the requirements may result in rejection of Proposal.
- 19.5. Contractor is required to fill out the Certificate of Interested Parties Form 1295 and the form must be submitted to the City Project Manager before the contract will be presented to the City Council. The form can be obtained at <https://www.ethics.state.tx.us/tec/1295-Info.htm>.
- 19.6. Additional approvals could be required if outside funding is used.

20. Signing of Agreement

- 20.1. When City issues a Notice of Award to the Successful Offeror, it will be accompanied by the required number of unsigned counterparts of the Agreement. Within 14 days thereafter Contractor shall sign and deliver the required number of counterparts of the Agreement to City with the required Bonds, Certificates of Insurance, and all other required documentation. City shall thereafter deliver one fully signed counterpart to Contractor.

21. Performance, Payment, and Maintenance Bonds

- 21.1. Performance, Payment and Maintenance Bonds in the amount of not less than one hundred percent (100%) of the contract price conditioned upon the faithful performance of the contract, and upon payment of all persons supplying labor or furnishing materials, will be required upon the forms which are a part of the contract Documents. Bonds shall be executed by a surety company acceptable to and approved by the City of Burleson, Texas, authorized to do business in the State of Texas and acceptable for underwriting of risks as indicated by the latest revision, Treasury Department Circular 570, listing acceptable sureties on Federal Bonds. The period of the Maintenance Bond shall be two years from the date of acceptance of all work done under the Contract, to cover the guarantee as set forth in the Special Conditions.

22. Standard Specifications

- 22.1. All work for this project including but not limited to all grading, utility and paving improvements described in the Proposal and Construction Drawings shall be performed in accordance with the STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION as issued by the North Central Texas Council of Government (NCTCOG); the latest edition with any revisions as may be modified by the special conditions of this Contract.
- 22.2. Asphaltic concrete and standard concrete pavement improvements done within TxDOT right of way, shall be done in accordance with the STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES as issued by The Texas Department of Transportation; the latest edition with any revisions as may be modified by the special conditions of this Contract.

END OF SECTION

SECTION NO. 3.0

**PREVAILING WAGE RATES FOR MUNICIPAL
CONSTRUCTION IN BURLESON, TEXAS**

The rates below have been determined by the City of Burleson, Texas, in accordance with the statutory requirements and prevailing local wages:

<u>CLASSIFICATION</u>	<u>RATE</u>
Air Tool Operator	9.00
Asphalt Raker	8.50
Asphalt Shoveler	7.50
Batching Plant Weigher	9.65
Batterboard Setter	9.50
Carpenter	12.00
Concrete Finisher-Paving	10.50
Concrete Finisher-Structures	9.83
Concrete Rubber	8.84
Electrician	14.69
Flagger	7.55
Form Builder-Structures	9.82
Form Liner-Paving & Curb	9.50
Form Setter-Paving & Curb	9.50
Form Setter-Structures	9.75
Laborer-Common	7.50
Laborer-Utility	8.00
Manhole Builder	13.00
Mechanic	12.50
Oiler	11.00
Servicer	9.41
Painter-Structures	11.00
Piledriver	9.60
Pipe Layer	9.00
Blaster	11.50
Asphalt Distributor Operator	10.29
Asphalt Paving Machine	10.30
Broom or Sweeper Operator	8.50
Bulldozer, 150 HP & Less	10.74
Bulldozer, Over 150 HP	12.00
Concrete Paving Curing Machine	9.25
Concrete Paving Finishing Machine	11.13
Concrete Paving Form Grader	9.50
Concrete Paving Joint Machine	10.42
Concrete Paving Joint Sealer	8.00
Concrete Paving Float	9.00
Concrete Paving Saw	10.53
Concrete Paving Spreader	10.50
Paving Sub-Grader	12.00
Slipform Machine Operator	9.92
Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel less than 1½ C.Y.	11.04

CLASSIFICATIONRATE

Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel 1½ C.Y. & Over.....	11.52
Crusher or Screening Plant Operator.....	11.40
Form Loader.....	9.50
Foundation Drill Operator, Crawler Mounted.....	10.00
Foundation Drill Operator, Truck Mounted.....	11.83
Foundation Drill Operator, Helper-Truck/Crawler.....	8.75
Front End Loader 2½ C.Y. or Less.....	10.00
Front End Loader Over 2½ C.Y.	10.80
Hoist - Double Drum.....	10.25
Milling Machine Operator.....	8.62
Mixer (Over 16 C.F.).....	10.30
Mixer (16 C.F. & Less).....	10.50
Mixer - Concrete Paving.....	12.50
Motor Grader Operator Fine Grade.....	12.31
Motor Grader Operator.....	10.96
Pavement Marking Machine.....	7.32
Roller, Steel Wheel Plant - Mix Pavements.....	9.06
Roller, Steel Wheel Other Flatwheel or Tamping.....	8.75
Roller, Pneumatic, Self-Propelled.....	8.48
Scraper - 17 C.Y. & Less.....	9.63
Scraper - Over 17 C.Y.....	12.50
Side Boom.....	9.74
Tractor-Crawler Type 150 HP & Less.....	10.58
Tractor-Crawler Type Over 150 HP.....	13.50
Tractor - Pneumatic.....	9.15
Traveling Mixer.....	8.83
Trenching Machine - Light.....	9.50
Trenching Machine - Heavy.....	10.75
Post Hole Driller Operator.....	10.00
Wagon-Drill, Boring Machine.....	9.50
Reinforcing Steel Setter Paving.....	9.00
Reinforcing Steel Setter, Structures.....	13.00
Reinforcing Steel Setter Helper.....	7.50
Steel Worker - Structural.....	13.70
Sign Erector.....	13.70
Spreader Box Operator.....	10.00
Barricade Servicer Zone Work.....	7.70
Mounted Sign Installer, Permanent Ground.....	10.00
Truck Driver - Single Axle Light.....	9.00
Truck Driver - Single Axle Heavy.....	9.64
Truck Driver - Tandem Axle, Semi-Trailer.....	10.22
Truck Driver - Lowboy/Float.....	11.00
Truck Driver - Transit Mix.....	9.47
Truck Driver - Winch.....	9.00
Vibrator Operator.....	8.50
Water Meter Setter.....	9.00
Welder.....	10.50

THE STATE OF TEXAS §
COUNTY OF JOHNSON §

AFFIDAVIT

"My name is _____. I am of sound mind and capable of making this affidavit.

"I am a _____ for the _____
(title) (Company Name)

which company entered into a contract on the ____ day of _____, 20____, to construct _____ Burleson Westside Business Park Lift Station, Forcemain and Sanitary Sewer _____,
(Name of Project)

in the City of Burleson, Texas, and I am duly authorized on behalf of said company to hereby swear and affirm that all wages for labor on the above-referenced project are in strict compliance with the established prevailing wage rates as described in the contract documents for the referenced project, and all wages have been and will be paid and satisfied as the prevailing rates may change from time to time. Upon request by the City of Burleson, I shall allow a complete examination of the financial records relative to this project, including, but not limited to, cancelled checks, invoices and statements at any time, and allow the City of Burleson to interview any and/or all employees of the above said company or any and/or all employees of said Company's subcontractor or subcontractors. Also, I hereby agree on behalf of the above company, to be accountable for any and all penalties and/or fine provisions in accordance with the contract documents and relevant law.

AFFIANT

"BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, who is known to me or who was proved to me on the oath of _____ (name of person identifying the acknowledging person) or who was proved to me through _____ (description of identity card or other document issued by the federal or state government containing the picture and signature of the acknowledging person) to be the person whose name is subscribed to this affidavit; and being by me first duly sworn, upon oath.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____ day of _____, 20____.

Notary Public In and For The State of Texas

Notary's Printed Name

My Commission Expires: _____

Offeror Acknowledgement

Compliance with HB 89: Proposer agrees per HB 89 vendor shall not boycott Israel at any time while providing products or services to the City of Burleson.

Yes, we agree

No, we do not agree

Compliance with SB 252: Proposer agrees per SB 252 vendor shall not do business with Iran, Sudan or a foreign terrorist organization while providing products or services to the City of Burleson.

Yes, we agree

No, we do not agree

Compliance with SB 13: Proposer agrees per SB 13 vendor does not boycott energy companies as those terms are defined in the Texas Government Code § 809.001, and will not boycott energy companies during the term of any contract with the City of Burleson.

Yes, we agree

No, we do not agree

Compliance with SB 19: Proposer agrees per SB 19 vendor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association as those terms are defined in the Texas Government Code § 2274.001, and that vendor will not so discriminate during the term of any contract with the City of Burleson.

Yes, we agree

No, we do not agree

I acknowledge that my signature affixed hereto verifies that I have read and understood the contents of this document, and I affirm the accuracy and truthfulness of the information provided therein

Vendor: _____

By: _____

Name: _____

Title: _____

Date: _____

SECTION 5.0**PROPOSAL FORM – COMPETITIVE SEALED PROPOSAL**

TO: City of Burleson
141 W. Renfro St.
Burleson, TX 76028

FOR: Burleson Westside Business Park Lift Station, Force Main and Sanitary Sewer

1 Enter into Agreement

The undersigned Offeror proposes and agrees, if this Proposal is accepted, to enter into an Agreement with City in the form included in the Proposal Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Unit Price Proposal and within the Contract Time indicated in this Proposal and in accordance with the other terms and conditions of the Contract Documents.

2 OFFEROR Acknowledgements and Certification

- 2.1 In submitting this Proposal, Offeror accepts all of the terms and conditions of the INVITATION TO OFFERORS and INSTRUCTIONS TO OFFERORS, including without limitation those dealing with the disposition of Offeror's Bond.
- 2.2 Offeror is aware of all costs to provide the required insurance, will do so pending contract award, and will provide a valid insurance certificate meeting all requirements within 14 days of notification of award.
- 2.3 Offeror certifies that this Proposal is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
- 2.4 Offeror has not directly or indirectly induced or solicited any other Offeror to submit a false or sham Proposal.
- 2.5 Offeror has not solicited or induced any individual or entity to refrain from proposing.
- 2.6 Offeror has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph:
 - a. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the proposal process.
 - b. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the proposal process to the detriment of City (b) to establish proposal prices at artificial non-competitive levels, or (c) to deprive City of the benefits of free and open competition.
 - c. "collusive practice" means a scheme or arrangement between two or more Offerors, with or without the knowledge of City, a purpose of which is to establish proposal prices at artificial, non-competitive levels.
 - d. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the proposal process or affect the execution of the Contract.

3 Time of Completion

- 3.1 The Work will be Substantially Complete as defined in the Supplementary Conditions within ***Three Hundred Sixty-Five (365)*** Days after the date when the Contract Time commences to run, which is the day indicated in the Notice to Proceed, plus any extension thereof allowed in accordance with Sections 11A and 11B.
- 3.2 The Work will be complete for Final Acceptance within ***Four Hundred (400)*** Days after the date when the Contract Time commences to run, which is the day indicated in the Notice to Proceed, plus any extension thereof allowed in accordance with Sections 11A and 11B.
- 3.3 Offeror accepts the provisions of the Agreement as to Liquidated Damages in the event of failure to obtain Milestones (if applicable), Substantial Completion, and Final Acceptance within the times specified in the Agreement.

4 Attached to this Proposal

- 4.1 The following documents are attached to and made a part of this Proposal:
 - a. Proposal (Including past experience, key personnel resume, detailed schedule as outlined in Sections 10 & 11
 - b. Affidavit Against Prohibited Acts
 - c. Conflict of Interest Form
 - d. Offeror Acknowledgement
 - e. Offeror’s Bond
 - f. Vendor Compliance to State Law – Non-resident Offeror
 - g. Proposed Subcontractors Form
 - h. W9
 - i. This proposal form
 - j. Any additional documents required in Instructions to Offerors

5 Total Proposal Amount

- 5.1 Offeror will complete the Work in accordance with the Contract Documents for the following proposal amount. In the space provided below, please enter the total proposed amount for this project.
- 5.2 It is understood and agreed by the Offeror in signing this proposal that the total proposed amount entered below is subject to verification and/or modification by multiplying the unit prices for each pay item by the respective estimated quantities shown in this proposal and then totaling all of the extended amounts.

Total Proposal Amount: \$ _____

Respectfully submitted,

By: _____
(Signature)

(Printed Name)

Title: _____

Company: _____

Address: _____

State of Incorporation: _____

Email: _____

Phone: _____

Receipt is acknowledged of the following Addenda:	Initial
Addenda No. 1:	
Addenda No. 2:	
Addenda No. 3:	
Addenda No. 4:	
Addenda No. 5:	

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
BASE BID UNIT 1					
1	Mobilization, Bonding, and Insurance	1	LS		
	dollars and	cents per unit		\$	
2	Staking/Survey	1	LS		
	dollars and	cents per unit		\$	
3	Testing	1	LS		
	dollars and	cents per unit		\$	
4	Temporary Erosion, Sediment, & Water Pollution Prevention Plan	1	LS		
	dollars and	cents per unit		\$	
5	Traffic Control	4	MO		
	dollars and	cents per unit		\$	
6	Site Clearing and Preparation	1	LS		
	dollars and	cents per unit		\$	
7	21-inch ASTM F679 PS115 PVC Sanitary Sewer Pipe (By Open Cut)	1,076	LF		
	dollars and	cents per unit		\$	
8	21-Inch ASTM F679 PS115 PVC Sanitary Sewer Pipe (Carrier Pipe)	40	LF		
	dollars and	cents per unit		\$	
9	18-Inch ASTM F679 PS115 PVC Sanitary Sewer Pipe (By Open Cut)	3,464	LF		
	dollars and	cents per unit		\$	
10	18-Inch ASTM F679 PS115 PVC Sanitary Sewer Pipe (Carrier Pipe)	20	LF		
	dollars and	cents per unit		\$	

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
BASE BID UNIT 1					
11	15-Inch ASTM F679 PS115 PVC Sanitary Sewer Pipe (By Open Cut)	775	LF		
				\$	
	dollars and	cents per unit			
12	15-Inch ASTM F679 PS115 PVC Sanitary Sewer Pipe (Carrier Pipe)	40	LF		
				\$	
	dollars and	cents per unit			
13	16-Inch HDPE DIPS DR 13.5 Force Main Pipe (By Open Cut)	9,114	LF		
				\$	
	dollars and	cents per unit			
14	16-Inch HDPE DIPS DR 13.5 Force Main Pipe (Carrier Pipe)	370	LF		
				\$	
	dollars and	cents per unit			
15	Cement Stabilized Backfill	90	LF		
				\$	
	dollars and	cents per unit			
16	16-Inch Eccentric Plug Valve w/ Box	4	EA		
				\$	
	dollars and	cents per unit			
17	30-Inch Steel Casing Pipe (0.5") (By Auger Bore)	20	LF		
				\$	
	dollars and	cents per unit			
18	27-Inch Steel Casing Pipe (0.5") (By Auger Bore)	40	LF		
				\$	
	dollars and	cents per unit			
19	24-Inch Steel Casing Pipe (0.5") (By Auger Bore)	370	LF		
				\$	
	dollars and	cents per unit			
20	3-Inch Combination Air/Vacuum Release Valve w/ Vault	3	EA		
				\$	
	dollars and	cents per unit			

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
BASE BID UNIT 1					
21	6' Diameter Standard Manhole	3	EA		
				\$	
	dollars and	cents per unit			
22	6' Diameter Polymer Concrete Manhole	1	EA		
				\$	
	dollars and	cents per unit			
23	5' Diameter Standard Concrete Manhole	14	EA		
				\$	
	dollars and	cents per unit			
24	6' Extra Depth Standard Manhole (above 6' standard depth)	19	VF		
				\$	
	dollars and	cents per unit			
25	6' Extra Depth Polymer Concrete Manhole (above 6' standard depth)	9	VF		
				\$	
	dollars and	cents per unit			
26	5' Extra Depth Standard Manhole (above 6' standard depth)	130	VF		
				\$	
	dollars and	cents per unit			
27	Vacuum Testing of Sanitary Sewer Manholes	18	EA		
				\$	
	dollars and	cents per unit			
28	Post-Construction TV Inspection	5,415	LF		
				\$	
	dollars and	cents per unit			
29	Trench Safety	14,899	LF		
				\$	
	dollars and	cents per unit			
30	Hydromulch Seeding	41,800	SY		
				\$	
	dollars and	cents per unit			

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
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BASE BID UNIT 1

31	Topsoil	2,300	CY		
				\$	
	dollars and	cents per unit			
32	Asphalt Pavement Repair, Mill & Overlay 1/2 width of existing CR 914 where force main or gravity sanitary sewer is installed	1,983	SY		
				\$	
	dollars and	cents per unit			
33	#12 AWG Insulated Tracer Wire per specs; including required grounding terminals	14,899	LF		
				\$	
	dollars and	cents per unit			

LIFT STATION - MECHANICAL / PROCESS COMPONENTS

34	16' Polymer Concrete Wet Well	1	EA		
				\$	
	dollars and	cents per unit			
35	60" Polymer Concrete MH	1	EA		
				\$	
	dollars and	cents per unit			
36	Metering Precast MH	1	EA		
				\$	
	dollars and	cents per unit			
37	Valve Vault	1	EA		
				\$	
	dollars and	cents per unit			
38	Submersible Sewage Pumps (125 HP)	3	EA		
				\$	
	dollars and	cents per unit			
39	Air Release Valves (Pump Discharge)	2	EA		
				\$	
	dollars and	cents per unit			
40	12" Plug Valves	3	EA		
				\$	
	dollars and	cents per unit			

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
BASE BID UNIT 1					
41	12" Check Valves	2	EA		
				\$	
	dollars and	cents per unit			
42	Odor Control Unit	1	EA		
				\$	
	dollars and	cents per unit			
43	Backflow Preventer Assembly	1	EA		
				\$	
	dollars and	cents per unit			
44	Hose Bib Assembly	1	EA		
				\$	
	dollars and	cents per unit			
45	18" SS PVC SDR 26	24	LF		
				\$	
	dollars and	cents per unit			
46	8" SS PVC SDR 26	36	LF		
				\$	
	dollars and	cents per unit			
47	12" FM SSTP SCH 40	55	LF		
				\$	
	dollars and	cents per unit			
48	12" FM CLASS 350 DIP	55	LF		
				\$	
	dollars and	cents per unit			
49	16" FM CLASS 350 DIP	44	LF		
				\$	
	dollars and	cents per unit			
50	16" FM HDPE DR 13.5	52	LF		
				\$	
	dollars and	cents per unit			

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
BASE BID UNIT 1					
51	ACCESS GATE ASSEMBLY	1	EA		
	dollars and	cents per unit		\$	
52	PERIMETER FENCING	400	LF		
	dollars and	cents per unit		\$	
LIFT STATION - ELECTRICAL / INSTRUMENTATION COMPONENTS					
53	HEATING BOX	1	EA		
	dollars and	cents per unit		\$	
54	LOCAL CONTROL PANEL	1	EA		
	dollars and	cents per unit		\$	
55	497 kW GENERATOR SET	1	EA		
	dollars and	cents per unit		\$	
56	LEVEL TRANSDUCER	1	EA		
	dollars and	cents per unit		\$	
57	FLOATS	4	EA		
	dollars and	cents per unit		\$	
58	ATS	1	EA		
	dollars and	cents per unit		\$	
59	SES	1	EA		
	dollars and	cents per unit		\$	
60	480V PDP	1	EA		
	dollars and	cents per unit		\$	

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
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BASE BID UNIT 1

61	120V LIGHTING PANEL	1	EA		
	dollars and	cents per unit		\$	
62	15KVA TRANSFORMER	1	EA		
	dollars and	cents per unit		\$	
63	PULL BOXES	4	EA		
	dollars and	cents per unit		\$	
64	GATE OPERATOR	1	EA		
	dollars and	cents per unit		\$	
65	PLC PANEL	1	EA		
	dollars and	cents per unit		\$	
66	LIGHT FIXTURES/LIGHT POLES	1	LS		
	dollars and	cents per unit		\$	
67	ELECTRICAL DUCTBANK	1	LS		
	dollars and	cents per unit		\$	
68	GROUNDING	1	LS		
	dollars and	cents per unit		\$	
69	CONDUIT	1	LS		
	dollars and	cents per unit		\$	
70	CONDUCTORS	1	LS		
	dollars and	cents per unit		\$	

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price (\$)	Amount Bid
BASE BID UNIT 1					
71	CELLULAR ANTENNAE	1	EA		
	dollars and	cents per unit		\$	
72	PROGRAMMING	1	LS		
	dollars and	cents per unit		\$	
73	12" FLOW METER	1	EA		
	dollars and	cents per unit		\$	
74	PRESSURE INDICATOR TRANSMITTERS	3	EA		
	dollars and	cents per unit		\$	
LIFT STATION - CONCRETE PAVING AND PADS					
75	CONCRETE PAVING	82	CY		
	dollars and	cents per unit		\$	
76	EQUIPMENT PADS	6	CY		
	dollars and	cents per unit		\$	
77	Allowance - Coserv Electrical Service Coordination	1	LS	\$ 15,000.00	
	Fifteen thousand				
	dollars and	cents per unit			
78	Contingency Allowance	1	LS	\$ 100,000.00	
	dollars and	cents per unit			

BASE BID (ITEMS 1-78) \$ _____
(words and figures)

_____ **DOLLARS**

_____ **CENTS**

ALTERNATIVES – NOT IN BASE BID

79	ALTERNATIVE - Grading upstream of Lift Station Site per MMA Grading Plan	1	LS		
	dollars and	cents per unit		\$	
80	ALTERNATIVE - Traffic Control along CR 914 from CR 1020 to CR 914A during force main and downstream gravity sanitary sewer installation. Closure of traffic at this intersection is to be avoided.	1	LS		
	dollars and	cents per unit		\$	
81	ALTERNATIVE - Asphalt Pavement Repair, Mill & Overlay entire width of existing CR 914 where force main or gravity sanitary sewer is installed	3,965	SY		
	dollars and	cents per unit			

SECTION 5.1
OFFEROR'S BOND - CSP

KNOW ALL BY THESE PRESENTS:

That we, (Offeror Name) _____, known as "Principal" herein, and (Surety Name) _____, a corporate surety duly authorized to do business in the State of Texas, known as "Surety" herein, are held and firmly bound unto the City of Burleson, a Texas home-rule municipal corporation created pursuant to the laws of Texas, known as "City" herein, in the penal sum of five percent (5%) of Offeror's maximum proposal price, in lawful money of the United States, to be paid in Burleson, Johnson County, Texas for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a proposal to perform work for the following project designated as

Burleson Westside Business Park Lift Station, Force Main, and Sanitary Sewer

NOW, THEREFORE, the condition of this obligation is such that if the City shall award the Contract for the foregoing project to the Principal, and the Principal shall satisfy all requirements and conditions required for the execution of the Contract and shall enter into the Contract in writing with the City in accordance with the terms of such same, then this obligation shall be and become null and void. If, however, the Principal fails to execute such Contract in accordance with the terms of same or fails to satisfy all requirements and conditions required for the execution of the Contract, this bond shall become the property of the City, without recourse of the Principal and/or Surety, not to exceed the penalty hereof, and shall be used to compensate City for the difference between Principal's total proposal amount and the next selected offeror's total proposal amount.

PROVIDED FURTHER, that if any legal action be filed on this Bond, venue shall lie in the state district court of Johnson County, Texas.

IN WITNESS WHEREOF, the Principal and the Surety have SIGNED and SEALED this instrument by duly authorized agents and officers on this the _____ day of _____, 20__.

By: _____
(Principal Name)

(Signature and Title of Principal)

*By: _____
(Surety Name)

(Signature of Attorney-in-Fact)

*Attach Power of Attorney (Surety) for Attorney-in-Fact

Impressed
Surety Seal
Only

END OF SECTION

SECTION 5.2

VENDOR COMPLIANCE TO STATE LAW NON-RESIDENT OFFEROR - CSP

Texas Government Code Chapter 2252 was adopted for the award of contracts to nonresident offerors. This law provides that, in order to be awarded a best value contract where the offeror also offered the lowest proposal price, nonresident offerors (out-of-state contractors whose corporate offices or principal place of business are outside the State of Texas) propose on projects for construction, improvements, supplies or services in Texas at an amount lower than the lowest Texas resident offeror by the same amount that a Texas resident offeror would be required to underbid a nonresident offeror in order to obtain a comparable contract in the State which the nonresident's principal place of business is located.

The appropriate blanks in Section A must be filled out by all nonresident offerors in order for your proposal to meet specifications. The failure of nonresident offerors to do so will automatically disqualify that offeror. Resident offerors must check the box in Section B.

A. Nonresident offerors in the State of _____, our principal place of business, are required to be _____ percent lower than resident offerors by State Law. A copy of the statute is attached.

Nonresident offerors in the State of _____, our principal place of business, are not required to underbid resident Offerors.

B. The principal place of business of our company or our parent company or majority owner is in the State of Texas.

OFFEROR:

Company By: _____
(Please Print)

Address Signature: _____

City/State/Zip Title: _____
(Please Print)

Date: _____

END OF SECTION

SECTION 5.3
 PROPOSED SUBCONTRACTORS FORM - CSP

Each Offeror for a City procurement is required to complete the information below by identifying the proposed subcontractors whom they intend to utilize and the approximate percentage of the overall contract that will be allocated to each entity. Offeror is reminded that a minimum of **35%** of the Contract must be performed by Offeror's company.

Company Name	Type of Work to be Performed	Overall Contract Percentage (%)
General Contractor:		
Subcontractors:		

The undersigned hereby certifies that the subcontractors described in the table above will be utilized for this project at the approximate percentage levels indicated above.

OFFEROR:

_____ By: _____
 Company (Please Print)

_____ Signature: _____
 Address

_____ Title: _____
 City/State/Zip (Please Print)

Date: _____

END OF SECTION

STATE OF TEXAS §

CONTRACT

COUNTY OF JOHNSON §

This Contract, made and entered into this ___ day of _____, 20___, by and between the City of Burleson, hereinafter called "Owner," and _____, hereinafter called "Contractor."

W I T N E S S E T H:

For and in consideration of the payment, agreements and conditions hereinafter mentioned, and under the conditions expressed in the bonds herein, Contractor hereby agrees to complete the construction of improvements described as follows:

Burleson Westside Business Park Lift Station, Forcemain and Sanitary Sewer

City of Burleson Project No. DV2401

in the City of Burleson, Texas, and all extra work in connection therewith, under the terms as stated in the *Standard Specifications for Public Works Construction* as issued by the North Central Texas Council of Governments (NCTCOG), as it may be amended from time to time (hereinafter called "Standard Specifications"), and under the terms of the Special Provisions and Special Projects of this Contract; and at his, her or their own proper cost and expense to furnish all superintendence, labor, insurance, equipment, tools and other accessories and services necessary to complete the said construction in accordance with all the Contract documents, incorporated herein as if written word for word, and in accordance with the plans, which include all maps, plats, blueprints, and other drawings and printed or written explanatory manner therefore OWNER, who has been identified by the endorsement of the Contractor's written proposal, these General Provisions of the Standard Specifications, the Special Provisions and Special Projects of this Contract, the Payment, Performance, and Maintenance Bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire Contract.

The Contractor hereby agrees to commence work on or after the date established for the start of work as set forth in a written notice to do so shall have been given to him or her and to complete all work within the time stated in the Proposal, subject to such extensions of time as are provided by the General and Special Conditions.

The Owner agrees to pay the Contractor in current funds for the performance of the Contract in accordance with the proposal submitted therefore, subject to additions and deductions, as provided by the General and Special Conditions.

This Contract is entered into subject to the Charter and Ordinances of Owner, as they may be amended from time to time, and is subject to and is to be construed, governed, and enforced under all applicable State of Texas and federal laws. Situs of this Contract is agreed to be Johnson County, Texas, for all purposes including performance and execution.

If any of the terms, sections, subsections, sentences, clauses, phrases, provisions, covenants, or conditions of this Contract is held for any reason to be invalid, void or unenforceable, the remainder of the terms, sections, subsections, sentences, clauses, phrases, provisions, covenants, or conditions of this Contract shall remain in full force and effect and shall in no way be affected, impaired, or invalidated.

Owner reserves the right to terminate this agreement immediately upon breach of any term or provision of this Contract by Contractor; or, if any time during the term of this Contract, Contractor shall fail to commence the work in accordance with the provisions of this Contract or fail to diligently provide Services in an efficient, timely, and careful manner and in strict accordance with the provisions of this Contract or fail to use an adequate number or quality of personnel and equipment to complete the work or fail to perform any of its obligations under this Contract, then Owner shall have the right, if Contractor shall not cure any such default after thirty (30) days written notice thereof, to terminate this Contract and complete the work in any manner it deems desirable, including engaging the Services of other parties therefore. Any such act by Owner shall not be deemed a waiver of any other right or remedy of Owner. If after exercising any such remedy the cost to Owner of the performance of the balance of the work is in excess of that part of the Contract sum which has not theretofore been paid to Contractor hereunder, Contractor shall be liable for and shall reimburse Owner for such excess.

No right or remedy granted herein or reserved to the parties is exclusive of any other right or remedy herein by law or equity provided or permitted; but, each shall be cumulative of every other right or remedy given hereunder. No covenant or condition of this Contract may be waived without consent of the parties. Forbearance or indulgence by either party shall not constitute a waiver of any covenant or condition to be performed pursuant to this Contract.

Contractor's status shall be that of an independent Contractor and not an agent, servant, employee or representative of Owner in the performance of this

Contract. No term or provision of, or act of Contractor or Owner under this Contract shall be construed as changing that status.

This Contract embodies the complete agreement of the parties hereto, superseding all oral or written previous and contemporary agreements between the parties relating to matters herein; and except as otherwise provided herein, cannot be modified without the written agreement of the parties.

Owner and Contractor each bind themselves, their successors, executors, administrators and assigns to the other party to this Contract. Neither Owner nor Contractor will assign, sublet, subcontract or transfer any interest in this Contract without the written consent of the other party. No assignment, delegation of duties or subcontract under this Contract will be effective without the written consent Owner.

It is further agreed that one or more instances of forbearance by Owner in the exercise of its rights herein shall in no way constitute a waiver thereof.

In performing this Contract, Contractor agrees to use diligent efforts to purchase all goods and services from Burleson Businesses whenever such goods and services are comparable in availability, quality and price.

IN WITNESS WHEREOF, the parties of these presents have executed this agreement in the year and date first written above.

WITNESS:

CONTRACTOR

By _____
Signature

Company Name

Typed/Printed Name

Tax Identification Number:

Title

By _____
Signature

Address

Printed or Typed Name

City State Zip

Printed or Typed Title

ATTEST:
The City of Burleson

CITY OF BURLESON, TEXAS

By: _____

By: _____

Amanda Campos
City Secretary

Tommy Ludwig
City Manager

THE STATE OF TEXAS §
COUNTY OF JOHNSON §

Corporate Acknowledgment

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, who is known to me or who was proved to me on the oath of _____ (name of person identifying the acknowledging person) or who was proved to me through _____ (description of identity card or other document issued by the federal or state government containing the picture and signature of the acknowledging person) to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed same for and as the act and deed of _____, a corporation of _____ County, Texas, and as _____ thereof, and for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ___ day of _____, 20__

Notary Public In and For the State of Texas

Notary's Printed Name

My Commission Expires: _____
THE STATE OF TEXAS §

City Acknowledgement

COUNTY OF JOHNSON §

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to me to be a person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed same for and as the act of City of Burleson, Texas, a Texas municipal corporation, and as _____ thereof, and for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ___ day of _____, 20__.

Notary Public In and For the State of Texas

Notary's Printed Name

My Commission Expires: _____

THE STATE OF TEXAS §

PERFORMANCE BOND

COUNTY OF JOHNSON §

KNOW ALL BY THESE PRESENTS: That _____
of the City of _____, County of _____
State of _____ hereinafter referred to as "PRINCIPAL," and

_____, a corporate surety/sureties organized under the laws of the State of _____ and authorized to do business in the State of Texas, hereinafter referred to as "SURETY," (whether one or more), are held and firmly bound unto the **CITY OF BURLESON, TEXAS**, a municipal Entity located in Johnson County, Texas, hereinafter referred to as "CITY," in the amount of _____ DOLLARS (\$ _____), lawful money of the United States, to be paid in Burleson, Johnson County, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, assigns, administrators and successors, jointly and severally; and firmly by these presents, the condition of this obligation is such that,

WHEREAS, PRINCIPAL entered into a certain written Contract with the CITY dated the ____ day of _____, 20____, a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment, labor, supervision, and other accessories necessary for the construction of:

Burleson Westside Business Park Lift Station, Forcemain and Sanitary Sewer

in the City of Burleson, Texas, as more particularly described and designated in the above referenced contract such contract being incorporated herein and made a part hereof as fully and to the same extent as if written herein word for word:

NOW THEREFORE,

If PRINCIPAL shall well, truly and faithfully perform and fulfill all of the undertakings, covenants, terms, conditions and agreements of the above referenced Contract in accordance with the plans, specifications and Contract documents during the original term thereof, and any extension thereof which may be granted with or without notice to SURETY, and during the life of any guaranty required under the Contract, and shall also well and truly perform and

fulfill all the covenants, terms, conditions and agreements of any and all authorized modifications of such Contract that may hereafter be made, notice of which modifications to SURETY being hereby waived, then this obligation shall be void, otherwise to remain in full force and effect; and in case PRINCIPAL shall fail to do so, it is agreed that the CITY may do such work and supply such materials and charge the same against PRINCIPAL and SURETY on this obligation, and PRINCIPAL and SURETY hereon shall be subject to the liquidated damages mentioned in the Contract for each day's failure on its part to comply with the terms and provisions of such Contract.

Provided, further, that if any legal action be filed on this Bond, venue shall lie in Johnson County, Texas.

And, that 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 performed thereunder, or the plans, specifications, drawings, etc., accompanying 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 to be performed thereunder.

The undersigned and designated agent is hereby designated by SURETY as the agent resident in either Tarrant or Johnson County to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, this instrument is executed on this the ____ day
of _____, 20__.

WITNESS

PRINCIPAL

By _____
Signature

By _____
Signature

Typed/Printed Name

Typed/Printed Name

Title

Title

Address

Address

City State Zip

City State Zip

WITNESS

SURETY

By _____
Signature

By _____
Signature

Typed/Printed Name

Typed/Printed Name

Title

Title

Address

Address

City State Zip

City State Zip

THE STATE OF TEXAS §

PAYMENT BOND

COUNTY OF JOHNSON §

KNOW ALL BY THESE PRESENTS:

That _____ of the City of _____, County of _____, State of _____ hereinafter referred to as "PRINCIPAL," and _____, a corporate surety/sureties organized under the laws of the State of _____ and authorized to do business in the State of Texas, hereinafter referred to as "SURETY," (whether one or more), are held and firmly bound unto the **CITY OF BURLESON, TEXAS**, a municipal corporation located in Johnson County, Texas, hereinafter referred to as "CITY," and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached Contract, in the penal sum of _____ DOLLARS (\$_____), lawful money of the United States, to be paid in Burleson, Johnson County, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; and firmly by these presents, the condition of this obligation is such that,

WHEREAS, PRINCIPAL entered into a certain Contract with the CITY, dated the day of _____, 20____, a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment, labor, supervision, and other accessories necessary for the construction of:

Burleson Westside Business Park Lift Station, Forcemain and Sanitary Sewer

NOW THEREFORE,

If PRINCIPAL shall well, truly and faithfully perform its duties and make prompt payment to all persons, firms, subcontractors, corporations and claimants supplying labor and materials in the prosecution of the work provided for in the above referenced Contract and any and all duly authorized modifications of such Contract that may hereafter be made, notice to SURETY of such modifications being hereby waived, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, further, that if any legal action be filed on this Bond, venue shall lie in Johnson County, Texas.

And, that such 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 performed thereunder, or the plans, specifications, drawings, etc. accompanying 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 to be performed thereunder.

This Bond is given pursuant to the provisions of Chapter 2253 of the Government Code, as amended. The terms "payment bond beneficiary," "public work labor," and "public work material," as used herein, are in accordance with and as defined in the relevant provisions of Chapter 2253 of the Government Code.

The undersigned and designated agent is hereby designated by SURETY herein as the resident agent in either Tarrant or Johnson Counties to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, this instrument is executed on this the ____ day of _____, 20__.

WITNESS

PRINCIPAL

By _____
Signature

By _____
Signature

Typed/Printed Name

Typed/Printed Name

Title

Title

Address

Address

City State Zip

City State Zip

WITNESS

SURETY

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

Company

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

The Resident Agent of the SURETY in _____ County, Texas, for
delivery of notice and service of process is:

NAME _____

ADDRESS _____

NOTE: Date of Payment Bond must NOT be prior to date of Contract.

SECTION NO. 9.0

THE STATE OF TEXAS §
COUNTY OF JOHNSON §

MAINTENANCE BOND

KNOW ALL BY THESE PRESENTS:

That _____ of the City of _____, County of _____, State of _____ hereinafter referred to as "PRINCIPAL," and _____, a corporate Surety/sureties organized under the laws of the State of _____ and authorized to do business in the State of Texas, hereinafter referred to as "SURETY," (whether one or more), are held and firmly bound unto the **CITY OF BURLESON, TEXAS**, a municipal corporation located in Johnson County, Texas, hereinafter referred to as "CITY," in the amount of _____ DOLLARS (\$ _____), lawful money of the United States, to be paid in Burleson, Johnson County, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, assigns, administrators and successors, jointly and severally; and firmly by these presents, the condition of this obligation is such that:

WHEREAS, PRINCIPAL entered into a certain written Contract with RA DEVELOPMENT, dated the ____ day of _____, 20____, a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment, labor, supervision, and other accessories necessary for the construction of:

Burleson Westside Business Park Lift Station, Forcemain and Sanitary Sewer

in the City of Burleson, Texas, as more particularly described and designated in the above referenced contract such contract being incorporated herein and made a part hereof as fully and to the same extent as if written herein word for word:

NOW THEREFORE,

If PRINCIPAL will maintain and keep in good repair the work herein contracted to be done and performed for a period of two (2) years from the date of acceptance and perform all necessary work and repair any defective condition growing out of or arising in any part of the construction of said improvement, it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by PRINCIPAL; then this obligation shall be void, otherwise it shall remain in full force and effect; and in case PRINCIPAL shall fail to do so, it is agreed that CITY may do such work and supply such materials and charge the

same against PRINCIPAL and SURETY on this obligation, and in addition, PRINCIPAL and SURETY herein shall be subject to the liquidated damages as provided in the Contract referred to herein for each day's failure on its part to comply with the terms and provisions of such Contract.

Provided, further, that if any legal action be filed on this Bond, venue shall lie in Johnson County, Texas.

And, that 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 performed thereunder, or the plans, specifications, drawings, etc., accompanying 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 to be performed thereunder.

The undersigned and designated agent is hereby designated by SURETY as the resident agent in either Tarrant or Johnson County to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

IN WITNESS WHEREOF, this instrument is executed on this the ____ day of _____, 20____.

WITNESS

PRINCIPAL

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

Company

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

WITNESS

By _____

Signature

Typed/Printed Name

Title

Address

City State Zip

SURETY

Company

By _____

Signature

Typed/Printed Name

Title

Address

City State Zip

Section 10.0

CONTRACTOR’S AFFIDAVIT OF FINAL PAYMENT

THE STATE OF TEXAS)
COUNTY OF _____)

CONTRACTOR’S AFFIDAVIT OF
FINAL PAYMENT AND RELEASE

BEFORE ME, the undersigned authority, on this day personally appeared _____
 (“Affiant”), who, after being by me duly sworn, deposes and says that he is _____
 _____, _____ (office held) of _____
 (corporation, partnership, trade name) of _____ (County, State Texas)
 (the “Contractor”), which said Contractor was awarded the contract dated the _____ day of _____,
 20____, for the construction of _____ (the “Work”), for a total
 consideration of _____ (Dollars to be paid to the said Contractor (the
 “Contract”), and the Affiant has full power of authority to make this affidavit.

That _____ has received the request for final payment on said Work, and that the said
 Contractor has fully satisfied and paid any and all claims that may be covered by Chapter 53 of the Texas
 Property Code, and Article 5160 of the Revised Civil Statutes of the State of Texas, or any other applicable
 statutes or charter provisions, and that all just bills for labor and materials have been paid and charged by
 said Contractor insofar as they pertain to the Work in question.

That in addition to any funds which may have been previously paid by the City of Burleson (the City) the
 Contractor hereby accepts the amount of _____ Dollars as FULL
 AND FINAL PAYMENT under the aforementioned contract, and hereby waives and releases any right
 against the City arising out of or in any manner connected with the performance of the work and/or his
 Contract, including but not limited to claims of third parties that supplied material and/or labor for the
 Work for or through the Contractor (“Subcontractors”), as well as claims for delay, additional
 compensation or for recovery of liquidated damages which may have been withheld by the City. The
 Contractor shall defend, hold harmless and indemnify the City from any such claims of such
 Subcontractors. The Contractor further releases the City from any claim or liability arising from any act or
 neglect of the City related to or connected with the Contract, and shall not be deemed or alter or modify the
 terms and provisions of said Contract.

By _____
(Affiant)

(Printed Name)

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE _____ day of _____ 20____

(Notary Public, in and for the State of Texas)

(Printed Name of Notary)

My Commission Expires: _____

SPECIAL PROVISIONS

PART A – PAVING AND DRAINAGE SPECIFICATIONS

11A-1 PURPOSE OF SPECIAL PROVISIONS:

The project shall be constructed in accordance with the *Standard Specifications for Public Works Construction* as issued by the North Central Texas Council of Governments (NCTCOG), City of Burleson Standards and TxDOT standards as it may be amended from time to time, hereinafter referred to as the Standard Specifications. In the event of a conflict, the most restrictive standard will shall apply.

These Special Provisions are included for the purpose of adapting the Standard Specifications to the particular project which is subject to this agreement and of adding thereto such further provisions as may be necessary to state the contract in its entirety.

Where any discrepancies occur between the Special Provisions and the Standard Specifications, the Special Provisions shall govern.

References made to “TxDOT” items in this contract shall mean items in the *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges* as published by the Texas Department of Transportation in 2014, or most recent edition, Standard version only. There will be no Metric projects. Further technical requirements contained in other publications are referenced in sections where they apply and are hereby incorporated.

11A-2 SCOPE OF WORK:

- A. The work governed by these drawings and contract documents is located in the city of Burleson, Texas and consists of the Burleson Westside Business Park Lift Station, Forcemain and Sanitary Sewer including all necessary appurtenances. The major work will consist of the construction of the lift station site. Approximately 9500 LF of 16” force main, 4250 LF of 14” force main, 1,000 LF of 21” sanitary sewer line, 4,700 LF of 18” thru 15” sanitary sewer line, and replacement of certain surface improvements, and repair of roadway where the sewer is being installed beneath pavement. The sewer and force main installation continues downstream from County Road 1019 in an easterly direction through various properties terminating at the intersection of County Road 914 and County Road 914A. All scope of work shall be installed complete and in place as outlined within the Contract Documents, Specifications and Drawings.

- B. The intent of the Contract Documents, including the Standard Specifications, Special Provisions & Projects, and other instruments, documents, drawings and maps comprising the Plans and Specifications, is to describe the completed work to be performed by the Contractor under the contract as an independent Contractor.
- C. Horizontal and vertical control, if available, will be provided by the City prior to construction. Construction staking will be the responsibility of the contractor. No separate pay item is included for construction staking. The work will be performed subject to the right of inspection by the City or its authorized representative. Any provision of the agreement vesting in the City, the right of supervision or inspection is understood by all the parties to be for the purpose of ensuring that the plans and specifications are complied with and that the completed work is obtained as described, and no such provision shall be interpreted as vesting in the City the right to control the details of the work.
- D. The Contractor shall maintain at all times on the job site, a superintendent authorized to receive and execute instructions from the engineer.
- E. The Contractor shall employ only competent, efficient workmen and shall not use on the work any unfit person or one not skilled in the work assigned to him; and shall at all times maintain good order among his employees.
- F. The City shall inform the Contractor in writing that, in his opinion, any employee is unfit, unskilled, disobedient or is disrupting the orderly progress of the work; such employee shall be removed from the work and shall not again be employed on it.
- G. Under urgent circumstances, the City may orally require immediate removal of an employee for cause, to be followed by written confirmation.

11A-3 BONDS, INSURANCE AND AFFIDAVITS:

- A. The following bonds and proof of insurance shall be filed with the City of Burleson as joint beneficiaries as a condition of the contract, together with appropriate powers of attorney.
 - 1. **Performance, Payment, And Maintenance Bonds:** Performance, Payment and Maintenance bonds in the amount of not less than one hundred percent (100%) of the contract price conditioned upon the faithful performance of the contract, and upon payment of all persons supplying labor or furnishing materials, will be required upon the forms which are a part of the Contract Documents. Bonds shall be executed by a surety company authorized to do business in the State of Texas and acceptable to and approved by the City of Burleson. The period of

the Maintenance Bond shall be two years from the date of acceptance of all work done under the contract, to cover the guarantee as set forth in the Special Conditions.

- 2. Performance Bonds And Payment Bonds In Excess Of \$100,000:** In addition to all other requirements set forth with regard to performance bonds and payment bonds, any performance bond or payment bond in an amount exceeding One Hundred Thousand Dollars (\$100,000) must be issued by a surety that is qualified as a surety on obligations permitted or required under federal law as indicated by publication of the surety's name in the current U.S. Treasury Department Circular 570. In the alternative, an otherwise acceptable surety company that is authorized and admitted to write surety bonds in Texas must obtain reinsurance on any amounts in excess of One Hundred Thousand Dollars (\$100,000) from a reinsurer authorized and admitted as a reinsurer in Texas who qualifies as a surety or reinsurer on obligations permitted or required under federal law as indicated by publication of the surety's or reinsurer's name in the current U.S. Treasury Department Circular 570.
- 3. Insurance:** Contractor shall, at his own expense, purchase, maintain and keep in force during the term of this contract such insurance as set forth below. Contractor shall not commence work under this contract until he has obtained all the insurance required under the contract and such insurance has been approved by the City, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance of the subcontractor has been obtained and approved. All insurance policies provided under this contract shall be written on an "occurrence" basis.

Compensation Insurance

Workers' Compensation	Statutory Limit
Employer's Liability	\$100,000 Each Occurrence
\$100,000 Disease – Each Employee	

Liability Insurance

Commercial General Liability \$1,000,000 Per Occurrence
(No standard coverages are to be excluded by endorsement.)

Automobile Liability Insurance

Commercial Auto Liability Policy \$ 500,000 Combined
(including coverage for owned, Single Limit hired, and non-owned autos)

Umbrella Liability

(Following Form and Drop Down \$2,000,000 Each Occurrence Provisions Included)

- B. It is agreed by all parties to this contract that the insurance required under this contract shall:
1. Be written with the City of Burleson as an additional insured.
 2. Provide thirty days notice of cancellation to the City of Burleson, for nonpayment of premium, material change, or any other cause.
 3. Be written through companies duly authorized to transact that class of insurance in the State of Texas.
 4. Waive subrogation rights for loss or damage so that insurers have no right to recovery or subrogation against the City of Burleson, it being the intention that the required insurance policies shall protect all parties to the contract and be primary coverage for all losses covered by the policies.
 5. Provide a Certificate of Insurance evidencing the required coverages to:

The City of Burleson Public Works & Engineering Department.
141 W. Renfro Street
Burleson, TX 76028

- C. Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the engineer (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the City of Burleson's property might be responsible or encumbered (less amounts withheld by the City) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the contract documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the City, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the contract documents, (4) consent of Surety, if any, to final payment and (5) if required the City, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the contract, to the extent and in such form as may be designated the City. If a subcontractor refuses to furnish a release or waiver the City, the Contractor may furnish a bond satisfactory to indemnify the City against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund

the City all money that the City may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- D. In addition to the requirements contained above, the Contractor shall comply with the following in its provision of workers' compensation insurance.

1. Definitions:

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractor" in §406.096) - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries and delivery of portable toilets.

2. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.
3. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
4. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

5. The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:
 - a. A certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
 - b. No later than seven (7) days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
6. The Contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
7. The Contractor shall notify the City in writing by certified mail or personal delivery, within ten days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
8. The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
9. The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:
 - a. provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 - b. provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - c. provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

- d. obtain from each other person with whom it contracts, and provide to the Contractor:
 - (1) a certificate of coverage, prior to the other person beginning work on the project; and
 - (2) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - e. retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - f. notify the governmental entity in writing by certified mail or personal delivery, within ten days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
 - g. contractually require each person with whom it contracts, to perform as required by paragraphs 1 – 7 above, with the certificates of coverage to be provided to the person for whom they are providing services.
10. By signing this contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the City that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
11. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

11A-4 INDEMNIFICATION:

Contractor does hereby agree to waive all claims, release, indemnify, defend and hold harmless City of Burleson and all its officials, officers, agents, and employees, from and against any and all claims, losses, damages, suits, demands or causes or action, and liability of every kind

including all expenses of litigation and/or settlement, court costs and attorneys fees for injury or death of any person or for loss of, damage to, or loss of use of any property, arising out of or in connection with the performance of this contract. Such indemnity shall apply whether the claims, losses, damages, suits, demands or causes of action arise in whole or in part from the negligence of the City of Burleson his officers, officials, agents or employees. It is the express intention of all the parties that the indemnity provided for in this paragraph is indemnity by Contractor to indemnify and protect City of Burleson from the consequences of City of Burleson's own negligence, whether that negligence is a sole or concurring cause of the injury, death or damage and whether said negligence is characterized as sole, contractual comparative, concurrent, joint, gross, active, passive, or any other form of negligence.

In any and all claims against any party indemnified hereunder by any employee 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, this indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any sub-contractor under workmen's compensation acts or other employee benefit acts.

11A-5 ADDENDUM:

This section has been moved to "Instructions to Offerors."

11A-6 TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

Since time is of the essence, the City has seen fit to establish the time required to complete this project.

Substantial Completion.

The Work will be Substantially Complete, within **Three Hundred Sixty-Five (365) Calendar Days** after the date when the Contract Time commences to run, which is the day indicated in the Notice to Proceed, plus any extension thereof allowed in accordance with Article 11 of the General Conditions. **Substantially complete is defined as having completed all bid items included in the contract to allow the facilities to function as designed.**

Final Acceptance.

The Work will be complete for Final Acceptance within **Four Hundred (400) Calendar Days** after the date when the Contract Time commences to run, which is the day indicated in the Notice to Proceed, plus any extension thereof allowed in accordance with these Special Provisions. **Final acceptance is defined as having completed all bid items included in the contract.**

Liquidated Damages:

Contractor recognizes that *time is of the essence* to achieve Milestones, Substantial Completion, and Final Acceptance of the Work, and City will suffer financial and other losses if the Work is not completed within the times specified in the Contract Documents. The Contractor will pay the City of Burleson liquidated damages per the schedule below for each **Calendar** day of delay (including Sundays and holidays) in finishing the work in excess of time specified for completion, plus any authorized time extensions. Execution of the contract under these specifications shall constitute agreement by the City of Burleson and Contractor that liquidated damages per the schedule below is the minimum value of the costs and actual damage caused by failure of the Contractor to complete the work within the allotted time, that such sum is liquidated damages and shall not be construed as a penalty, and that such sum may be deducted from payments due the Contractor if such delay occurs.

Substantial Completion: If the Contractor neglects, refuses, or fails to achieve Substantial Completion, as defined in the Supplementary Conditions, within the time (as duly adjusted pursuant to the Contract) specified above, Contractor shall pay City Five Hundred and no/100 Dollars (\$500.00) for each day that expires after such time, until Substantial Completion is achieved.

Final Acceptance: If Contractor neglects, refuse, or fails to complete the Work within the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.3, for completion and readiness for Final Payment, Contractor shall pay City Five Hundred and no/100 Dollars (\$500.00) for each day that expires after such time, until the date determined by City as stated in the City-issued Letter of Final Acceptance.

11A-7 COMPUTATION OF CONTRACT TIME FOR COMPLETION:

The Contract Documents furnished to the Contractor shows the number of calendar days allowed in the contract. If the satisfactory completion of the contract shall require unforeseen work or work and materials in greater amounts than those set forth in the contract, then additional calendar days will be considered, equal to the time which, in the opinion of the engineer, the work as a whole is delayed. However, the completion time can only be changed by the execution of a supplemental agreement (change order). To be effective, all change orders must be approved by Contractor, the City, and the City Council of the City of Burleson.

Time will be charged for all calendar days regardless of weather conditions, material supplies, or other conditions not under the control of the Contractor, which could impede the prosecution of the work. Time will also be charged for Sundays and holidays.

Prior to beginning construction operations, the Contractor shall submit to the engineer a *Critical Path Method (CPM)* chart progress schedule showing the manner of prosecution of the work that he intends to follow in order to complete

the contract within the allotted time. The purpose for this schedule is to assure adequate planning and execution of the work. The progress schedule must present a reasonable approach to completing the work within the allotted time. Payment of partial monthly estimates shall not be commenced until the CPM chart progress schedule has been approved by the engineer.

The Contractor shall be entirely responsible for maintaining the progress of the work in accordance with the approved schedule. Should it become evident, in the opinion of the engineer, any time during the construction that the progress of the work has not been maintained in accordance with the approved schedule, the Contractor shall, upon written request of the engineer, promptly submit a revised schedule. This revised schedule shall set out operations, methods, equipment, added labor, and additional work shifts by which time lost shall be made up. At the end of each estimate period, the engineer will determine whether the Contractor is in compliance with the approved schedule, or the approved revised schedule. In the event the Contractor is determined not to be in compliance, he will be notified immediately in writing. If the Contractor does not correct the work progress to comply with the approved revised schedule by the end of the month of notification, payment for work performed during the period of non-compliance will be reduced according to the following:

- 1st Month - Reduction = 30% X work performed (Month Only)
- 2nd Month - Reduction = 40% X work performed (Month Only)
- 3rd Month - Reduction = 50% X work performed (Month Only)
- Subsequent Month - Reduction = 50% work performed (Month Only)

The first month (the month of notification) is that month in which notification is made. Each month's reduction will be assessed only for that work performed during that specific month. The reduction will be cumulative for the entire period of non-compliance; i.e., 30% payment reduction for the work performed during the first month, plus 40% payment reduction for work performed during the second month, plus 50% payment reduction for work performed during the third month, and plus 50% payment reduction for work performed in each succeeding month of non-compliance thereafter. When the work progress becomes in compliance with the approved schedule, or the approved revised schedule, all withheld monies will be paid to the Contractor with the next regular estimate.

The Contractor shall anticipate possible delays and shall be prepared to supplement and revise his construction methods accordingly.

Prior to any construction activities, the Contractor shall install erosion control measures. The Contractor shall then begin the work to be performed under the contract within 10 days after the date of the authorization to begin work and shall continuously prosecute same with such diligence as will enable him to complete the work within the time limit specified. He shall not open up work to the detriment of work already begun. The Contractor shall conduct his operations so as to impose a minimum interference to traffic.

11A-8 DELAYS:

The Contractor assumes the risk of all suspensions of or delays in performance of the contract, regardless of length thereof, arising from all causes whatsoever, whether or not relating to this contract, including wrongful acts or omissions of the City or its Contractors or subcontractors except only to the extent, if any, that compensation or an extension of time may be due as expressly provided for elsewhere in this contract for such suspension or delays, and, subject only to such exception, the Contractor shall bear the burden of all costs, expenses and liabilities which he may incur in connection with such suspensions or delays, and all such suspensions, delays, costs, expenses and liabilities of any nature whatsoever, whether or not provided for in this contract, shall conclusively be deemed to have been within the contemplation of the parties.

Notwithstanding any provisions of this contract, whether relating to time of performance or otherwise, the City makes no representation or guarantee as to when the construction site or any part thereof will be available for the performance of the contract, or as to whether conditions at the construction site will be such as to permit the contract to be formed thereon without interruption or by any particular sequence or method or as to whether the performance of the contract can be completed by the time required under this contract or by any other time.

Wherever in connection with this contract it is required, expressly or otherwise, that the City shall perform any act relating to the contract, including making available or furnishing any real property, materials or other things, no guarantee is made by the City as to the time of such performance and the delay of City of Burleson in fulfilling such requirement shall not result in liability of any kind on the part of the City except only to the extent, if any, that an extension of time or compensation may be due as expressly provided for in this contract.

11A-9 MONTHLY ESTIMATE:

Although Contractor estimates may be submitted on a monthly basis, the City does not use a monthly pay estimate schedule. The City will process the estimate within a reasonable time. It is in the Contractor's best interest to get the estimate to the inspector as early in the week as possible to verify quantities and make the request. After verification, payment can be made.

11A-9A RIGHT TO AUDIT:

CONTACTOR agrees that the City of Burleson ("City") shall, until the expiration of three (3) years after final payment under this contract, have access to and the right to examine any directly pertinent books, documents, papers and records of CONTRACTOR involving transactions relating to this contract. CONTRACTOR agrees that the City and CITY shall have access during normal working hours to

all necessary CONTRACTOR facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. CITY shall give CONTRACTOR reasonable advance notice of intended audits.

11A-10 PREVAILING WAGE RATES:

The Contractor shall comply with V.T.C.A., Government Code, Chapter 2258, in performing this project. In accordance with V.T.C.A., Government Code, Chapter 2258, the prevailing wage rates as set forth in Section 2 of the contract documents shall be paid on this project. For overtime work and legal holidays, the hourly rate shall be one and one-half times the basic hourly rate set forth in Section 2. The City will require an affidavit stating that the Contractor has complied with the prevailing wage rate provision of the contract documents, prior to acceptance of the project. The City reserves the right to conduct interviews with the Contractor's employees to insure compliance with Section 2 of the contract documents in accordance with applicable State and Federal Laws.

Upon written request by the City , the general contractor shall be responsible for submitting payroll information to the City for all employees performing work on the project, whether employed by the general contractor or a subcontractor to the general contractor. Each submittal shall be certified by the general contractor as to completeness and accuracy.

A Contractor or subcontractor in violation of V.T.C.A., Government Code, Chapter 2258 is liable for a penalty. That Contractor or subcontractor shall pay to the City sixty dollars (\$60.00) 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 work done under the contract.

The Contractor or subcontractor violating a requirement of this Special Provision may be determined ineligible to propose on or receive any additional work during the calendar year following the year in which the violation of this Special Provision occurred.

11A-11 CONSTRUCTION WATER:

Construction water necessary for the normal construction of this project will not be provided free to the Contractor. All construction water will be metered by Johnson County Special Utility District (JCSUD) owned meters and only these meters. The Contractor is responsible for paying the current security deposit for the meter and any additional fees required by JCSUD. The necessary application of water for dust shall be considered subsidiary to the other proposal items listed in SECTION 5 (PROPOSAL) of this contract.

11A-12 DETOURS AND BARRICADES:

The Contractor shall submit to the inspector two (2) copies of a Traffic Control Plan two (2) weeks prior to closing any street or causing any obstruction to traffic on any street. The Contractor shall not proceed with the implementation of the Traffic Control Plan until notified by the inspector that the plan has been accepted. The Traffic Control Plan shall be drawn at a scale not less than 1"=200' unless approved by the inspector and such that it is legible and shall include proposed street closings, detours, barricade placements, and sign placement, including advance warning signs, and pavement markings if necessary. The Contractor shall furnish and erect suitable barricades, signs, and appropriate pavement markings to protect motorists and pedestrians, as set forth in the latest edition of the *TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TxMUTCD)*. The barricades, signs, and pavement markings shall be constructed, placed, and adequately maintained as set forth in the Traffic Control Plan or as directed by the engineer or authorized representative. Unless included as a proposal item, no direct compensation will be made to the contractor for the preparation of the Traffic Control Plan.

Unless otherwise approved by the engineer or authorized representative, two-way traffic shall be maintained on all roadways under construction at all times. If it becomes necessary to detour traffic off the existing paved roadway for more than seven (7) days, a hard surface driving lane, such as asphalt, shall be properly constructed and maintained by the Contractor throughout the duration of the detour. All temporary tie-ins shall be constructed of 4-inch Type B asphalt over a compacted subgrade (standard compaction). Subsequent maintenance of all detours and tie-ins shall be considered subsidiary to the unit prices proposed for temporary asphalt. Cutting, removing, and replacing the asphalt for utility installations, excavation, and/or liming operations shall be considered subsidiary to the initial placement of asphalt and will not be paid for each re-installation. Asphalt shall be replaced within seven (7) days of removal for these activities. A proposal item shall be included for furnishing, installing, maintaining and final removal of the asphalt.

Where pavement drop-offs occur, traffic control plans shall be in accordance as illustrated on the following "*Traffic Control Device Detail*," which is enclosed as part of these specifications. These guidelines are applicable to construction work where continuous pavement edges or drop-offs exist parallel and adjacent to a lane used for traffic.

No direct compensation (unless proposal item included) will be made to the Contractor for furnishing, installing, and maintaining barricades, signs, pavement markings, and detours and their subsequent removal. This is to be considered subsidiary to the several items for which unit prices are requested in the PROPOSAL. Should it be necessary for the City to provide and/or maintain signs, barricades, and markings the cost of such shall be deducted from the monthly estimate.

11A-14 SALES TAX:

The City of Burleson qualifies as an exempt entity as defined by the statutes (Chapter 151.309) of the Tax Code of the State of Texas. The City's purchasing department will issue exemption certificates. Comply with all statutes and rulings of the State Comptroller.

11A-15 ACCESS TO PRIVATE PROPERTIES:

The Contractor shall maintain all private drives in an accessible condition to allow residents ingress and egress before leaving the job site, except during the placing and curing of drive approaches. All commercial drives and other locations with high traffic volumes, as directed by the engineer, shall be maintained with 4-inch Type B asphalt over a compacted subgrade (standard compaction). Subsequent maintenance of drives shall be considered subsidiary to the unit prices proposed. Cutting, removing, and replacing the asphalt for utility installations, excavation, and/or liming operations shall be considered subsidiary to the initial placement of asphalt and will not be paid for each re-installation. Asphalt shall be replaced within seven (7) days of removal for these activities.

The Contractor will leave with the engineer the phone numbers of responsible persons available twenty-four (24) hours a day to handle emergencies concerning egress and ingress. If a vehicle becomes stranded due to an inaccessible condition, any legitimate claims arising from such conditions shall be the sole responsibility of the Contractor. If such claims are not settled prior to the monthly pay estimate, they shall be deducted from that estimate.

11A-15 CRUSHED ROCK BAD WEATHER PROTECTION:

During periods of bad weather, the Contractor shall put in place, on excavated streets, an amount of Type A, Grade 1, flex base sufficient to provide temporary access to private non-commercial property. Crushed concrete flexible base meeting TxDOT Item 247, Grade 1 is also acceptable to provide temporary access to private property. All flex base will be removed and stockpiled for future use at other locations as necessary. Any base removed and hauled off the project site without approval from the engineer will be replaced by an equal quantity at the Contractor's expense. Special care will be taken by the Contractor during placement and removal of the flex base, not to unnecessarily combine the flex base with native material on the project. If special care is not taken by the Contractor, an equal quantity of flex base will be replaced at the Contractor's expense. This specification is not considered a separate proposal item. It is considered subsidiary to other items in the proposal. Ingress and egress onto private and public property shall be maintained at all times when contractor is not working in the area.

11A-16 USE OF PRIVATE PROPERTY:

The Contractor shall not at any time use private property to park or turn around construction vehicles or store equipment and/or materials without the written permission of the property owner involved. ***The Contractor shall not at any time use private water meters set for the property owners use without written permission of the property owner.*** Contractor is responsible for any and all damages to private property used for construction purposes.

11A-17 PROTECTION OF THE PUBLIC:

(COG 107.18) The Contractor shall at all times conduct the work in such manner as to ensure the least possible obstruction to public traffic and protect the safety of the public. Public safety and convenience and provisions therefore made necessary by the work, shall be the direct responsibility of the Contractor and shall be performed at his entire expense.

Materials placed on the site, or materials excavated and the construction materials or equipment used shall be located so as to cause as little obstruction to the public as possible.

the City reserves the right to remedy any neglect on the part of the Contractor in regard to public convenience and safety which may come to its attention. The cost of such work done or material furnished by the City shall be deducted from monies due or to become due to the Contractor.

11A-18 PROTECTION OF ADJACENT PROPERTY:

The Contractor shall be responsible for the protection of all fences, trees, curb and gutter, and other improvements on the property adjoining the construction sites from damage by the Contractor's equipment and personnel. The Contractor shall be responsible for notifying the property owners in advance of any trimming to be done on trees. The Contractor will notify the City of any trees, shrubs, or bushes that must be removed by the construction. No trees will be removed by the Contractor until permission is granted by the engineer or his designated representative. The Contractor will not be allowed to place excess material, forms, equipment, or any other material outside the street right-of-way without written permission of the property owner and approval of the Engineer. No dumping will be allowed in floodplains or below the 100-year flood elevation of drainage ways.

11A-19 TESTING:

The Inspector, deemed necessary, shall have the authority to test materials, equipment and in-place construction to verify compliance with project specifications. The expense of initial testing and any re-tests shall be paid for by the Contractor as follows:

1. *Sanitary Sewer Lines*
 - Trench backfill density
 - Pressure Testing of the Line
 - Manhole Vacuum Test

2. *Water Lines*
 - Trench Backfill Density
 - Pressure Testing of the Line
 - Line Sterilization

3. *Storm Drain*
 - Trench Backfill density

4. *Paving*
 - Lime or cement stabilized subgrade gradation and density
 - Mix design/plant control
 - Thickness test/coring
 - and additional tests to isolate deficient areas.

5. *Structures*
 - Mix design/plant control
 - Strength test/cylinders

The Contractor shall provide such facilities as the engineer may require for collecting and forwarding samples and shall not, without specific written permission of the engineer, use the materials represented by the samples until tests have been made and materials approved for use. The Contractor will furnish adequate samples without charge to the City.

In case of concrete, the aggregates, design minimum and the mixing and transporting equipment shall be approved by the engineer before any concrete is placed, and the Contractor shall be responsible for replacing any concrete that does not meet the requirements of the contract documents.

11A-20 DEFECTIVE MATERIALS, EQUIPMENT OR, IN-PLACE CONSTRUCTION:

- A. Materials and equipment not conforming to the requirements of these specifications will be rejected and shall be removed immediately from the site of the work, unless permitted to remain by the engineer. Rejected materials, the defects of which have been subsequently corrected, shall have the status of new material.

B. In-Place construction not conforming to the requirements of these specifications will be removed and replaced at the Contractor's expense or reworked at the Contractor's expense as deemed appropriate by the engineer. Tests made on in-place construction which has been replaced or reworked due to failure to meet project specifications will be authorized by the engineer and the cost of such tests will be the expense of the Contractor.

11A-21 MATERIALS AND WORKMANSHIP: WARRANTIES AND GUARANTEES:

Under the terms of the warranties which arise from these contract documents and/or by the terms of any applicable special warranties required by the contract documents, if any of the work in accordance with this contract is found to not be in accordance with the requirements of the contract documents, the Contractor shall correct such work promptly after receipt of written notice from the City. This obligation shall survive acceptance of the work under the contract and termination of the contract. In order to facilitate a prompt response, Contractor agrees to provide for warranty service to the extent practical, from local businesses, including goods and services, when such goods and services are comparable in availability, quality and price. If Contractor fails within a reasonable time after written notice to correct defective work or to remove and replace rejected work, or if Contractor fails to perform the work in accordance with the contract documents, or if Contractor fails to comply with any provision in the contract document, either the City or its designee may, after seven (7) days written notice to Contractor, correct and remedy any such deficiency at the expense of the Contractor.

11A-22 EXISTING UTILITIES:

The Contractor will make every effort to protect existing utilities and other lines or structures. The Contractor shall not adjust, remove, or operate existing utilities unless specifically requested to do so in these specifications or authorized to do so by the engineer or his representative. Any utility damaged by the Contractor during the construction shall be suitably replaced **at the Contractor's expense.**

The Contractor shall contact the proper utility representative as follows for questions or coordination of construction related to existing utilities:

Utility	Representative	Phone Number	Email
ENLINK MIDSTREAM 480 South Courtney Road Calumet, OK 73104	Colin Bramm Senior Landman - OK&NTX	(405) 422-8919 O	Colin.Brammell@enlink.com
		(337) 322-0672 C	-
WILLIAMS PIPELINE	Will Lee	(682) 730-4880 O	willie.lee@williams.com

5601 East 1st Street Fort Worth, Texas 76103	Land Rep Sr.	(817) 648-9920	C	
DCP MIDSTREAM / SINCLAIR 3201 Quail Springs Parkway, Suite 100 Oklahoma City, OK 73134	Mike Patton Manager, Land & Right of Way - Midcon	(405) 605-3855 (281) 620-9955	O C	mpatton@dcpmidstram.com
ENERVEST OPERATING 449 S. I-35W Alvarado, Texas 76009	Joe Reitz Maintenance Foreman	(817) 212-3133 (817) 564-2256	O C	jreitz@enervest.net
UNITED COOPERATIVE - FIBER 2601 S. Burleson Blvd Burleson, Texas 76028	Patrick Fuller Outside Plant Coordinator	(817) 556-4081 (682) 459-7833	O C	patrick@ucs.net
UNITED COOPERATIVE - ELECTRIC 2601 S. Burleson Blvd Burleson, Texas 76028	Wes Burton Sr. Field Engineer	(817) 447-9292 (817) 782-8316	O C	wes@ucs.net
AT&T	Daniel Dunn Sr. Specialists-OSP Design Engineer	(817) 994-3700	C	dd5406@att.com
JCSUD (Water) 740 FM 3048 Joshua, Texas 76058	Tyler Lyles Water Operations Manager	(817) 760-5228 (817) 487-0516	O C	tlyles@jcsud.com
ATMOS	Talon Tucker Pipeline Engineer			Talon.tucker@atmosenergy.com
CHARTER	Chad Whitten			chad.whidden@charter.com
PATHWAY COM-TEL	Mark Elrod	(81) 748-4222		mark@usapathway.com
RA DEVELOPMENT, LTD 240 E Renfro St. Burleson, Texas 76028	Justin Bond	(817) 880-1220	C	justin@radev.biz
CITY OF BURLESON 141 W Renfro St. Burleson, Texas 76028	Michelle McCullough Asst Dir of PW & Engineering/City Engineer	(817) 426-9616 (817) 366-2612	O C	mmcullough@burlesontx.com
CITY OF BURLESON 141 W Renfro St. Burleson, Texas 76028	Errick Thompson Director of Public Works & Engineering	(817) 426-9610	O	ethompson@burlesontx.com

11A-23 PROTECTION & CLEANING OF EXISTING SEWERS

If the contractor, through any carelessness or negligence, obstructs the flow through any existing sewer within the limits of the project, the Public Works Department of the City of Burleson will provide the necessary equipment and labor to clean the obstructions(s) at a rate of Two Hundred Dollars (\$200.00) per hour with a two (2) hour minimum per location.

11A-24 LOCATION & PROTECTION OF EXISTING STRUCTURES & UTILITIES:

See 11B-12

11A-25 RIGHT-OF-WAY PREPARATION (SITE CLEARING):

Right-of-way preparation shall be in accordance with NCTCOG Specification Item 203.3, General Site Preparation. "Preparing Right-of-Way" shall be measured on a lump-sum basis unless indicated otherwise. The lump sum proposed for this item shall not exceed 10 percent of the total amount proposed for the entire project. A prorated portion of the lump sum item shall be paid monthly until such work is completed. No dumping or disposal of excess material will be allowed in floodplains or below the 100-year flood elevation of drainage ways. The Contractor should take special precautions to avoid damaging any trees outside the construction limits and any other trees which the engineer may designate to remain.

11A-26 ROADWAY EXCAVATION:

All roadway excavation on this project shall be unclassified and shall be performed in full accordance with the NCTCOG Specifications, Division 200, 203.4, "Unclassified Street Excavation."

Payment for excavation is based on plan quantity. Contractor shall verify excavation/fill quantities and shall notify the City in writing of concurrence or disagreement with plan quantities prior to start of construction. Any discrepancies in quantities shall be resolved prior to beginning excavation. No adjustments to plan quantities shall be allowed once excavation/fill activities have begun.

It shall be the responsibility of the Contractor to locate a suitable disposal site outside the right-of-way limits to dispose of both excess and unsuitable material from roadway excavation not needed in roadway fill and embankment. No

separate payment shall be made for disposal of excess or unsuitable material. No dumping or disposal of excess material will be allowed in floodplains or below the 100-year flood elevation of drainage ways. Disposal shall be performed in accordance with appropriate laws and ordinances.

11A-27 UNCLASSIFIED STRUCTURAL EXCAVATION:

The excavation for the construction of the inlets, box culverts, and junction boxes is not classified. Payment for the excavation shall be subsidiary to the unit price proposed for each structure in the proposal.

11A-28 SITE GRADING:

All vegetation shall be removed from areas where fill is to be placed. Topsoil shall be grubbed, removed, and stockpiled. After the fill has been placed and compacted, the topsoil shall be spread to a thickness of six inches (6") in all proposed areas that require it. The topsoil shall be free from grass, roots, sticks, stones, or other foreign materials. After placement is complete, the surface of the topsoil shall be finished to a reasonably smooth surface so grass may be planted and maintained.

Site grading will be based on the elevations and grades shown on the Grading and Paving Drawings. Filling, construction of embankments, removal, stockpiling, and spreading topsoil and offsite disposal of excess material will be considered incidental and subsidiary to excavation and shall not be a separate pay item.

No extra payment shall be made for rock excavation or crushing rock material for placement in fill areas. This work shall be considered incidental to site grading and shall not be a separate pay item.

11A-29 COMPACTED ROADWAY FILL & EMBANKMENT:

All compacted roadway fill and embankments constructed on this project shall be in accordance with the NCTCOG Specifications, Division 200, 203.7, "Embankment", except as amended herein or as shown on the plans.

All fill material shall be compacted in lifts of loose depth not exceeding eight (8") inches and compacted to at least 95% of Standard Proctor Density at optimum moisture content, \pm two percentage points, as determined by ASTM D 698. Each lift shall be tested before a subsequent lift is allowed to be placed. It shall be the responsibility of the Contractor to locate a suitable disposal site outside the right-of-way limits and to dispose of any excess material not needed for constructing embankments to the established grade, shape of the typical sections shown on the plans, and detailed sections or slopes. No dumping or disposal of excess material will be allowed in floodplains or below the 100-year

flood elevation of drainage ways. Disposal shall be performed in accordance with appropriate laws and ordinances.

No recycled soil will be allowed for use on this project without prior consent from the engineer.

The placement and compaction of fill material in roadway and embankment areas on this project shall be measured and paid for separately from the "Roadway Excavation". However, no separate payment will be made for the disposal of excess materials as mentioned above. Measurement for compacted roadway fill and embankment shall be for in-place embankment after compaction to the density specified on the plans. Measurement shall be in cubic yards as determined on the basis of the natural ground cross-section and the finished lines and grades as shown in the plans and computed by the method of average end areas from the project cross-section.

The price proposed per cubic yard for "Compacted Roadway Fill and Embankment" shall be full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the embankment, including cost of water, sprinkling, wetting, and rolling in accordance with the plans and specifications.

11A-30 BORROW:

It is the Contractor's responsibility to locate a suitable source of select borrow material for completing any required fills on the project. Prior to using any offsite borrow material, the material must be approved by the City. The following will be required prior to approval:

- A. The Contractor must obtain a written, notarized certification from the landowner of each proposed borrow source stating that to the best of the landowner's knowledge and belief there has never been contamination of the borrow source site with hazardous or toxic materials.
- B. The Contractor shall provide adequate testing to determine that the borrow source material is not contaminated with hazardous or toxic materials. The geotechnical engineer performing the testing for the Contractor shall notify the City in writing of his/her approval of the material. No recycled soil will be allowed for use on this project without prior consent from the engineer.
- C. Based on geotechnical testing performed on existing soil from the project site, a lime/cement application rate has been determined for subgrade stabilization as set forth in these Special Provisions. The quantities included in the PROPOSAL are based on the determined application rate. Before using any offsite borrow material for subgrade purposes, the Contractor shall provide necessary testing to determine the lime/cement

application rate for the proposed borrow material. The results of these tests shall be submitted to in writing by the geotechnical engineer performing the testing for the Contractor. If the lime/cement application rate required for the offsite borrow material is greater than the rate specified in these Special Provisions, the Contractor shall be responsible for the cost of the additional lime/cement required or locate an alternative borrow source. If the application rate required for the borrow material is less than the rate specified in these Special Provisions, the Contractor will be paid for the actual quantity of lime/cement used on the project.

- D. The Contractor shall provide testing (ASTM D 698) to determine the optimum density and moisture content for the borrow material if used as treated subgrade.
- E. The borrow material shall be tested for the presence of soluble sulfates. Any soil with a content of soluble sulfate in excess of 2000 ppm will not be approved.
- F. No organic material, trash, debris, trees, clippings or other deleterious material will be allowed in offsite borrow material.

11A-31 FILLING:

Fills shall be constructed at the locations and to the lines and grades indicated on the drawings. When rock excavation is used, it shall be broken or crushed so that the maximum dimension is four (4") inches. No rock will be allowed in the upper twelve (12") inches of the fill.

Equipment for compacting fills shall be sheepsfoot rollers, rubber-tired rollers, and other approved equipment capable of obtaining required density.

The combined excavation and fill placing operation shall be blended sufficiently to secure the best practicable degree of compaction. Fill shall be compacted to at least ninety-five percent (95%) Standard Proctor Density at optimum moisture content, \pm two percentage points, as determined by ASTM D 698. The suitability of the materials shall be subject to approval of the City's preferred laboratory. Dump, then spread and mix successive loads of material to give a horizontal layer of not more than eight (8") inches in depth, loose measurement. After each layer of fill has been spread to the proper depth, it shall be thoroughly manipulated with a disc plow or other suitable and approved equipment until the material is uniformly mixed, pulverized, and brought to a uniform approved moisture content.

No fill material shall be rolled until the layer of material has a uniform moisture content which will permit the proper compaction under that degree of moisture content which is the optimum for obtaining the required compaction.

Dry any material having a moisture content too high for proper compaction by aeration until the moisture content is lowered to a point where satisfactory compaction may be obtained. If the moisture of the fill material is too low, add water to the material and thoroughly mix by blading and discing to produce a uniform and satisfactory moisture content.

If, in the opinion of the City's preferred laboratory or inspector, the rolled surface of any layer or section of the fill is too smooth to bond properly with the succeeding layer or adjacent section, roughen by discing or scarifying to the satisfaction of the City's preferred laboratory before placing succeeding layer or adjacent sections.

No recycled soil will be allowed for use on this project without prior consent from the engineer.

11A-32 DRAINAGE:

Contractor shall maintain adequate drainage at all times during construction. Changing of natural runoff flow locations or concentrating flows to a point of potential harm to the adjacent property shall not be allowed.

11A-33 REMOVAL ITEMS:

The removal of existing concrete curb and gutters, concrete valley gutters, and concrete drive approaches shall be at the locations indicated by the engineer and shall be paid for under the right-of-way preparation pay item (See Special Provision 11-25) unless a separate proposal item is included in the PROPOSAL. All concrete curb and gutter and drive approaches removed will be broken out at existing construction expansion joints if possible. Where existing concrete is removed at a location other than a joint, the slab will be sawed in a neat straight line the full depth of the slab. The cost for sawing and breaking shall be considered subsidiary to the unit price proposed for concrete removal. The Contractor shall make every effort to protect all concrete surfaces that will remain. Any remaining surfaces damaged during removal operations by the Contractor will be replaced at the Contractor's own expense.

The responsibility of locating suitable disposal sites for removal items on this project will be solely a function of the Contractor. the City will in no way be responsible for the actions of the Contractor if he disposes of excess material in locations that are not approved. No dumping or disposal of excess material will be allowed in floodplains or below the 100-year flood elevation of drainage ways.

11A-34 HYDRATED LIME AND PORTLAND CEMENT FOR SUBGRADE STABILIZATION:

Hydrated lime to be used on this job shall conform to NCTCOG Specification Item 301.2 with the exception of 301.2.1.2 Quicklime. No Quicklime will be allowed on this project. Portland cement to be used for stabilization shall conform to NCTCOG Specification Item 301.3.

11A-34A LIME STABILIZATION OF SUBGRADE:

N/A

11A-34B PORTLAND CEMENT STABILIZATION OF SUBGRADE

- A. Prior to beginning any Cement modification, the subgrade shall be brought to the required line, grade, cross-section, and proof rolled in accordance with specification requirements. Proof rolling shall be in accordance with Texas Department of Transportation *Standard Specification for Construction of Highways, Streets and Bridges, 2014 (or most current edition)*, Item 275, or the most recent edition. The cost of proof rolling shall be considered subsidiary to this item.
- H. After the subgrade has been shaped, the roadway will be scarified to full depth and width of modification. Full depth will be six (6") inches below finished grade and full width will be that distance from the fronts of gutter pans on either side of the roadway. (On roadways where full length curb and gutter are removed to be replaced during reconstruction, one (1') foot behind the back of proposed curb on each side of the roadway.)
- C. Portland cement will be applied to that area defined in Part B of this section so that the initial mixing operation can be completed during the same working day. Portland cement stabilization shall be applied by either the slurry or dry method. If the method used is "DRY", it shall be the Contractors responsibility to maintain dust control during the application of Portland cement. If during application of Portland cement stabilization the Contractor has failed to maintain the dust to within limits specified by the inspector, the contractor will apply future Portland cement stabilization by "slurry method".
 - 1. It shall be the responsibility of the CONTRACTOR to regulate the sequence of work, to process a sufficient quantity of material so as to provide full depth as shown on plans, to use the proper amount of Portland cement, maintain the work and to rework the courses as necessary to meet the foregoing requirements. Cement stabilized base shall not be mixed or placed when the air temperature is below 40°F (5°C) and falling, but may be mixed or placed with the air temperature is above 35°F (2°C) and rising, the temperature being taken in the shade and away from artificial heat, and with the further

provisions that cement stabilized base shall be mixed or placed only when weather conditions, in the opinion of RA Development, are suitable.

2. The cement-modified soil layer may be constructed with any machine or combination of machines and auxiliary equipment that shall produce the results meeting the requirements for soil pulverization, cement application, water application, mixing, incorporation of materials, compaction, finishing and curing as specified herein. The CONTRACTOR shall at all times provide sufficient equipment to enable continuous performance of the work and its completion in the required number of working days.
3. Soft or yielding subgrade shall be corrected and made stable before construction proceeds. The soil and/or recycled asphalt pavement shall be so pulverized that at the completion of moist-mixing, it meets the gradation in the table below.

Table 1. (a) Cement Treated Materials-In-Place

Sieve Size	Minimum Passing by Dry
Weight ^{1, 2}	
1-in. (25mm)	100%
No. 4 (4.75mm)	80%

1. Exclusive of gravel or stone retained on these sieves.
2. Recycled asphalt pavement shall be pulverized so that 100-percent shall pass a 2-in. (50mm) sieve.

D. *Application of Cement to Materials-In-Place:* Portland cement shall be spread by an approved dry or slurry method uniformly on the soil at the rate specified on the plans or as determined by preliminary laboratory tests. If a bulk cement spreader is used, it shall be positioned by string lines or other approved method during spreading to insure a uniform distribution of cement. Cement shall be applied only to such an area that all the operations can be continuous and completed in daylight within 6-hours of such application. The percentage of moisture in the soil at the time of cement application shall not exceed the quantity that shall permit uniform and intimate mixture of soil and cement during dry-mixing operations, and it shall not exceed the specified optimum moisture content for the soil and cement mixture. In the event of high soil-moisture contents, cement may be applied at one-half the specified rate when approved by the Engineer. The remainder of the application rate of cement shall be applied the following day(s), not to exceed 48-hours. The usual construction sequence shall then be resumed. No equipment, except that used in the spreading and mixing, shall be allowed to pass over the freshly spread cement until it is mixed with the soil.

1. Mixing shall continue until a homogeneous, friable mixture of the material and cement is obtained, free from all clods or lumps. The mixture shall be kept within moisture tolerances throughout the operation.
2. Compaction shall begin after mixing and after gradation and moisture requirements have been met. The material shall be compacted to at least 95-percent of the maximum density as determined by ASTM 698 Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)). At the start of compaction, the percentage of moisture in the mixture and in un-pulverized soil lumps, based on oven-dry weights, shall be within 2-percentagepoints of the specified optimum moisture content and shall be less than the quantity which shall cause the soil cement mixture to become unstable during compaction and finishing. When the un-compacted soil-cement mixture is wetted by rain so that the average moisture content exceeds the tolerance given at the time of final compaction, the entire section shall be reconstructed in accordance with this specification at the sole expense of the CONTRACTOR. The specified optimum moisture content and density shall be determined in the field on the representative samples of soil-cement mixture obtained from the area being processed. Final moisture content shall be within minus 2 (-2) to plus 4 (+4) of optimum. Prior to the beginning of compaction, the mixture shall be in a loose condition for its full depth. Compaction shall begin at the bottom and shall continue until the entire depth of the mixture is uniformly compacted. The loose mixture shall then be uniformly compacted to the specified density within 2-hours. After the soil and cement mixture, except the top mulch, is compacted, water shall be uniformly applied as needed and thoroughly mixed in. The surface shall then be reshaped to the required lines, grades and cross section and then lightly scarified to loosen any imprint left by the compacting or shaping equipment. The resulting surface shall be thoroughly rolled with a pneumatic tire roller and "clipped," "skinned," and "tight-bladed" by a power grader to a depth of approximately ¼-in. (6mm), moving all loosened soil and cement from the section. The surface shall then be thoroughly compacted with the pneumatic roller, adding small increments of moisture as needed during rolling. When directed by the City or it's representative, surface finishing methods may be varied from this procedure, provided a dense, uniform surface, free of surface material, is maintained at its specified optimum during all finishing operations. Surface compaction and finishing shall proceed in such a manner as to produce, in not more than 2-hours, a smooth, closely knit surface, free of cracks, ridges or loose material, conforming to the drawn grade and line shown on the plans. the City or it's representative shall conduct In-place density tests shall as outlined in ASTM D2922 Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth). In-place density tests shall be performed at the rate of one-per-300-linear-ft. (one/91-m) of paving for two (2) lanes. The suitability of the modification shall be confirmed by Atterberg Limit testing at the rate of one test per 2,500 cubic-yards (one/1,910-m³) of processed material. In addition to the

requirements specified for density, the full depth of the material shown on the plans shall be compacted to the extent necessary to remain firm and stable under construction equipment. After each section is completed, tests as necessary will be made by the City. If the material fails to meet the density requirements, it shall be reworked as necessary to meet these requirements. Throughout this entire operation the shape of the course shall be maintained by blading, and the surface upon completion shall be smooth and in conformity with the typical section shown on the plans and to the established lines and grades. Should the material, due to any reason or cause, lose the stability, density and finish before the next course is placed or the work is accepted, it shall be re-compacted and refinished at the sole expense of the CONTRACTOR.

E. *Application of Cement to Plant Mixed Cement:* Mixing and Processing of Portland cement for stabilization by plant mixing shall follow the guidelines as provided in section 11A-34B, subsections A-D.

1. Free access to the plant shall be provided to the City for construction quality control. The mixture shall be hauled to the paving area in trucks having beds cleaned of deleterious material.
2. The mixture shall be placed on a moistened subgrade in a uniform layer by any approved method of spreading that will deposit the required quantity per lineal foot, without segregation, to produce a uniformly compacted base conforming to the grade and cross-section. Not more than 30-minutes shall elapse between placement of cement treated base in adjacent lanes at any location except at longitudinal and transverse construction joints. Compaction shall start as soon as possible after spreading. Elapsed time between the addition of water to the cement treated base mixture and the start of compaction shall not exceed 60-minutes under normal conditions. The Engineer may alter this time if environmental conditions, such as temperature, humidity or wind conditions would justify such a change. Laboratory tests may be required to verify changes in compaction time limits.

F. *Opening to Traffic.* The CONTRACTOR shall not be permitted to drive heavy equipment over completed portions. Pneumatic-tired equipment required for hauling cement and water may be permitted to drive over after the surface has hardened sufficiently to prevent the equipment from marring the surface, provided that protection and cover are not impaired. The soil-cement course may be opened to local traffic as soon as the curing seal has been applied and dusted or sanded as necessary to prevent it from being picked up by traffic. Completed portions may be opened to all traffic after 7-days.

G. *Maintenance.* The CONTRACTOR shall be required within the limits of its contract to maintain the soil-cement treatment in good condition from the time it first starts work until all work shall have been completed.

Maintenance shall include immediate repairs of any defect that may occur after the cement is applied. Such maintenance work shall be done by the CONTRACTOR at the CONTRACTOR'S expense, and repeated as often as necessary to keep the area continuously intact. Repairs are to be made in such a manner as to insure restoration of a uniform surface for the full depth of treatment. Any low area of treated subgrade shall be remedied by scarifying the surface to a depth of at least 2-in. (5cm), filling the area with treated material and compacting. Any low area of sub-base or base shall be remedied by replacing the material for the full depth of sub-base or base treatment rather than adding a thin layer of stabilized material to the completed work.

H. No stabilizer, either concentrated or diluted, shall be allowed to enter a storm drain system or a natural waterway. The stabilizer shall be applied in a manner that prevents puddling and/or runoff. Runoff will be considered a spill. All spills shall be immediately reported to the City of Burleson's Public Works & Engineering Department at (817) 426-9848. during City Hall working hours and to the Burleson Fire Department Dispatcher (817) 426-9910 during evenings and weekends. The spill shall be contained, neutralized, cleaned up, and removed from the site. Washing down the spill is not allowed. This is subsidiary to the Portland cement stabilization item.

11A-35 FLEXIBLE BASE:

All flexible base shall be in accordance with Item 247 of the 2014, or most current edition of the Texas Department of Transportation *Standard Specifications for the Construction of Highways, Streets, and Bridges*.

Type "A" Grade 1 Flex Base shall be used as subgrade material under the proposed HMAC pavement. An acceptable alternative to Type "A" Grade 1 Flex Base is crushed concrete. Crushed concrete shall be categorized as Type "D" Grade 1 Flex Base. Flex Base shall be thoroughly compacted and placed to a depth specified on the plans.

Type "A"

Crushed or Broken Aggregate	Retained on Sq. Sieve	%
	1 3/4 in.	0
	7/8 in.	10 - 35
	3/8 in.	30 - 50
	No. 4	45 - 65
	No. 40	70 - 85
	Max LL	35
	Max PI	10

Wet Ball Mill, Max Amt.	40
Max Increase in passing No. 40	20

Payment for Flexible Base shall include all materials, labor, equipment, hauling and placement. Measurement shall be compacted in-place plan quantities by the square yard to the thickness specified on the plans.

Daily tickets will be submitted by the Contractor and signed by the inspector or his representative no later than one week after delivery of the flexible base.

11A-36 CONCRETE CURB AND GUTTER:

N/A

11A-37 EPOXY BONDING AGENT:

Epoxy used for tie bars drilled into existing concrete shall be submitted to the project inspector for approval.

11A-38 HOT MIX ASPHALTIC CONCRETE:

A. PAVING MIXTURES:

- Mixture Design:** The Job Mix Formula shall be designed by the Contractor in accordance with the requirements of this Special Provision, TxDOT Bulletin C-14 and TxDOT Test Method Tex-204-F and tested in accordance with TxDOT Test Methods Tex-201-F and Tex-202-F, with the exception that the laboratory density will be determined as a percentage of the mixture maximum theoretical density. The maximum theoretical specific gravity shall be determined in accordance with TxDOT Test Method Tex-227-F on trial samples of the mixture near optimum asphalt content and conform with the requirements herein. The Contractor shall submit the Job or Plant Mix Formula for review on forms acceptable to the City or it's representative for each source of supply and type of mixtures specified. Total sand content shall not exceed 18% for Type "D" mix. The bulk specific gravity will be determined for each aggregate to be used in the design mixture. The mixture shall be designed to produce a mixture within the density and stability requirements shown below. In addition, washed gradations of the aggregate in the job mix formula shall be plotted on the 0.45 power chart for comparison with the maximum density line.
- Stability and Density:** The mixture shall be designed to produce an acceptable mixture within tolerance, at or near optimum density. The mixture molded in the laboratory in accordance with TxDOT Test Method Tex-206-F and the bulk specific gravity of the laboratory compacted mixture

determined in accordance with TxDOT Test Method Tex-207-F should have the following percent of maximum theoretical density as measured by TxDOT Test Method Tex-227-F and stability conforming to TxDOT Test Method Tex-208-F:

<u>Optimum Density Range</u>	<u>Stability, Percent</u>
95 to 97 Percent	Not Less than 42

3. **Types:** The paving mixtures shall consist of a uniform mixture of coarse aggregate, fine aggregate and asphaltic material. Mineral filler may also be required.

When properly proportioned, the mineral aggregate shall produce a gradation which will conform to the limitations for master grading given for the type specified unless otherwise shown on plans. The gradation will be determined in accordance with TxDOT Test Method Tex-200-F (Dry Sieve Analysis) and shall be based on aggregate only. The amount of asphaltic material shall conform to the limitations shown for the paving type specified.

Type "B" (Fine Grade Binder of Leveling-up Course)	Percent Aggregate by Weight or Volume
Passing 1" sieve	100
Passing 7/8" sieve	95 to 100
Passing 7/8" sieve, retained on 3/8" sieve	21 to 53
Passing 3/8" sieve, retained on No. 4 sieve	11 to 42
Passing No. 4 sieve, retained on No. 10 sieve	5 to 26
Total retained on No. 10 sieve	50 to 74
Passing No. 10 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 21
Passing No. 80 sieve, retained on No. 200 sieve ...	3 to 21
Passing No. 200 sieve	1 to 8

The asphaltic material shall form from 3.5 to 7 percent of the mixture by weight, unless specified otherwise on the plans.

Type "D" (Fine Grade Surface Course):	Percent Aggregate by Weight or Volume
Passing 1/2" sieve	100
Passing 3/8" sieve	85 to 100
Passing 3/8" sieve, retained on No. 4 sieve	21 to 53
Passing No. 4 sieve, retained on No. 10	11 to 32
Total retained on No. 10 sieve	54 to 74
Passing No. 10 sieve, retained on No. 40 sieve	6 to 32
Passing No. 40 sieve, retained on No. 80 sieve	4 to 27
Passing No. 80 sieve, retained on No. 200 sieve ...	3 to 27

Passing No. 200 sieve 1 to 8

The asphaltic material shall form from 4 to 8 percent of the mixture by weight, unless specified otherwise on the plans.

- 4. **Sampling and Testing for Field Control:** Extraction tests for bitumen content and aggregate gradation shall be made for each 500 tons produced or fraction thereof. Extraction tests shall conform to TxDOT Test Method Tex-210-F. Tests for stability of the asphalt mixture shall conform to TxDOT Test Method Tex-208-F. The mixture shall not vary from the grading proportions of the aggregate and the asphalt content by more than the respective tolerances and shall be within the limits specified for master grading.
- 5. **Tolerances in Relation to Approved Design:** The aggregate portion of the paving mixture produced shall not vary from the design gradation by more than the tolerances which follow. The material passing the No. 200 sieve is further restricted to conform to the limitations for the master grading for the type specified. The asphaltic material portion of the paving mixture shall not vary from the design amount by more than the allowed tolerance and is also restricted to conform to the master limits. The method of test for determining the aggregate gradation and asphalt content of the mixture shall be TXDOT Test Method Tex-210-F or other methods of proven accuracy.

Type "B" (Fine Grade Binder of Leveling-up):	Percent Aggregate by Weight or Volume
Passing 2" sieve	±5%
Passing 1¾" sieve	±5%
Passing 1¾" sieve, retained on 7/8" sieve	±5%
Passing 7/8" sieve, retained on 3/8" sieve	±5%
Passing 3/8" sieve, retained on No. 4 sieve	±5%
Passing No. 4 sieve, retained on No. 10 sieve	±5%
Total retained on No. 10 sieve	±5%
Passing No. 10 sieve, retained on No. 40 sieve	±3%
Passing No. 40 sieve, retained on No. 80 sieve	±3%
Passing No. 80 sieve, retained on No. 200 sieve	±3%
Passing No. 200 sieve	±3%
Asphaltic material	±0.5%/or 1.2% by vol.

Type "D" (Fine Graded Surface Course):	Percent Aggregate by Weight or Volume
Passing ½" sieve	±5%
Passing 3/8" sieve	±5%
Passing 3/8" sieve, retained on No. 4 sieve	±5%
Passing No. 4 sieve, retained on No. 10	±5%

Total retained on No. 10 sieve	±5%
Passing No. 10 sieve, retained on No. 40 sieve	±3%
Passing No. 40 sieve, retained on No. 80 sieve	±3%
Passing No. 80 sieve, retained on No. 200 sieve	±3%
Passing No. 200 sieve	±3%
Asphaltic Material	±0.5%/or 1.2% by vol.

B. IN-PLACE COMPACTION CONTROL: In-place compaction control is required for all mixtures.

1. Asphaltic concrete should be placed and compacted to contain not more than 8 percent nor less than 3 percent air voids unless otherwise indicated. The percent air voids will be calculated using the maximum theoretical specific gravity of the mixture determined according to TXDOT Test Method Tex-227-F. Roadway specimen, which shall either be cores or sections of asphalt pavement, will be tested according to TXDOT Test Method Tex-207-F. The same specimen shall be used for determining both the maximum theoretical density and field density. Specimens used for field density determinations shall be carefully crumbled, using heat, if necessary, and the maximum theoretical density determined as specified. If heating is necessary, the specimen shall be heated to the lowest temperature required for proper preparation of the sample. The use of nuclear field density determinations shall not be accepted as the basis for acceptance with respect to density. However, an approved nuclear gauge may be used to establish a rolling pattern.
2. The Contractor shall be responsible for assuring that the compaction of the asphaltic concrete in place will attain between 3 and 8 percent air voids. The Contractor's responsibility for the required compaction includes the selection of rolling equipment and the selection of rolling patterns to achieve the required compaction within the guidelines provided herein. The above selections of equipment and procedures must provide the required qualities of profile, smooth riding surface, and consistent workmanship in appearance.

Initial testing and re-testing will be the responsibility of the Contractor. Additional information is provided in Section 11A-19 of these Special Provisions.

11A-39 TACK COAT:

The unit bid prices for coarse graded base course and fine graded surface course shall include the application of a tack coat to each layer of asphaltic concrete before the next layer is applied and a tack coat shall also be applied to any exposed concrete edges that shall abut any hot mix asphaltic concrete. The

tack coat shall be liquid asphalt complying with the specifications of the Asphalt Institute for SS-1, MS-2 Emulsified Asphalt. The tack coat shall be applied to each layer at a rate not to exceed 0.05 gallons per square yard of surface.

11-40 ASPHALTIC PRIME COAT:

A prime coat shall be used on the stabilized base material immediately after the base material has been compacted to specified density and cut to grade. The prime coat shall be liquid asphalt complying with the specification of the Asphalt Institute for type MS-2 Emulsified Asphalt. The prime coat shall be applied to the surface of the base at a rate of 0.20 to 0.40 gallons per square yard of surface and allowed to penetrate as far as possible. The cost of furnishing and installing the asphalt prime coat shall be considered subsidiary to the unit prices bid for hot mix asphaltic concrete.

11A-41 REINFORCING STEEL:

All reinforcing steel used on this project shall comply in all respects to Item 440, "Reinforcing Steel" of the *Standard Specifications for Construction of Highways, Streets and*, as adopted by the Texas Department of Transportation, 2014 or most current edition. Payment for reinforcing steel shall be considered subsidiary to the various proposal items.

11A-42 TEMPORARY BATCH PLANT:

If the Contractor chooses to construct a temporary batch plant, the following conditions (at a minimum) must be satisfied prior to approval from the City.

1. Batch plant must be permitted by Texas Air Control Board. Evidence must be presented.
2. Batch plant must be permitted by Environmental Protection Agency (EPA). A copy of Notice of Intent (NOI) and Storm Water Pollution Prevention Plan must be on the premises.
3. Location map must be provided indicating routes for raw material delivery.
4. Location map must be provided indicating that the nearest recreational area, school, or residence is located at least 300 feet away.
5. Letter of Permission must be provided by the City of the property (on which the batch plant is to be constructed) requiring that the contractor leaves the site in as good or better condition.
6. The start and stop dates for operation of the plant must be provided.

7. It must be stated that the batch plant will be used to provide concrete for no other project(s) without written approval from the City of Burleson.

No additional pay will be made for the temporary batch plant.

11A-43 TESTING REQUIREMENTS (CONCRETE):

The strength of the concrete shall be determined during the construction by taking a minimum of three (3) test cylinders and/or two test beams during each fifty (50) cubic yards of continuous pouring. These tests shall be conducted by an approved testing laboratory and the initial tests and any re-tests shall be paid for by the Contractor. The cost of additional testing to isolate areas not complying with the specifications shall be paid for by the Contractor.

Beam strength tests permitted by the specifications for early form removal shall be conducted by an approved testing laboratory and the cost shall be borne by the Contractor.

11A-44 CONCRETE VALLEY GUTTERS:

All concrete valley gutters shall have a thickness of six inches (6"). Concrete valley gutters shall be reinforced with #4 bars on twelve inch (12") spacing in both directions. All concrete shall have a minimum cement content of 5 sacks per cubic yard of concrete, 5% entrained air ($\pm 1.5\%$) and a minimum compressive strength at 28 days of 3,000 pounds per square inch. An approved curing compound shall be applied to the surface.

11A-45 CONCRETE DRIVEWAYS:

Driveways shall be composed of concrete having a minimum cement content of 5 sacks per cubic yard of concrete, 5% entrained air ($\pm 1.5\%$) and a minimum compressive strength at 28 days of 3,000 pounds per square inch. The unit price shall also include #3 bars on twelve inch (12") centers, or #4 bars on eighteen (18") centers both ways. An approved curing compound shall be applied to the surface.

the City will replace only those existing driveways specified. Any new drives installed by the Contractor under criteria other than the above will be at his own expense.

All drive connections to State Right-of Way shall use TxDOT details.

11A-46 RECONSTRUCT DRIVES:

Existing drives which will be destroyed by proposed construction and which will be reconstructed are specifically called out on the plans and construction shall conform to this special provision. After construction operations are completed in the street area, these drives shall be reconstructed to original or better condition than existed before construction and to satisfaction of the engineer. Existing surface and base materials and storm drain pipe may be reused if approved by the engineer. Where new materials will be required in order to reconstruct drives to the required condition, the Contractor shall be aware of their need and they shall be incidental to the price requested. All work shall conform to the applicable standard and special project specifications. Payment for reconstructing drives shall be a price per square yard of typical concrete driveway or a price per square yard of exposed aggregate concrete driveway. Such price shall include all materials, labor, and supervision for the completed construction.

11A-47 CONCRETE SIDEWALKS:

- A. **MATERIALS:** Sidewalks shall be constructed of concrete with a minimum cement content of 5 sacks of cement per cubic yard of concrete, 5% entrained air ($\pm 1.5\%$), and a compressive strength of not less than 3,000 pounds per square inch at 28 days. Reinforcing steel shall be #3 bars on 18" centers located two inches (2") below the top surface of the sidewalk. As soon as the concrete has obtained its initial set, a white pigmented approved curing compound shall be applied.
- B. **CONSTRUCTION PROCEDURE:** In general, the grade of the sidewalks shall be established with respect to the curb. Forms shall be set for all sidewalks and shall be true to line and grade. Forms shall be set to provide a cross slope of 1/4 inch per foot (2%) across the sidewalk toward the street. All forms shall remain in place at least twenty-four (24) hours.
- C. The plane of all joints shall make a right angle with the surface of the pavement. No joints shall have an error in alignment of more than one-half (1/2") inch at any point. The edges of the slab at all joints, except where the joints are sawed, shall be rounded with an edger having a radius of one-fourth (1/4") inch, except as otherwise shown on the plans. The edging shall also be done symmetrically on each section with the plane of the joint.
- D. Longitudinal expansion joints, joints used to separate new from old concrete, and all joints around all fire hydrants shall be made of conventional one-half (1/2") inch asphalt expansion joint material extending completely through the concrete unless otherwise specified on the plans.
- E. Transverse expansion joints shall be three-fourths (3/4") inch in width and made of high-grade redwood placed through the concrete at a spacing not to exceed forty (40') feet. No. 4 X 18" steel dowels shall be placed on

eighteen-inch (18") centers through each redwood expansion joint, one end of each dowel being wrapped or otherwise prevented from bonding to the concrete.

- F. Contraction joints shall be made in the sidewalk at regular intervals, such intervals generally being equal to the width of the sidewalk.
- G. The Contractor shall grade or fill, as necessary, along the sidewalk to match the existing ground. Care will be used to ensure that adjacent property outside the right-of-way line is protected.

11A-47A CONCRETE SIDEWALKS WITH RETAINING WALL

- A. When sidewalks are constructed adjacent to retaining walls, the plans shall specify if the sidewalk and retaining wall are to be constructed as separate items or as a sidewalk with wall unit. The sidewalk with wall unit shall be constructed in accordance with the City of Burleson typical details and shall be paid on a linear foot basis for various wall heights up to four (4') foot. When specified to be constructed as separate items, the limits of pay for the sidewalk shall be of the sidewalk up to the face of the retaining wall on a square yard basis. The retaining wall shall be paid under retaining wall on a cubic yard basis.
- B. Generally, location of sidewalk with retaining wall will be the same as a standard sidewalk. If necessary, the sidewalk shall be adjusted in the field, as approved by the Project Engineer, to match existing sidewalks and to avoid trees, fire hydrants, light poles, traffic signs, etc., that otherwise would be in the sidewalk.
- C. It is assumed that areas showing sidewalk with retaining wall will require a retaining wall of only about two foot. Nonetheless, as the details shows, there is a four foot maximum height allowance and the bid price shall reflect the possibility of a four foot (4') wall dependent on field conditions.

11A-48 BARRIER FREE RAMPS:

Sidewalks shall be constructed barrier free and fully accessible. Curb ramps are required at all intersections between sidewalks and streets. At driveways, the curb shall be layed down and the sidewalk section shall be maintained through the driveway. Ramps shall be constructed in accordance with the detail shown on the plans. Ramp slopes shall not exceed one inch (1") rise in twelve inches (12"). The landings shown on the details shall be constructed of concrete and paid for under the unit price bid for sidewalks. At tee intersections, a mid ramp

shall be constructed as shown in the details. The ramps shall be paid for based on the unit price bid for the ramp and shall include curb and street cuts, matting, and other material used to construct the ramps, complete and in place.

11A-49 CONCRETE MEDIANS:

All concrete for concrete medians and median noses shall have a minimum thickness of four inches (4"). Reinforcement shall be #3 bars on 18" centers both ways or as shown on the plans. All Class "C" concrete shall have a minimum cement content of six (6) sacks per cubic yard and a minimum compressive strength at 28 days of 3,600 pounds per square inch. Redwood expansion joints shall be placed at the end of the nose radius and at every 40 feet. Curing and reinforcement shall be considered subsidiary to the various bid items.

11A-50 ADJUSTMENT OR RELOCATION OF WATER SERVICES & METER BOXES:

The Contractor shall be responsible for adjusting (vertical), or relocating (horizontal and vertical), and bringing to grade, water meter boxes, within the limits of this project. This shall include the adjustment or relocation of the service line on the City's side of meter (from main to the meter), the quarter bend, the curb stop or angle valve, depending on service size, and the meter. Adjustment of the customer's service line shall be performed by a licensed plumber and shall be considered subsidiary. All of the work shall be in accordance with the Standard Specifications for Waterworks and Sewerage Improvements (1997). The Contractor shall also endeavor to keep meters accessible during the project construction for reading purposes. In the event the meters are covered during construction, the Contractor shall mark their locations with stakes and shall uncover the meters within 24 hours when notified to do so by the inspector. The Contractor shall also replace cast iron meter boxes, with boxes of the following specifications:

For Meter Boxes for 5/8", 3/4", and 1" services

1. Single Mtr. Box (non-traffic) - Alliance 1200.SBTR
2. Double Mtr. Box (non-traffic) - Alliance 16AMR2.DU.SB
- 3.

For Meter Boxes of 1.5" and 2" services

1. Single Mtr Box (traffic) - Rotec D1730-18-BD5M
2. Double Mtr. Box (traffic) - Rotec DFW38C-14-KSBSM

Water meter boxes broken by the Contractor shall be replaced at the Contractor's own expense. If any portion of the meter box is in a concrete sidewalk, the meter box shall be relocated outside the sidewalk. The box shall be set to the finished grade of the surrounding lot. Water service and meter box *adjustments* (vertical) shall be subsidiary to the various items in the PROPOSAL. Water service and meter box *relocations* (horizontal and vertical) shall be paid for as outlined in the PROPOSAL.

11A-51 VERTICAL ADJUSTMENT OF SANITARY SEWER MANHOLES, SANITARY SEWER CLEANOUTS, AND WATER VALVES:

Prior to the application of the lime slurry, all manholes, cleanouts, and water valves shall be adjusted to approximately one foot (1') below the bottom of the proposed subgrade. Prior to the placement of any pavement, the Contractor shall verify the locations of all valves, manholes, and cleanouts. For existing manholes that are being adjusted to proposed grade, the Contractor shall replace old manhole ring and lid with new manhole ring and lid, as directed by the engineer or his representative. All manholes, water valves, and cleanouts may be blocked out or brought to proper grade before placement of concrete pavement. Where HMAC is used, adjustment to proper grade shall be made after placement of the top layer of coarse grade binder. It shall then be encased in concrete for a minimum of six inches (6") in depth and the concrete shall be a minimum of twelve inches (12") wide at all points around the water valves, cleanouts, or manholes. Valve stacks shall be ductile iron only. In the event the top of the operating nut for any valve is more than six feet (6') deep from the finished ground elevation, valve stem extensions shall be furnished and installed by the Contractor to bring the operating nut to within three feet (3') of the finished ground level. Payment for the valve stem extension shall be subsidiary to other unit prices in the PROPOSAL.

It shall be the sole function of the Contractor to re-establish the location of all valves, manholes, cleanouts, etc. If the Contractor, through carelessness or negligence, damages any valve, manhole, or cleanout, it will be the Contractor's responsibility to replace the same. Should the Contractor fail to re-establish the location and adjust any valve, manhole, or cleanout, he will be required to perform the necessary work to raise the same at no additional charge to the City.

Where manholes, cleanouts, or gate valves are to be raised within the proposed fill slopes or in areas other than a concrete or asphalt surface, the manhole, cleanout or gate valve shall be raised at least six inches (6") higher than the proposed finished grade. An exception to this specification is in areas where the appurtenance is on private property. The engineer or its representative will give the proper height above the proposed finished grade.

Where manholes, cleanouts, or gate valves are located within the alignment of a sidewalk, the following adjustments shall be made: (1) Manholes shall be flush within the sidewalk and located within construction joints creating an isolated

panel for easy removal and repairs if necessary. If the manhole ring and lid are located only partially within the sidewalk and an eccentric cone will not remove it completely from the sidewalk, the manhole ring and lid shall be formed circumferentially within the sidewalk to create vertical edges. The grass side shall be planted with sod to the edge of the ring and lid. (2) Water valve boxes and cleanouts shall be raised flushed within the sidewalk. A block-out of 12" beyond all sides of the valve or cleanout shall be formed. The alignment of the block-out shall that of a 48" square rotated 45 degrees when looking perpendicular to the sidewalk. Contraction joints shall extend from the top and bottom vertices to the outer edged of the sidewalk. The contraction joints for the side vertices shall extend to meet the traverse construction joints on either side, forming a panel of four feet (4') square that will allow for removal and repairs if necessary.

Except as called for on the plans, the Contractor shall not be responsible for the relocation of power poles, gas meters, telephone cable boxes and signs, gas pipeline markers, fire hydrants, light poles, traffic signs and signals, or for adjustment of the top elevation of gas and telephone manholes which are in direct conflict with improvements. If these items have not been relocated and/or adjusted at the time of construction and the plans do not require the Contractor to adjust them, the Contractor shall inform the engineer and/or his representative of the problem.

Sanitary sewer manholes may be adjusted up to 12 inches in additional height above the cone section with concrete grade rings. Adjustments over 12 inches shall be accomplished using a concrete flat top section or by using pre-cast or cast-in-place manhole sections.

11A-52 REINFORCED CONCRETE PIPE:

N/A

11A-53 CORRUGATED METAL PIPE (CMP):

N/A

11A-54 HIGH DENSITY CORRUGATED POLYETHYLENE PIPE (HDPE)

N/A

11A-55 MECHANICALLY COMPACTED TRENCH BACKFILL SPECIFICATIONS:

N/A

11A-56 FLOWABLE FILL TRENCH BACKFILL SPECIFICATIONS:

A. **FLOWABLE BACKFILL:** Flowable backfill shall consist of a mixture of native sand or a blend of native sand/manufactured sand, cement, fly ash and water which produces a material with unconfined compressive strength of between 250 and 450 psi after 28 days.

The flowable mixture shall be mixed at a concrete batch plant or a mobile transit mixer and shall have a minimum slump of five inches (5") and a minimum air content of 6 percent. The flowable mixture must be allowed to set prior to the placement of any overlying material.

B. **MODIFIED FLOWABLE BACKFILL:** Modified flowable backfill in areas of possible future excavation such as utility installations shall consist of a mixture of native sand or a blend of native sand/manufactured sand, cement, fly ash and water which produces a material with unconfined compressive strength of between 50 and 150 psi after 28 days.

Modified flowable backfill in permanent areas such as abandoned pipe closures, abutments and embankments shall contain the same materials with an unconfined compressive strength of greater than 150 psi after 28 days.

The flowable mixture shall be mixed at a concrete batch plant or a mobile transit mixer and shall have a minimum slump of five inches (5") and a minimum air content of 6 percent.

The flowable mixture must be allowed to set prior to the placement of any overlying material.

The Contractor shall submit to the engineer a mix design for the type of flowable backfill to be used 10 days prior to the start of the backfill operation. When the mix design has been approved by the engineer there shall be no changes or deviation from the proportions or sources of supply except as approved by the engineer.

C. Flowable backfill will be allowed for the following:

Backfill

- Bridge abutments
- Box culverts
- Sewer trenches
- Utility trenches
- Conduit trenches

Structural Fill

- Road base
- Pipe bedding
- Mud jacking

Miscellaneous Uses

- Abandoned sewer mains
- Soil erosion
- Slope stabilization
- Abandoned tank fill

11A-57 CONCRETE:

Concrete for all concrete drainage structures, manholes, and inlets shall be Class "A" with a minimum compressive strength of 3,000 psi at 28 days. A minimum of five (5) sacks of cement (Type I) shall be used per cubic yard and the maximum water-cement ratio shall not exceed 6.5 gallons per sack.

Concrete for channel lining and rip-rap shall also be Class "A" concrete having a minimum compressive strength of 3,000 psi at 28 days.

The desired slump for Class "A" concrete shall be three inches (3") and the maximum allowable slump shall be four inches (4").

Air entrainment (5 %, ± 1.5%) is required for all exposed concrete.

Calcium Chloride will not be permitted. Air-entraining, retarding, and water reducing admixtures must be approved and shall conform in all respects to NCTCOG Specification Item 303.2.3.

Aggregates for Class "A" concrete shall be either Grade 2 or Grade 3 for coarse aggregate, and Grade 1 for fine aggregate. Grades specified above refer to those outlined in Item 421 of the Texas Department of Transportation Specifications referenced above.

Forms used in the construction, concrete placement, and concrete finishing, shall comply in all respects to the requirements of Item 420 of the above referred Texas Department of Transportation Specifications.

All concrete shall be cured for a minimum of four (4) curing days. The acceptable methods for curing the concrete are as follows:

- A. FORM CURING: Forms left in place in contact with the concrete.
- B. WATER CURING: Water curing using wet mats, water spray or ponding.
- C. MEMBRANE CURING: Compound may be used.

All weight supporting forms shall remain in place a minimum of four (4) curing days after which they may be removed if the concrete has attained a flexural strength of 500 psi as evidenced by strength tests of beam specimens cast at the time of the pour. If beams have not reached the required strength after 4 days, the forms shall be left in place 14 days.

11A-58 REINFORCED CONCRETE BOX CULVERT:

N/A

11A-59 UNCLASSIFIED CHANNEL EXCAVATION:

Channel excavation shall be in accordance with NCTCOG Specifications. Any fill required bringing the channel to the required lines, grades and cross-sections will be subsidiary to this pay item.

If the channel is to be lined with concrete, the sides and bottom of the channel shall be kept at the existing moisture level after excavation and prior to placement of concrete. Moisture level shall be maintained by manual watering or other approved method. Cost of maintaining moisture level shall be considered subsidiary.

11A-60 MANHOLES, INLETS, AND OTHER CONCRETE DRAINAGE STRUCTURES:

Manholes and inlets shall be constructed to the size and location shown on the plans. Payment shall be made for the manholes, inlets, and other drainage structures complete in place at the unit price in the PROPOSAL. The payment shall include all work and materials necessary to complete the structure, including excavation and backfill. No additional pay will be made for manhole ring and lid, or grade rings. No precast manholes or inlets will be allowed unless approved by the engineer prior to construction.

11A-61 CURB INLET:

N/A

11A-62 BACKFILL & BACKFILL MATERIAL:

Backfill operations shall begin immediately following removal of the forms on the permanent improvements. All loose concrete, rocks, roots, trash, and other debris shall be removed from the excavation prior to any backfill being placed.

Backfill material shall consist of the native material obtained from the street excavation unless in the opinion of the engineer, this material is unsuitable for use. The material shall not contain trash, rock, concrete, asphalt, lime shavings, gravel or other debris. Sand shall not be used for backfill material unless the native soil in the construction area is sandy in nature. All backfill material will be considered subsidiary to the unit price proposed for the permanent improvements.

Backfill shall be placed in such a manner as to eliminate voids in the backfill material. The use of power equipment to place the backfill, or to bring it to grade, shall be limited to small farm-type tractors. Bring the backfill material to

within four inches (4") of proper finished grade. The top four inches (4") shall be placed in accordance with Spec 11A-63 "Topsoil."

11A-63 TOPSOIL:

A minimum of four inches (4") of topsoil shall be placed on all disturbed areas adjacent to permanent improvements within the project limits. The topsoil shall be free from stone, rock, lumps, clods of hard earth, plants or their roots, sticks and other foreign material and shall be brought to the lines and grades as established by the engineer. Under no circumstances will topsoil be accepted unless it is free from the aforementioned contaminants. Contractor may use approved means of treating the topsoil to ensure its acceptability. This item shall be considered subsidiary to the other items in this project and shall not be a separate pay item.

The existing topsoil from the project limits may be used if Contractor stockpiles and protects it properly. No trash, lime shavings or other foreign material, shall be added to this stockpile. Topsoil material shall be stockpiled at locations approved by the engineer, and after completion of permanent improvements, topsoil shall be placed on all disturbed areas so as to provide a minimum four-inch (4") depth of topsoil. The topsoil shall be tilled to a 1/2"-1" diameter size.

the City retains the authority to require the Contractor to provide topsoil meeting the following specification should the Contractor fail to maintain the integrity of the stockpiled existing topsoil.

The soil texture shall be classified as loam or sandy loam according to the following criteria:

	(% Passing) <u>Loam</u>	(% Passing) <u>Sandy Loam</u>
Sand (0.074 to 4.76 mm diameter)	25-50%	45-85%
Silt (0.002 to 0.074 mm diameter)	30-50%	Less than 50%
Clay (Smaller than 0.002 mm) (Hydrometer analysis)	5-25%	Less than 20%

Soil texture shall be determined by utilizing processes as prescribed in ASTM D 422.

11A-64 5" REINFORCED CONCRETE RIPRAP:

N/A

11A-65 HYDRO-MULCH SEEDING:

- A. **DESCRIPTION:** This item shall consist of preparing ground, providing, and planting seed, or a mixture of seeds, of the kind specified along and across such areas as are designated by the engineer.
- B. **MATERIALS:** The type seed used shall be in accordance with NCTCOG Specification, Section 202.6, and approved by the engineer. All seed must carry a Texas Seed Label showing purity and germination, name and type of seed and that the seed meets all requirements of the Texas Seed Law. Seed furnished shall be of the previous season's crop and the date of analysis shown on each tag shall be within 9 months of the time of delivery to the project. Each variety of seed shall be furnished and delivered in separate bags or containers. A sample of each variety of seed shall be furnished for analysis and testing when directed by the engineer. Grass seed shall equal or exceed 95% purity and 90% germination.
- C. **PLANTING SEASON:** Planting of hulled bermuda grass seed shall be done between the months of April through September. The density of seeds planted shall be 80 pounds per acre. A blend of 30 pounds Rye grass and 40 pounds unhulled bermuda may be used between the months of September through April.
- D. **CONSTRUCTION METHODS:** The designated areas shall be raked, leveled and fine graded as necessary to provide a smooth uniform grade, free of ruts, depressions, humps and objectionable soil clods, prior to seeding. The area shall also be free of weeds, rubbish, and building materials. Any low areas shall also be filled to prevent ponding. All particles in the seed bed shall be reduced to less than one inch (1") in diameter or they shall be removed. The area to be seeded shall be loosened or disked prior to placement of seed in areas that appear to be overly compacted or to destroy existing vegetation, at the direction of the engineer or authorized representative. The cost of any chemical treatment to the soil in order to establish a uniform stand of grass will be subsidiary to "Hydro-mulch Seeding." Seeding of the type specified shall be performed in accordance with the requirements in NCTCOG Specification 202.6 except as hereinafter described:
1. **Watering:** The seeded areas shall be watered as necessary to establish grass as described in Establishment and Acceptance of Seeding.
 2. **Hydro-Mulch Seeding:** In accordance with COG Specification 202.6.4.4 alternate methods for placement of seed may be used if approved by the engineer.

- E. **MEASUREMENT:** Work and acceptable material for "Hydro-mulch Seeding" will be measured by the unit price, complete in place.
- F. **PAYMENT:** The work performed and materials furnished and measured as provided under "Measurement" will be paid for at the unit price proposed for "Seeding" which price shall be full compensation for furnishing all materials and for performing all operations necessary to complete the work, including fertilizer. Once a "uniform stand of grass" is provided, the City will provide payment for the seeding. See definition of "uniform stand of grass" below.
- G. **ESTABLISHMENT AND ACCEPTANCE OF SEEDING:** Regardless of unseasonable climatic conditions or other adverse conditions affecting planting operations and the growth of the grass, it shall be the sole responsibility of the Contractor to establish a uniform stand of grass as herein specified. When adverse conditions such as drought, cold weather, high winds, excessive precipitation, or other factors prevail to such an extent that satisfactory results are unlikely, the City may, at his own discretion, stop any phase of the work until conditions change to favor the establishment of grass.
1. **Uniform Stand of Grass:** A uniform stand with complete coverage of the specified grass shall be defined as not less than one hundred-fifty (150) growing plants per square foot seeded (approximately 75% of disturbed area covered). Growing plants shall be defined as healthy grass plants of two blades or more at least two inches (2") tall.
- H. **POST-PLANTING MAINTENANCE:** Maintenance shall begin immediately after each portion of grass area is planted. It will be the Contractor's responsibility to maintain the existing grades and leave them in a true and even condition after planting. All planted areas will be protected and maintained by watering, weed control, mowing, and replanting as necessary for at least thirty (30) days after initial planting and for as much longer as necessary to establish a uniform stand with complete coverage of the specified grass.
- I. **FERTILIZER:** (Subsidiary to Seeding Item)
1. **Description:** This item shall consist of providing and distributing fertilizer over the seeded areas.
2. **Materials:** Shall be in accordance with NCTCOG Specification 202.4.1 and Special Provisions, Landscaping Specifications, Section 14.5.C.
3. **Construction Methods:** The fertilizer shall be pelleted or granular fertilizer and shall be applied uniformly over the entire area specified to be fertilized and in the manner directed for the particular item of work. The fertilizer shall be dry and in good physical condition. Fertilizer that

is powdered or caked will be rejected. Distribution of fertilizer for the particular item of work shall meet the approval of the engineer.

Unless otherwise indicated on the plans, fertilizer shall be applied uniformly at the average rate of 400 pounds per acre for all types of seeding.

11A-66 SODDING:

Grass sod shall be provided along disturbed areas of the parkways at the completion of construction and clean-up operations. Sodding is specified to be provided for but not limited to street reconstruction which includes new curb and gutter, adjacent to sidewalk construction, and along graded drainage swales. Sod limits shall be to a maximum of five feet behind the new curbs. the City shall approve sod types with the intent of matching existing grass cover in the individual yards. Sod pallets shall be inspected before unloading to ensure quality and physical appearance of sod. If the individual sod patches display less than 75% dark green in color, it shall not be used. Sod should not be laid during the dormant time of year or during the peak of summer. THE General contractor will be responsible for the initial growth and establishment. Payment for sodding shall include the cost of leveling disturbed areas, topsoil, fertilizer and water. No separate payment will be made for topsoil, fertilizer and watering. Buffalo grass sod shall be used on all medians unless otherwise specified in the plans.

11A-67 SLOPE EROSION CONTROL:

Erosion control material shall be "Curlex Blanket" heavy jute netting such as "AMXCO Curlex Blanket," or approved equal (no plastic meshes are allowed), and shall be applied after seeding is complete. Heavy jute mesh shall be open plain weave of unbleached single jute yarn, averaging one hundred and thirty (130) pounds per spindle of 14,400 yards. Jute mesh shall be furnished in approximately ninety (90) pound rolled strips. Other criteria for jute mesh shall be as follows:

Length- approximately seventy-five (75) yards.

Width - forty-eight (48") inches (\pm one inch).

0.78 warp ends per width of cloth.

Forty-one (41) weft ends per yard.

Weight of cloth - 1.22 pounds per linear yard (\pm 5%).

Staples shall be of No. 11 gauge steel wire formed into a "U" shape six inches (6") long.

To install erosion control material on channel slopes, bury the up-channel end in a trench six inches (6") deep. After the jute is buried, the trench shall be tamped firmly closed. Using a steel tube or three-quarter inch (3/4") pipe

through the paper core of the roll with a rope on each end will enable the operator to lower the roll down the slope. The material should be applied without stretching. The material should lie smoothly, but loosely on the soil surface. In order to keep the area as smooth as possible, workers should avoid, as much as possible, walking directly on the seed bed, either before or after the jute is applied. In cases where one roll ends and another is needed, the up-channel piece should overlap the second roll by at least eighteen inches (18"). Where two or more widths are applied side by side, an overlap of at least four inches (4") shall be maintained. The material shall be brought to level area before terminating. The end shall be across the fold on twelve-inch (12") centers. Outside edges, centers, and overlaps on banks shall be stapled on two-foot (2') intervals. Each width of cloth will have a row of staples down the center as well as along each edge. On soft or sandy soil or windy areas, apply staples in alternate slanting position and space at closer intervals (12" to 18"). For extra hard soil or shale areas, use sharp pointed, hardened steel three-inch (3") fence-type staple. Outside edges shall have loose topsoil spread over them to allow for smooth entry of water. The entire jute covered area should be rolled with a smooth roller weighing fifty (50) to seventy-five (75) pounds per foot of length.

Any clods, debris, etc., which hold the jute off the ground, shall be stamped into the soil. The netting shall completely cover all areas to be protected from erosion. Overlaps must be ample and well stapled so that no gapping can occur. The material shall be in intimate contact with the surface at all points. If some areas experience severe erosion, two layers shall be in intimate contact with the surface at all points.

The quantity shown in the PROPOSAL is a rough estimate as the actual amount and location of the jute mesh will be determined in the field as directed by the engineer in areas where excessive slopes exist. Overlapping of material will not be paid for double.

Heavy jute netting will be paid for at the unit price proposed per square yard, which price will be full compensation for furnishing and placing all materials, including all labor, tools, equipment, and incidentals necessary to complete the work.

11A-68 STEEL GUARD RAIL:

N/A

11-69 CLEANUP:

It is the intent of the Special Provisions to ensure that an adequate cleanup job be performed by the Contractor as soon during the construction procedure as possible. In particular, all curb and gutter and sidewalk shall be backfilled as soon as possible. Before the project is accepted by the City, all rocks, stones,

and other construction debris shall be removed. All necessary cleanup work shall be considered subsidiary to the various proposal items on this contract.

11A-70 FINAL INSPECTION:

The engineer will make final inspection of all work included in the contract as soon as practicable after the work is completed and ready for acceptance. If the work is not acceptable to the engineer at the time of such inspection, he will inform the Contractor as to the particular defects to be remedied before final acceptance will be made.

11A-71 TOWING OF VEHICLES:

The Contractor shall follow applicable City of Burleson Ordinances should it be determined that vehicles parked upon a City street must be moved in order to perform street maintenance or construction.

11A-72 TRAFFIC SIGNAL CONDUIT:

N/A

11A-73 SPRINKLER RELOCATIONS:

Sprinkler relocations may be required on this project. Prior to construction, the Contractor and inspector shall identify and document the sprinkler systems that will be affected by the construction of the project. The Contractor shall contact the owner of each sprinkler system and arrange to test each system. In the presence of the inspector, the Contractor shall: (1) determine if the system functions properly, (2) identify the layout of the system and, (3) document in writing the layout and function of the system. The work described above is required by the Contractor for all projects and should be considered subsidiary to the unit prices proposed for other items.

If the Contractor is responsible for actual irrigation relocations, a dollar amount will be included in the PROPOSAL to reimburse the Contractor for any required sprinkler relocations. The amount is only an estimate. Prior to beginning construction, the Contractor shall contact the owner of each sprinkler system and arrange to test each system. When construction activities approach a sprinkler system, the Contractor shall cut all feed lines to the system and salvage existing sprinkler heads for re-use (if possible). The feed lines shall be cut at the right-of-way line. All of these activities shall be coordinated with the inspector. The Contractor shall obtain a licensed irrigator to repair or replace sprinkler systems with equal or better materials as the existing system. The Contractor shall submit copies of monthly invoices from the licensed irrigator for all sprinkler work performed during the month. Payment will only be made based on the invoices submitted; therefore, the full dollar amount included in the

PROPOSAL for sprinkler relocations may or may not be paid. No payment will be made for adjustments except those determined necessary by the inspector. All sprinkler systems affected must be fully functional prior to final acceptance of the project.

11A-74 PROJECT SIGNS:

The Contractor on this project shall provide and erect up to two (2) project signs as required.

Generally, project signs shall be located at the beginning and end of the project and on major intersecting streets. Locations of signs and specific information on signs shall be approved by the inspector prior to fabrication of signs.

Signs shall be substantially in accordance with the sample drawing enclosed as part of these Special Provisions. Construction shall be on 3/4 inch weatherproof (marine) 4'x8' plywood and the painting shall be accomplished with good quality paint which will not weather or fade during the life of the contract. Sign colors shall be as indicated on the sample drawing.

Signs shall be placed in prominent locations and maintained in good condition until the completion of the project. Damaged or defaced signs will be repaired or replaced within two (2) calendar days at the Contractor's expense. The cost of the plywood sign(s) shall be considered subsidiary to the unit prices proposed on this project.

11A-75 SIGNS FOR BUSINESSES:

Weatherproof signs directing motorists to adjacent business entrances shall be provided by the Contractor and used during construction at locations directed by the project engineer. The signs shall be white with red letters and include the business name, shall be approximately 18 inches by 24 inches and have lettering at least six inches tall. The sign shall be placed such that it is visible from the street to help direct patrons to adjacent businesses, but shall not obstruct traffic visibility for vehicles exiting the driveway. It will be the Contractor's responsibility to maintain the signs until such time as the project engineer agrees they can be removed.

11A-76 USE OF CITY PARKS:

The Contractor shall obtain written permission from the Parks and Recreation Department prior to the use of City park property for access or for the storage of machinery, equipment, materials, and/or supplies. Any damage incurred to City park property, by unauthorized use by the Contractor, will be the responsibility of the Contractor to repair in an equal or better condition. Payment to the

Contractor may be withheld until the damage is repaired and/or payment for the damages has been made.

11A-77 STORM WATER MANAGEMENT (CONTRACTOR PROVIDE)

- A. This project is subject to the Texas Commission on Environmental Quality's (TCEQ) General Permit requirements for construction projects, through the Texas Pollutant Discharges Elimination System (TPDES) Program. The Contractor shall be required to submit a "Notice of Intent" (NOI) to TCEQ prior to the start of any construction activity on projects 5 acres and larger. The contractor shall provide the city a copy of the approved NOI. The City of Burleson will submit its own "Notice of Intent (NOI)" to TCEQ. On projects 1 acre and larger but less than 5 acres the contractor shall be required to submit a "TCEQ Site Notice" to TCEQ prior to the start of any construction activity. The information contained in the NOI's and TCEQ Site Notices shall be in accordance with the TPDES General Permit Regulations.

The Contractor shall provide a site specific "Storm Water Pollution Prevention Plan" (SWPPP), in accordance with the TPDES General Permit Regulations, prior to submitting either a NOI or TCEQ site notice. The SWPPP shall be prepared and certified by a licensed professional civil engineer who is familiar with the TCEQ TPDES General Permit requirements. The SWPPP shall be subject to approval by the City and/or TCEQ. The SWPPP shall contain information as required by the TPDES General Permit Regulations, including, but not limited to:

1. Site Description - including a site map, description of construction activity, estimate of disturbed area, runoff coefficient, and name of receiving waters.
2. Description of Controls - including plans for controlling erosion and sedimentation caused by construction activity by utilizing hay bales, silt fences, detention/retention structures, check dams, sand bag barriers, or other approved best management practices.
3. Construction Implementation - including phasing of construction activities and corresponding sequencing of erosion/pollution control measures. The Contractor shall perform his construction operations in accordance with best management practices to control erosion/pollutants in storm water discharges during construction.
4. Information on endangered species and critical habitat.
5. Current description of construction and waste materials stored on-site with updates as appropriate. Description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, spill prevention and response.

- B. Payment for the preparation and submittal of the NOI and the SWPPP, including any revisions necessary throughout the duration of the construction contract, shall be considered subsidiary to other items.
- C. The following shall be maintained on the project site by the Contractor at all times:
1. Post near main entrance to project site or at project site office:
 - a. NOI or TCEQ site notice depending on project size.
 - b. Local contact person with phone number.
 - c. Brief description of project.
 - d. Location of SWPPP if site is inactive or does not have an on-site location to store the plan.
 2. SWPPP including any revisions.
 3. Copy of the TPDES General Permit TXR150000.
 4. Inspection reports for inspections performed every 14 days and within 24 hours after every ½ inch rain.
 5. Record of construction activities:
 - a. Dates when grading activities will occur.
 - b. Dates when construction activities will temporarily and/or permanently cease on a portion of the project.
 - c. Dates when ground cover will be initiated on disturbed areas.
 6. Current description of construction and waste materials stored on-site with updates as appropriate. Description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, spill prevention and response.
- D. A Notice of Termination (NOT) must be submitted to TCEQ 30 days of project completion on all 5 acre or larger projects.
- E. Payment shall be a lump sum item and dollar amount in the PROPOSAL. This amount shall include complete payment for the physical erosion/pollution control measures throughout the duration of the construction contract, as delineated in the approved SWPPP. This amount also includes removal of all items and structures constructed for

storm water pollution protection at completion of the project when called to do so by the engineer or representative.

- F. The erosion control measures must be in place on the project prior to being authorized for any other construction activity. Any stockpiles of unusable items and/or excavated materials shall be removed from the project site within seven days.** In case of failure on the part of the Contractor to control soil erosion, pollution and/or siltation, the engineer reserves the right to employ outside assistance or to use City forces to provide the necessary corrective measures. Such incurred direct costs will be deducted from any money due or to become due to the Contractor.

11A-77A STORM WATER MANAGEMENT:

- A. This project is subject to the Texas Commission on Environmental Quality's (TCEQ) General Permit requirements for construction projects, through the Texas Pollutant Discharges Elimination System (TPDES) Program. The Contractor shall be required to submit a "Notice of Intent" (NOI) to TCEQ prior to the start of any construction activity on projects 5 acres and larger. The contractor shall provide the city a copy of the approved NOI. The City of Burleson will submit its own "Notice of Intent (NOI)" to TCEQ. On projects 1 acre and larger but less than 5 acres the contractor shall be required to submit a "TCEQ Site Notice" to TCEQ prior to the start of any construction activity. The information contained in the NOI's and TCEQ Site Notices shall be in accordance with the TPDES General Permit Regulations.

The Contractor shall provide a site specific "Storm Water Pollution Prevention Plan" (SWPPP), in accordance with the TPDES General Permit Regulations, prior to submitting either a NOI or TCEQ site notice. The SWPPP shall be prepared and certified by a licensed professional civil engineer who is familiar with the TCEQ TPDES General Permit requirements. The SWPPP shall be subject to approval by the City and/or TCEQ. The SWPPP shall contain information as required by the TPDES General Permit Regulations, including, but not limited to:

1. Site Description - including a site map, description of construction activity, estimate of disturbed area, runoff coefficient, and name of receiving waters.
2. Description of Controls - including plans for controlling erosion and sedimentation caused by construction activity by utilizing hay bales, silt fences, detention/retention structures, check dams, sand bag barriers, or other approved best management practices.

3. Construction Implementation - including phasing of construction activities and corresponding sequencing of erosion/pollution control measures. The Contractor shall perform his construction operations in accordance with best management practices to control erosion/pollutants in storm water discharges during construction.
 4. Information on endangered species and critical habitat.
 5. Current description of construction and waste materials stored on-site with updates as appropriate. Description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, spill prevention and response.
- B. Payment for the preparation and submittal of the NOI and the SWPPP, including any revisions necessary throughout the duration of the construction contract, shall be considered subsidiary to other items bid.
- C. The following shall be maintained on the project site by the Contractor at all times:
1. Post near main entrance to project site or at project site office:
 - a. NOI or TCEQ site notice depending on project size.
 - b. Local contact person with phone number.
 - c. Brief description of project.
 - d. Location of SWPPP if site is inactive or does not have an on-site location to store the plan.
 2. SWPPP including any revisions.
 3. Copy of the TPDES General Permit TXR150000.
 4. Inspection reports for inspections performed every 14 days and within 24 hours after every ½ inch rain.
 5. Record of construction activities:

- a. Dates when grading activities will occur.
 - b. Dates when construction activities will temporarily and/or permanently cease on a portion of the project.
 - c. Dates when ground cover will be initiated on disturbed areas.
6. Current description of construction and waste materials stored on-site with updates as appropriate. Description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, spill prevention and response.
- D. A Notice of Termination (NOT) must be submitted to TCEQ 30 days of project completion on all 5 acre or larger projects.
- E. Payment shall be a lump sum bid item and dollar amount in the PROPOSAL. This amount shall include complete payment for the physical erosion/pollution control measures throughout the duration of the construction contract, as delineated in the approved SWPPP. This amount also includes removal of all items and structures constructed for storm water pollution protection at completion of the project when called to do so by the engineer or representative.

The erosion control measures must be in place on the project prior to being authorized for any other construction activity. Any stockpiles of unusable items and/or excavated materials shall be removed from the project site within seven days. In case of failure on the part of the Contractor to control soil erosion, pollution and/or siltation, the engineer reserves the right to employ outside assistance or to use City forces to provide the necessary corrective measures. Such incurred direct costs will be deducted from any money due or to become due to the Contractor.

11A-78 FINAL QUANTITIES:

The Contractor is required to be present when final quantities are measured by the inspector. The inspector will coordinate with the Contractor to schedule a mutually agreeable date and time (including Saturdays) to perform the final measuring. If the Contractor chooses not to be present when final quantities are measured by the inspector, the Contractor agrees to accept the inspector's measurements or reimburse the City for time the inspector spends remeasuring any portion of the project.

11A-79 PUBLIC MEETING:

Prior to start of construction, a public meeting may be held for this project. The purpose of the meeting will be to explain the project to affected citizens and answer questions. A representative of the Contractor, knowledgeable of the

project, shall attend the public meeting. The representative will be introduced and will be called on as necessary to assist in answering questions.

11A-80 PRE-CONSTRUCTION MEETING:

A Pre-Construction Meeting shall take place prior to construction. This meeting will cover all of the aspects usually covered in the pre-construction meeting, but is also designed to build relationships between RA Development representatives and the Contractor's representatives who will work together on a daily basis. Issues will be discussed related to the chain-of-command, areas of special concern, and coordination expectations.

11A-81 CONSTRUCTION MEETING:

Once construction begins, project construction meetings may be held for this project. A representative of the Contractor, knowledgeable of the project, shall attend the construction meetings. RA Development will schedule the time and location, and determine the frequency of these meetings.

11A-82 TEMPORARY STREET REPAIR FOR STORM DRAIN:

N/A

11A-83 PROTECTION OF ADJACENT LANDSCAPING IMPROVEMENTS:

The Contractor shall be responsible for the protection of any existing landscaping improvements in the medians and parkways adjacent to the project including but not limited to trees, shrubs and irrigation from damage by Contractor's equipment or personnel. If the Contractor damages any of the landscaping improvements, the Contractor shall be responsible for replacing and/or repairing the improvements prior to processing the final pay estimate for the project. If the Contractor feels any of the landscaping improvements are in conflict with the project and must be removed or have prior damage, the Contractor shall coordinate this with the project inspector prior to removal of any landscaping improvements.

11A-84 RESTORATION OF EXISTING PAVED SURFACES:

The Contractor shall be responsible for maintenance of existing paved roadway surfaces within the project limits throughout the duration of the project. The Contractor shall perform daily inspections and restoration work required to provide an acceptable driving surface, as determined by RA Development. Restoration of paved surfaces shall be of asphalt, unless otherwise approved by RA Development. Should the Contractor be notified by the City or RA Development of unacceptable roadway conditions, the Contractor shall restore the surface within 24 hours. Should it become necessary for RA Development

to provide for the restoration of the surface, the cost of such shall be deducted from the monthly estimate. All asphalt for restoration of existing paved surfaces shall be considered subsidiary to the various proposal items on this contract.

11A-85 REPLACEMENT/ RELOCATION OF FENCES:

The Contractor shall be responsible for damages involved with existing fences that may be within the limits of construction as outlined in the plans and the Contract Documents and payment shall be considered subsidiary to items within the PROPOSAL. If it is necessary to replace or relocate a fence as part of the Contract, compensation for this work item shall be paid by RA Development to the Contractor as a lump sum price. The price shall be considered full compensation for all labor, materials, tools, and any other incidentals necessary to complete this work to the limits shown including the removal of existing fence, erection and installation of all new and existing fencing material, and cost for such new materials as required to complete the item to its original condition or better. No additional payment will be due to the Contractor for this item of work and Contractor shall verify for himself the amount of fence to be removed and replaced as shown on the plans and in accordance with this specification prior to preparing a proposal price. Non partial payment for this work will be made. Contractor will be paid in full upon successful completion of this item and approval by RA Development.

11A-86 RELOCATION / REPLACING OF MAIL BOXES: (POST OR BRICK)

This provision shall cover all the labor and materials necessary to temporary relocate mailboxes indicated on the plans and within the Contract Documents. Contractor shall be responsible for repair or replacement in the even of damage during the movements and return of the mailboxes to their original condition or better. The Contractor will restore the ground and surface area disturbed during relocation of the mailboxes back to original condition or better after returning the mailboxes to their original locations. Concrete bases for posts or foundations of minimum 2000 psi strength shall be provided to support the mailboxes. Mailboxes shall be positioned per the attached specifications provided by the United States Postal Service. Compensation for this work shall be considered full compensation for all labor, materials, tools, and any other incidentals necessary to fulfill the requirements of the plans and specifications. No partial payments shall be made. Contractor will be paid in full upon successful completion of this item and approval by RA Development.

11A-87 DEVELOPER AND CITY IN STANDARD SPECIFICATIONS OF THIS CONTRACT

In “Standard Specifications for Waterworks and Sewerage Improvements in the City of Burleson, Texas” of this Contract, R.A. Development, Ltd. (“RA Development”) shall have all the rights and responsibilities of the City of

Burleson under this Contract. To that end, in “Standard Specifications for Waterworks and Sewerage Improvements in the City of Burleson, Texas” of this Contract, the term “Owner” and “City” shall mean R.A. Development, Ltd. (“RA Development”); save and except where the term “City” or “City of Burleson” describes a location or jurisdiction as opposed to a municipal entity, the term will continue to describe the location and jurisdiction and not RA Development.

SPECIAL PROVISIONS

PART B - WATER AND SANITARY SEWER SPECIFICATIONS

11B-1 PURPOSE OF SPECIAL PROVISIONS:

See 11A-1

11B-2 SCOPE OF WORK:

See 11A-2

11B-3 WARRANTY SERVICE CLAUSE:

See 11A-21

11B-4 DISPOSAL OF EXCESS MATERIAL:

See 11A-25

11B-5 INGRESS AND EGRESS:

See 11A-14

11B-6 SAFETY REQUIREMENTS:

See 11A-17

11B-7 INVESTIGATION OF LOCAL CONDITIONS:

See Instructions to Offerors

11B-8 CHANGE OF LOCATION:

No change in the alignment is contemplated; however, should a change be necessary, the owner reserves the right to make such change. Any such changes will be compensated for at the unit prices bid for materials actually installed.

11B-9 GUARANTEE:

The Contractor shall guarantee all work for a period of two years from the date of written acceptance by the City. Damage or leaks due to acts of God or from sabotage and/or vandalism are specifically excepted from this guarantee.

When defective material and workmanship are discovered, required repairs are to be made under this guarantee and all such repair work shall be done by this Contractor at his own expense immediately after notice has been given him by the City. Should the Contractor refuse or fail to make the repairs within one day thereafter, the City may make the necessary repairs and charge the Contractor with the actual cost of the labor and materials required.

11B-11 POLY-VINYL CHLORIDE (P.V.C.) SEWER PIPE AND FITTINGS:

- A. SCOPE: This specification designates general requirements for unplasticized poly-vinyl chloride (P.V.C.) plastic gravity sewer pipe with integral wall bell and spigot joints for the conveyance of domestic sewage. The pipe and fittings shall be SDR 26 P.V.C. as specified in ASTM D 3034, or PS 115 P.V.C. as specified in ASTM F679, latest revision.
- B. MATERIALS: Pipe shall be made from clean, virgin, approved Class 12454 BC P.V.C. compound conforming to ASTM resin specification D 1784. Clean reworked material generated from the manufacturer's own production may be used.
- C. PIPE: All pipe shall be suitable for use as a gravity sewer conduit. Provisions must be made for contraction and expansion at each joint with a rubber ring. The rings shall securely lock the solid cross section rubber ring into position or approved equal. Standard lengths shall be 20 feet and 13 feet \pm 1 inch.
- D. FITTINGS: All fittings and accessories shall be as manufactured and furnished by the pipe supplier or approved equal and have bell and spigot configurations identical to that of the pipe. Adapters appropriate for the existing pipe material shall be used to tie proposed pipe into existing pipe for the service lines and laterals. No separate payment will be made for adapters, tees, bends, or other necessary fittings used in the installation of this line, but shall be considered subsidiary to the unit prices bid for pipe and services.
- E. PHYSICAL AND CHEMICAL REQUIREMENTS: Pipe shall be designated to pass all tests at 73 degrees F (\pm 3).

- F. PIPE STIFFNESS: Minimum "pipe stiffness" (F/Y at 5% deflection) shall be calculated in accordance with ASTM Designation D 2412. External Loading Properties of Plastic Pipe by Parallel-Plate Loading.
- G. JOINT TIGHTNESS: Assemble two sections of pipe in accordance with the manufacturer's recommendations. Subject the joint to an internal hydrostatic pressure of 25 psi for one hour. Consider any leakage failure of the test requirements.
- H. FLATTENING: There shall be no evidence of splitting, cracking, or breaking when the pipe is tested as follows:

Flatten specimen of pipe, six inches (6") long between parallel plates in a suitable press until the distance between the plates is forty percent of the outside diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within two to five minutes.

- I. DROP IMPACT TEST: Pipe (6" long section) shall be subjected to impact from a free falling tup (20 lb. Tup A) in accordance with ASTM method D 2444. No shattering or splitting (denting is not a failure) shall be evident when the following energy is impacted:

<u>NOMINAL SIZE</u>	4"	6"	8"	10"	12"
<u>Ft. - Lbs.</u>	150	210	210	220	220

- J. ACETONE IMMERSION TEST: After two (2) hours immersion in a sealed container of anhydrous (99.5% pure) acetone, a one-inch (1") long sample ring shall show no visible spalling or cracking. (Swelling or softening is not a failure when tested in accordance with ASTM D 2152.)
- K. PLACEMENT: The sanitary sewer lines constructed in this project are replacements for existing lines. The new line in most locations will be laid in the alignment and/or grade of the existing sewer. The Contractor will have to provide for the existing sewage flow at all times during construction operations. This will probable require additional fine crushed stone or filter fabric for support of a wet trench bottom. All services shall be reconnected as the line is laid and should drain at all times. Contractor will make temporary closure to the existing upstream sewer each day as he stops laying new sewer. All embedment and backfill materials shall be subsidiary to these items.

11B-12 LOCATION AND PROTECTION OF EXISTING STRUCTURES AND UTILITIES:

In the preparation of plans and specifications, the City has endeavored to indicate the location of existing underground utility lines which are known. No attempt has been made to show minor lines or services lines. It is not guaranteed that all major lines or structures have been shown on the plans. Prior to the start of the construction, the Contractor shall call 817-447-5400 ext 278 for utility locations. In addition, the Contractor shall communicate with the local representative of the utility companies, including, but not limited to, ATMOS Gas Company, Southwestern Bell (AT&T) Telephone Company, TXU Electric Company, Charter Cable Communications Company, Pathway Communications , and any other public and private utility companies, and advise said representatives of the route of the proposed construction in order to obtain the assistance of the utility companies in the location of and in the avoidance of the conflicts with utility lines. The Contractor shall uncover and determine the elevation and location of all conflicts well ahead of the trench excavation.

Where excavation endangers adjacent structures and utilities, the Contractor shall, at his own expense, carefully support and protect all such structures and/or utilities so that there will be no failure or settlement. Where it is necessary to move services, poles, guy wires, pipe lines, or other obstructions, the Contractor shall notify and cooperate with the utility owner.

In case damage to any existing structure or utility occurs, whether failure or settlement, the Contractor shall restore the structure or utility to its original condition and position without compensation from the City. All costs of temporarily or permanently relocating the conflicting utilities shall be borne by the Contractor without extra compensation from the City.

If in the opinion of the engineer, concrete backfill is necessary for the support of the utility lines crossing trenches, the engineer may direct 1500 psi concrete backfill be used.

Payment will be considered subsidiary to pipe installation as outlined in the PROPOSAL.

11B-15 PIPE HANDLING:

Pipe, fittings, valves and other accessories shall at all times be handled with care to avoid damage. In loading and unloading they shall be lifted by hoists, cranes or rolled on skidways in a manner which avoids sudden shock. Under no circumstances shall pipe be dropped. Pipe handled on skidways must not be skidded or rolled against pipe already on the ground. Pipe shall be placed on the site of the work parallel with the trench alignment and with bell ends facing the direction in which the work will proceed.

Proper implements, tools, equipment and facilities shall be provided and used by the Contractor for the safe and correct prosecution of the work. All pipe, fittings,

specials, valves, etc., shall be lowered into the trench by means of a suitable machine and shall not be rolled or dumped into the trench. The equipment shall have sufficient capacity to handle the pipe. The method of construction shall be subject to the City approval. Before being lowered into the trench, each joint of pipe shall be inspected and any unsound or damaged pipe shall be repaired or rejected.

Pipe shall be kept free of all debris during the laying operation. The pipe shall be swept or swabbed prior to installation. The swab should be of a design acceptable to the City. At the close of each operating day the open end of the pipe shall be effectively sealed against the entrance of all objects, especially water. No pipe shall be laid in water or when the trench conditions or the weather are unsuitable for such work, except in an emergency and then only upon permission of the City.

All pipes shall be laid accurately to established lines and grades with valves and fittings at the required location and with joints centered and spigots pushed home. Where it becomes necessary to make deflections in line of the pipe, sections of pipe beveled ends or fabricated fittings shall be used. Minor deflection of the line of the pipe may be obtained in standard pipe joints; however, the maximum joint opening caused by such deflection shall not exceed the recommendations of the pipe manufacturer. Random length pipe and/or grade adapters may be used to make unforeseen changes in the field.

11B-19 CONTROLLED LOW STRENGTH BACKFILL MATERIAL (CLSM):

CLSM shall be composed of concrete containing two bags of Portland Cement per cubic yard of concrete, and the slump of the concrete shall be as designed by the engineer. Aggregate shall be a free flowing well-graded granular material passing a 1½" screen and free from sticks, lumps, clay balls, and organic matter. Cement treated base (CTB) or sand (CTS) may be substituted for the CLSM. If CTS or CTB is used, it shall be sufficiently moist to set up and should be placed the same day it is delivered.

CLSM, CTS or CTB Backfill Material shall be used as designed on the plans or at such additional locations determined by the engineer and shall be paid for at the unit prices bid for CLSM, CTS or CTB Backfill Material or as included in the unit price bid for Street Backfill.

11B-20 EMBEDMENT REQUIREMENTS FOR WATER PIPE:

All P.V.C. pipe and pre-tensioned concrete cylinder water pipe shall be embedded per standard water detail Class "C." All P.V.C. and Pre-tensioned Concrete Cylinder Water Pipe shall be surrounded by and embedded in a six-inch (6") minimum encasement of granular material. Pre-stressed concrete cylinder water pipe shall be embedded in select material from ¼ of the outside diameter from the bottom to six inches (6") over the top of the pipe. The pipe shall be laid on six inches (6") of granular embedment which shall extend to ¼ of the outside diameter from the bottom.

The embedment material shall consist of fine, granular material. Fine granular material shall be defined as free flowing sand or like material, or mixed sand and pea gravel, free from large stones, clay, and organic material. The embedment material shall be such that when wet, it will not form mud or muck. This material may be an inferior grade of "pit-run" sand, not normally considered satisfactory for construction purposes, and may be used directly from pits without processing but shall meet the requirements set forth above.

Embedment material shall meet the following requirements:

- A. All material shall pass a one-inch (1") sieve and at least eighty percent (80%) shall be retained on a No. 100 sieve. The plasticity index of such part of the material which passes a No. 40 sieve shall not be greater than two (2).
- B. Embedment material from any source shall be of a fairly uniform quality. Such material shall be furnished and placed by the Contractor. Payment for furnishing and installing this material will be considered subsidiary to the unit price bid per linear foot of pipe. No separate payment will be made for this work.
- C. Initial bedding and embedment shall be placed to a depth of minimum 6" below pipe (Bell) and minimum 6" above the pipe. Bell holes shall be formed, a trough scooped out to grade, and the pipe laid and joined as specified.
- D. Native material shall be place on top of the embedment material to subgrade elevation. Material shall be placed in loosed layers as outlined in Section 11B-24.

11B-21 EMBEDMENT REQUIREMENTS FOR POLY VINYL CHLORIDE (PVC) SANITARY SEWER PIPE AND FITTINGS:

The minimum bedding and embedment for P.V. C sewer pipe is class "B" embedment as indicated in the Standard Specifications. The granular embedment material shall be compacted to ninety five (95%) percent Standard Proctor Density by being placed in a

minimum of 12-inch (12") lifts and hand or mechanically tamped BEFORE the native material is placed in the ditch.

The embedment material shall consist of durable particles of crushed stone, free from frozen material or injurious amounts of salt, alkali organic matter or other material free either free or as adherent coating and its quality shall be reasonably uniform throughout.

Embedment and Bedding material shall meet the following requirements and follow City's Detail S-05 included in the civil construction bid plan sets :

A.

CRUSH STONE BEDDING AND EMBEDMENT GRADATIONS

Passing or Retained on Sieve	Percent by Weight
Standard Crush Stone - Aggregate Grade 4	
Retained on 1 1/2-in sieve	0%
Retained on 1-in sieve	0 to 5%
Retained on 1/2-in sieve	40 to 75%
Retained on No. 4 sieve	90 to 100%
Retained on No. 8 sieve	95 to 100%

B. Initial bedding and embedment shall be placed to a depth of minimum 6" below pipe (Bell) and minimum 6" above the pipe. Bell holes shall be formed, a trough scooped out to grade, and the pipe laid and joined as specified.

C. A minimum of 12-inches (12") of flowable fill shall be placed on top of the embedment material.

D. Native material shall be placed on top of the embedment material to subgrade elevation. Material shall be placed in loose layers as outlined in Section 11B-24.

E. Such material shall be furnished by the contractor. Payment for furnishing and installing this material will be considered subsidiary to the unit price per linear foot of pipe. No separate payment will be made for this work.

11B-22 LOW PRESSURE AIR TEST OF SANITARY SEWER LINES:

After completing backfill of a section of sanitary sewer line, the Contractor shall, at his expense, conduct a Line Acceptance Test using low-pressure air. The test shall be performed using the below stated equipment according to stated

procedures and under the supervision of the engineer or his /her authorized representative.

A. EQUIPMENT: The equipment used shall meet the following minimum requirements:

1. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
2. Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.
3. All air used shall pass through a single control panel.
4. Three individual hoses shall be used for the following connections:
 - a. From the control panel to pneumatic plugs for inflation.
 - b. From the control panel to a sealed line for introducing the low-pressure air.
 - c. From a sealed line to control panel for continually monitoring the air pressure rise in the sealed line.

B. GENERAL PROCEDURE: All pipes shall be backfilled prior to air testing.

Air tests shall be made by the pressure drop versus time method.

The Contractor shall furnish all material, equipment and labor necessary to perform the air test. Air gauges shall be recently calibrated and shall be stamped showing the date of calibration. Should the sanitary sewer system fail air tests, the Contractor shall repair the leaks and retest at his own expense.

C. TESTING PIPE LESS THAN 36 INCHES IN DIAMETER: For pipes less than 36 inches in diameter, the air test shall be performed by testing sections of pipe of various lengths.

Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected. Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking. All air used shall pass through a single control panel.

Three individual hoses shall be used for the following connections: From the control panel to pneumatic plugs for inflation; from the control panel to a sealed line for introducing the low-pressure air; and from a sealed line to

the control panel for continually monitoring the air pressure rise in the sealed line.

The air compressor shall be of adequate capacity for charging the system.

The following procedure shall be used for air testing a sewer system:

All pneumatic plugs shall be seal-tested before being used in the actual test installation; one length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked; air shall be introduced into the plugs to 25 psig; the sealed pipe shall be pressurized to 5 psig; the plugs shall hold against this pressure without bracing and without movement of the plugs out of this pipe.

After a manhole-to-manhole reach of pipe has been backfilled and the pneumatic plugs checked, the plugs shall be placed in the line and inflated to 25 psig. Low pressure air shall be injected into the line until the internal pressure reaches 4 psig. Two minutes shall then be allowed for the pressure to stabilize.

In areas where ground water is known to exist, the Contractor shall install a one-half inch ($\frac{1}{2}$ ") diameter capped pipe nipple, approximately ten inches (10") long, through the manhole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the Line Acceptance Test, the ground water shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clean it, and then connecting a clear plastic tube to the pipe nipple. The hose shall be held vertically and a measurement of the height (in feet) of water over the invert of the pipe shall be taken after the water has stopped rising in this plastic tube. The height shall be divided by 2.3 feet to establish the pounds of pressure that will be added to all readings.

After the pipe pressure has stabilized at 3.5 psig or the adjusted pressure due to ground water submergence, a stopwatch shall be started and the time required for the internal pressure to reach 2.5 psig determined. Minimum permissible holding time for runs of single pipe diameter are indicated in the table below.

- D. EXAMPLE: If the height of water is 11.5 feet, then the added pressure will be psig. This will increase the 3.5 psig to 8.5 psig and the 2.5 psig to 7.5 psig. The allowable drop and the timing remain the same.
- E. TESTING PIPE 36 INCHES AND LARGER IN DIAMETER: For pipes 36 inches in diameter and over, the air test may be performed by testing each joint connection individually utilizing a joint tester similar to the Cherne Joint Tester. No joint shall be air tested until the pipe has been backfilled.

At no time shall pipe installation exceed 100 feet from the latest joint tested. The method of testing shall be described in this section. The time allowed for the pressure drop for 3.5 psig to 2.5 psig shall be 10 seconds.

Failure to pass the air test shall be cause for rejection. Rejected pipe shall be removed. Reinstallation and/or repairs may be made at the option of the City.

AIR TEST TABLES

MINIMUM HOLDING TIME IN MINUTES AND SECONDS REQUIRED FOR PRESSURE TO DROP FROM 3.5 TO 2.5 PSIG

1 Pipe Dia. (in.)	2 Min. Time (min: sec)	3 Length for Min. Time (ft)	4 Time for Longer Length (sec)	Specification Time for Length (L) Show (min:sec)											
				100ft	150ft	200ft	250ft	300ft	350ft	400ft	450ft	500ft	600ft	650ft	
4	3:46	597	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:48	4:07
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24	7:07	8:33	9:15	
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24	12:11	15:11	16:27	
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48	19:47	23:44	25:43	
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38	28:29	34:11	32:02	
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04	44:31	53:25	57:52	
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41	64:06	76:55	83:20	
21	19:50	114	10.470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31	87:15	104:42	113:20	
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33	113:58	136:45	148:09	
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48	144:14	173:05	187:30	
30	28:20	80	21.366 L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15	178:04	213:41	231:30	
33	31:10	72	25.852 L	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53	215:28	258:34	280:06	
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46	256:25	307:42	333:21	
39	36:50	61	36.114 L	60:11	90:17	120:22	150:28	180:34	210:39	240:45	270:51	300:56	361:08	391:14	

- F. MEASUREMENT AND PAYMENT: No separate payment will be made for the tests specified herein, but the cost thereof shall be included and considered subsidiary to the various other items.

IF THE INSTALLATION FAILS TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL DETERMINE, AT HIS OWN EXPENSE, THE SOURCE OF LEAKAGE. HE SHALL THEN REPAIR OR REPLACE ALL DEFECTIVE MATERIALS AND/OR WORKMANSHIP.

11B-23 DEFLECTION TESTING OF FLEXIBLE SANITARY SEWER:

P.V.C. and any other flexible sewer pipe shall pass a deflection test conducted under the inspection of the Project Engineer. A rigid mandrel shall be used to measure deflection. The rigid mandrel shall have an outside diameter (OD) equal to 95% of the inside diameter (ID) of the pipe. The inside diameter of the pipe, for the purpose of determining the outside diameter of the mandrel, shall be the average outside diameter minus two minimum wall thicknesses for an OD controlled pipe and the average inside diameter for an ID controlled pipe. Statistical or other tolerance packages shall not be considered in mandrel sizing.

Deflection tests shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5.0%. If a pipe fails to pass the deflection test, the Contractor, at his own expense, shall replace one complete length of pipe at the point of failure.

No separate payment will be made for the tests specified herein, but the cost thereof shall be included and considered subsidiary to the various other items.

11B-24 TRENCH BACKFILL:

After free moisture is gone from the embedment material, the ditch shall be backfilled with native material and compacted by mechanical methods. If hand pneumatic tampers are used, the backfill shall be placed in layers not exceeding six inches (6") in loose thickness and thoroughly compacted to ninety-five percent (95%) Standard Proctor density at optimum moisture content, + two percent (2%) as determined by ASTM D698. Backfill shall be placed in uniform layers completely across the trench, and compaction shall proceed in an orderly, uniform manner. If compaction is performed by the use of heavy tamping (sheep's foot) rollers, backfill shall be placed in layers not exceeding nine inches (9") in loose thickness and compacted to ninety-five percent (95%) Standard Proctor density at optimum moisture content, + two percent (2%) as determined by ASTM D698.

For line laid prior to new street construction, the backfill shall continue to within two feet (2') of the top of subgrade. At this point the trench shall be widened a

minimum of one foot (1') on each side. The remaining two feet (2') shall be native material, compacted in six-inch (6") loose lifts at optimum moisture content, +/- two percent (2%), to a density of ninety-five percent (95%) of maximum dry density, as determined at ASTM D698.

Payment shall be subsidiary to unit prices bid for pipe.

The City of Burleson will be responsible for testing during backfill operations. If a test does not meet the requirements as outlined above, the Contractor shall be responsible for additional tests until the above requirements are met.

11B-25 CLEARING AND GRUBBING:

The Contractor shall do all clearing and grubbing necessary for construction operations. Since most reconstruction projects are done within established neighborhoods, it is the City's intent to minimize damage to existing trees. Therefore, tree limbs or branches that are "hanging" over the plane of the easement or trench, but the trunk is not directly within the easement or trench alignment, shall be cut with a tree saw or other suitable method as to maintain the integrity of the trees. If a tree is close to the easement or trench alignment, but is not called to be removed, the Contractor shall contact the City inspector so a decision can be made as to leave or remove the tree. The tree owner shall be in on the decision. All broken or cut down trees, branches, limbs, and roots shall be removed and disposed of by the contractor so as to leave the right-of-way and/or utility easement in a neat and presentable condition. Removal and cleaning shall be accomplished daily when construction is in a residential area. Clearing and grubbing shall be done so as not to injure or damage adjacent property.

11B-26 DUCTILE IRON PIPE:

Where ductile iron pipe is chosen for use on this project, it shall be furnished and installed in accordance with the applicable provisions of the Standard Specifications, the details shown on the plans and as hereinafter specified.

Ductile iron pipe shall conform to the requirements of the latest edition of A.W.W.A. C151 (ANSI A21.51) and as specified hereinafter. The minimum thickness class furnished shall be Pressure Class 350 for water distribution and for sanitary sewer except as noted otherwise on the plans.

Ductile iron pipe for water lines shall have a "Standard Thickness" cement mortar lining and bituminous seal coat over the cement mortar lining in accordance with latest edition of A.W.W.A. C104 (ANSI A21.4). Ductile iron pipe for sanitary sewers shall have an internal virgin polyethylene coating of 40 mils

nominal thickness complying with ANSI/ASTM D 1248. All ductile iron pipe shall have a bituminous "Standard Outside Coating" of asphalt base in accordance with the latest edition of A.W.W.A. C151 (ANSI A21.51).

All ductile iron pipe joints shall be "Push On" Type and shall conform to the latest edition of A.W.W.A. C111 (ANSI A21.11).

The price bid per linear foot for ductile iron pipe at the various depths shall be full compensation for all material, labor, equipment, and incidental work required to complete the line ready for use, including embedment and seepage collars. The cost of trenching, embedment, seepage collars, backfill, compaction of backfill and exfiltration testing should be included in the unit price bid per linear foot, complete in place.

11B-27 CRUSHED STONE FOR GRAVEL AND DIRT DRIVEWAYS:

All gravel and dirt driveway cuts shall be backfilled with native material, mechanically tamped in six-inch (6") lifts to within six inches (6") of surface. Place six inches (6") of crushed stone and compact to existing driveway grade and line. Backfill and stone shall be placed as soon as possible after laying of pipe so as to provide uninterrupted access and use of the driveway. This shall be completed on the same day that the driveway is cut.

11B-28 CLEANING OF NEW WATER MAIN:

The Contractor shall install "poly pigs" as shown on the plans. The Contractor shall "run" the pig prior to pressure testing of the new main, chlorinating the line, the obtaining of the safe water sample, and the final tie-in being made. No separate payment will be made for this work but it will be considered subsidiary to the various unit prices bid. The Contractor will also be required to pull a swab through the water pipe prior to installation.

11B-29 ROCK CUSHION:

When in the opinion of the engineer the subgrade material encountered at grade is soft spongy, and unsuitable, it shall be removed to a depth necessary below the barrel of the pipe to achieve stable layers and replaced with a rock cushion so as to provide an unyielding stable foundation. The rock used in cushion shall be crushed rock and shall be free from silt, loam, or vegetable matter and shall be of a gradation of from ¾-inch to one-inch (1").

For sanitary sewer pipe installation, rock cushion shall be paid for the amount of rock placed at a depth greater than twelve inches (12") below the bottom of the

pipe; otherwise rock cushion is considered subsidiary to installation of sewer pipe. See Section 11B-21. If applicable, rock cushion will be paid for at the contract unit price per cubic yard in place and shall be the total compensation for furnishing all labor, materials, tools, and equipment for performing this particular phase of work.

Subgrades that have been allowed to become unstable by neglect of the Contractor, by improper drainage or lack of drainage, and when in the opinion of the engineer the condition was caused by the neglect or fault of the Contractor, the engineer shall order the Contractor to remove the unstable subgrade and replace the same with rock cushion at the expense of the Contractor, and no extra compensation will be allowed.

11B-30 THRUST BLOCKS:

Concrete blocks or thrust blocks shall be placed at the plugs and bends of 5 degree or greater in the main. The concrete blocking shall be placed so as to rest against firm undisturbed foundation of trench bottom. The supporting area shall be sufficient to withstand the thrust, including water hammer which may develop. All concrete blocking used for thrust blocks shall conform with the section "Thrust Blocking" of the Standard Specifications. This is not a separate pay item but will be considered subsidiary to the various other items.

Concrete blocking shall be placed at bends, tees, wyes, crosses, plugs, etc., in the water line. The concrete blocking shall be placed so as to rest against firm undisturbed trench walls. The supporting area for each block shall be sufficient to withstand the thrust, including water hammer. Each block except those for upward thrusts shall rest on a firm, undisturbed foundation of trench bottom.

Blocking at bends shall be computed based upon pipe thrust at bends, or tees, with internal pressure of 150 psi. Where upward thrusts are to be blocked, the concrete blocking shall be of sufficient weight to resist the thrust and the concrete shall be reinforced as directed by the engineer. Other blocking sizes shall be computed based upon a maximum safe allowable soil bearing pressure of 2,500 pounds per square foot of undisturbed earth.

The concrete blocking shall be placed against undisturbed trench walls, with a minimum of 18 inches between trench wall and pipe. Blocking shall extend a minimum of 0.75 X pipe diameter below and above the centerline of pipe and shall not extend beyond any joints. If requested by the engineer, the ends of the thrust blocks shall be contained in wood or metal forms. Where upward thrusts are to be blocked, tie-down blocking shall be used.

11B-31 FIRE HYDRANTS:

N/A

11B-32 DUCTILE IRON FITTINGS:

Ductile iron fittings shall conform to the requirements of A.W.W.A. C110 Full Body (ANSI A21.10) designed for a working pressure of not less than 150 psi (Class 250) or C153 Compact Body designed for a working pressure of not less than 250 psi (class 350),

Ductile iron fittings for water lines shall have a "Standard Thickness" cement mortar lining and bituminous seal coat over the cement mortar lining in accordance with the latest edition of A.W.W.A. Standard C153 and A.W.W.A. Standard C110 (ANSI A21.10). All water line fittings shall be mega lugged according to manufacturer's installation and specification procedures. This is subsidiary to ductile iron fitting bid item. All fittings shall be installed with a double layer of polyethylene wrap in compliance with A.W.W.A Standard C105 (ANSI A21.5).

All pay weights for Ductile Iron Fittings on this project shall be the exact weight of the specified fittings. Pay weights for Mechanical Joint Fittings do not include bolts, gaskets, or any other joint accessory, which are subsidiary to the price bid for ductile iron fittings. All fittings shall be cement lined in accordance with A.S.A. 21.4.

11B-33 STREET CUT AND BACKFILL:

Existing paved streets and drives shall be cut with a saw or clay spade to ensure a neat straight line along the edges of the trench. After the embedment material has been placed around the pipe, the remainder of the backfill shall be done in accordance with Section 11B-20 & 11B-21. For H.M.A.C. repair, a two-inch (2") hot mix asphaltic concrete (H.M.A.C.) surface shall then be placed on Class "A" concrete, 2:27 concrete, CTB or CTS backfill material, depending on the type of street, by the Contractor as soon as possible after completing the backfill. A tack coat will be used where necessary. The standard street cut and backfill will be paid for at the contract unit price per linear foot of trench and shall be the total compensation for furnishing all labor, materials, tools, and equipment for performing this particular phase of work.

11B-34 TEMPORARY ASPHALT STREET REPAIR AND BACKFILL:

After the embedment material has been placed around the pipe, the remainder of the backfill shall be done in accordance with Sections No. 11B-20 & 11B-21. For asphalt repair, a two-inch (2") Type "D" Asphaltic Concrete (H.M.A.C.) surface shall then be placed on six inches (6") of flexbase backfill material by the Contractor as soon as possible after completing the backfill. The temporary street repair and backfill will be paid for at the contract unit price per linear foot of trench and shall be the total compensation for furnishing all labor, materials, tools, and equipment for performing this particular phase of work. If the pavement settles ½ inch or more from the existing pavement's surface, the asphalt layer shall be removed and replaced to bring the surface back to grade. No additional payment shall be made for this additional work; it shall be considered subsidiary to the temporary asphalt street repair and backfill pay item.

11B-35 JOINT SEALING COMPOUND FOR REINFORCING CONCRETE PIPE AND MANHOLES:

Joint compound for sealing the tongue and groove joints to be used in the construction of the pre-cast manholes shall meet or exceed all requirements of Federal Specifications SS-S00210, "Sealing Compound, Preformed Plastic for Pipe Joints," Type I, Rope Form. Such plastic gaskets shall be equal to RAM-NEK and meet the following requirements:

The sealing compound shall be produced from blends of refined hydrocarbon resins and plasticizing compounds reinforced with inert mineral filler, and shall contain no solvents, irritating fumes, or obnoxious odors. The compound shall not depend on oxidizing, evaporating, or chemical action for its adhesive or cohesive strength. It shall be supplied in extruded rope-form of suitable cross-section and of such sizes as to seal the joint space when the pipes are laid. The sealing compound shall be protected by a suitable removable two-piece wrapper. The two-piece wrapper shall be so designed that one-half may be removed longitudinally without disturbing the other half to facilitate application of the sealing compound. Application of the compound shall be in accordance with the manufacturer's recommendations.

ESTIMATING GUIDE (Approx.)
Approximate Minimum Requirements (Tolerance = 10%)

Pipe Size	Primer per 100 Joints	Cut Lengths per Joint
48"	12.0 Gals.	4 Pieces 1 ½" x 3'-5"
96"	35.0 Gals.	8 Pieces 2" x 3'-5"

11B-36 CAST-IN-PLACE MANHOLES:

Cast-in-place concrete manholes shall have a minimum inside diameter of 5 feet (5') or six feet (6'). The Contractor shall not remove any forms until 24 hours after the concrete is placed. No backfill shall begin until 96 hours after the concrete is placed, unless otherwise directed.

11B-37 GATE VALVES:

Gate valves shall comply with the latest revision of A.W.W.A. Standard C500, entitled "Metal-Seated Gate Valves for Water Supply Service," unless otherwise specified. Gate Valves shall be double disc, parallel seat, internal wedging type with cast iron body and bronze mountings. Valves shall be designed for a working pressure of 150 psi. Resilient seat (wedge) gate valves are not allowed on lines larger than 12 inches in diameter.

Unless otherwise specified, all Gate Valves shall have non-rising stems and shall turn counter-clockwise to open. Valves shall have wrench nuts for operation unless otherwise specified. Spur gearing with gear eases shall be provided on all valves sixteen inches (16") and larger. In the event, the top of the operating nut is more than six feet (6') deep from the existing ground elevation, valve stem extensions shall be furnished by the Contractor to bring the operating nut to within three feet (3') of the existing ground level. No separate payment shall be made for furnishing and installing the necessary valve stem extensions, but will be considered subsidiary to the unit price bid for the valve. All valves shall be for vertical installation.

11B-38 ABANDONING EXISTING GATE VALVE BOX:

The unit price for abandoning existing gate valves shall include abandoning existing gate valve box by removing the top 10 inches or top section, fill void area with concrete and repair pavement if located in street, or replace with two inches of top soil including hydromulch or sod if at the back of curb.

11B-39 AIR RELEASE VALVES:

The Contractor shall furnish and install air release valve assemblies at locations and as shown on main line flanged outlet, vault, etc., as shown on the plans. Air release valves shall comply with the latest revision of A.W.W.A. Standard C512. Air valves shall be for heavy duty use and shall be of the type to allow air to enter when line drains. The valves shall be APCO "Heavy-Duty" combination Air Release Valves, Model No. 135C for two-inch (2") or approved equal. Valves shall have stainless steel floats and cast-iron bodies, with an interior coating of

rust inhibitor. Gate valves for isolating the air valves shall be as specified elsewhere in these specifications. Air valve vaults shall be as shown on the plans. Concrete shall be 3000 psi unless otherwise shown on the details. Payment of two-inch (2") air valves shall include all labor and materials, including the air valves shall include all labor and materials, including the required gate valves, piping, fittings, vaults and other appurtenances shown on the drawing as necessary to make the complete installation.

Air valves shall be installed outside of paved areas. Class III Reinforced Concrete Pipe (ASTM C 76) shall be used for the access with a ¼-inch thick steel cover and a three-inch (3") rim sized to fit over the pipe. Air valve markers as indicated in the details of the Standard Specifications shall be placed at each manhole installed outside of paved areas.

11B-40 TYING INTO EXISTING LINES:

The unit price bid for tying into existing lines shall include all labor and material necessary to tie the old main into the new main. This shall include the cost of offset bends as necessary for vertical and/or horizontal alignment. The new water lines will have to be tested, chlorinated, and a good sample received before the old lines can be plugged or abandoned and the new line tied in. Waterline alignments that will be replaced from valve to valve will not have a bid item "TIE TO EXISTIING WATERLINE". Connecting to or replacing the valves will be considered subsidiary to the waterline and fitting bid items. City personnel will operate the valves for any necessary shut-downs. During Construction, the contractor is responsible for "blow-outs" on existing water lines that connect to the water line being worked on to the nearest adjacent valve.

11B-41 HOT MIX ASPHALTIC CONCRETE:

See Special Provisions, Section 11A-38 Hot Mix Asphalt Concrete (H.M.A.C.)

11B-42 TACK COAT:

See Special Provisions, Section 11A-39: Tack Coat

11B-43 SIDEWALK REPLACEMENT:

The Contractor shall replace all sidewalk as shown on the plans. Replacement will meet current City of Burleson specifications for four-inch (4") concrete with #3 bars on 18-inch centers both ways. The unit price bid per linear foot, for "Remove & Replace Sidewalk," shall include the sawing and removal of the

existing sidewalk, expansion joint material at connections, Class 'A' Concrete and reinforcing steel, as well as all necessary labor and equipment.

11B-44 4" PVC SEWER SERVICE EXTENSIONS:

The cost of the four-inch (4") sanitary sewer service extension shall include the cost of tying into the existing stubout, four-inch (4") PVC sewer pipe, four-inch (4") PVC plug, embedment, and other materials and labor for the installation of the sewer service line. The existing stubouts should be stubbed from beneath the proposed pavement to the right-of-way line. No extra payment will be made for the aforementioned items, but will be considered subsidiary to the cost of furnishing and installing the four-inch (4") PVC sanitary sewer service extension.

11B-45 WATER SERVICES:

The Contractor shall use saddles as specified by the pipe manufacturer for one-inch (1") taps. When tying into an existing $\frac{3}{4}$ -inch water meter, the one-inch (1") service line shall be reduced to $\frac{3}{4}$ inches at the meter. The cost of the reducer and associated fittings shall be subsidiary to the water service bid item.

The unit prices bid for the water services shall include the cost of the saddles, making the taps, the corporation stops, the necessary pipe, the curb stops, and the tying in and/or relocation of existing meter and box where necessary. On the 1 $\frac{1}{2}$ inch and two-inch water services, two-inch (2") oriseal valves with boxes shall be used and two-inch (2") Type 'K' hard copper pipe for the service line.

All service lines will be installed 30 inches below the pavement (minimum) or at the same elevation as the main, whichever is greater. Any existing service lines that are steel or galvanized steel shall be renewed with copper from the new main to the meter.

11B-46 RELOCATION OF EXISTING WATER METERS:

The unit price bid for adjusting water service line and relocating existing water meters and boxes shall include the cost of tying into the existing line or new water main where new service lines are being installed, the necessary tubing of pipe, fittings, tying in of the customers service line at the property line, re-setting the meter, backfill, and sod or hydromulch to match existing conditions. This shall also include lowering of service lines where they are found to be up in the future subgrade between the main and meter and on the customers side of the meter to the right-of-way line.

All, methodologies associated with tying existing services in their present location to the new main is considered subsidiary to the proposed bid item. Existing meter boxes shall

remain, but if boxes are broken (prior to construction) it should be noted to City personnel for appropriate replacement.

This specification is GENERAL for all existing City utility infrastructures (meter boxes, sewer/storm manholes, water valves, etc.) that may be replaced with the main or within the path of proposed sidewalks.

Franchise utility infrastructures shall be coordinated with the Franchisee for relocation and/or adjustment. In most cases, the sidewalks can be meandered around such structures.

11B-47 TRAFFIC CONTROL ALONG STREET:

See 11A-12

11B-48 BACKFILL AND INITIAL CLEANUP:

Backfill and initial cleanup shall be done daily. This work shall progress immediately behind pipe laying and shall be within fifty feet of the pipe laying operation at all times. It shall also include the disposal of all excess material on a daily basis. Ditch lines, storm drains, inlets, bar-ditches, and other drainage facilities should be maintained and cleaned on a daily basis so that they will function for their intended purposes.

Where lines or services are laid in, along, or across the street pavement, the ditch line shall be backfilled and compacted upon the completion of that day's work. Barricades with warning lights shall be erected at these locations and shall be maintained by the Contractor until such time as the pavement (asphalt) is replaced. Steel plates shall be placed across the ditch lines until the time that pavement is replaced, but no later than the first working day following the installation of the pipe, and the necessary CLSM, CTS, CTB, or crushed stone, as required elsewhere in these specifications. No later than the second day following the installation of a line, the specified asphalt shall be placed in the ditch and the street repair shall be completed.

No exceptions or deviations from the requirement that all ditch lines be repaired within two working days after the installation of the pipe will be sanctioned on this project. It is of utmost importance that we have the cooperation of the Contractor in the control of the traffic, and the procedures outlined for backfilling and cleanup on this project. In the event these procedures are not followed, pipe laying shall cease immediately and not resume until the cleanup is completed and the roadway is and safe for traffic.

Particular care shall be taken during inclement weather to assure that driveways are backfilled with washed rock, or other suitable material, and all-weather access maintained for property owners. No driveway shall be blocked for longer than two (2) hours and only after notifying the affected property owner.

Where lines or services are laid in, along, or across street pavement the pavement shall be left in a clean and acceptable condition. At the end of each work day the Contractor shall sweep and/or wash the pavement to leave the roadway completely clean of dirt and debris. Dirt, debris, and/or wash water shall be collected for appropriate disposal and shall NOT be washed into waterways or storm drains. Other suitable methods of maintaining the pavement in a clean, unobstructed condition may be utilized by the Contractor. No additional payment will be made for cleaning of pavement. It shall be considered subsidiary to the work performed under this contract.

11B-49 CLEAN-UP:

It is the intent of this contract that complete cleanup be performed by the Contractor prior to acceptance of the project and final payment. Backfilling and cleanup shall follow the laying of the pipe as closely as possible. Upon completion of the work, the Contractor shall remove all construction debris and excess material from the job site, leaving nothing objectionable on either public or private property.

After cleanup has been completed, the Contractor shall check to see that all drainage ditches are properly graded so as to provide adequate drainage and to prevent ponding of the water in the drainage ditch.

11B-50 BNSF CLOSING SPECIAL PROJECT PROVISIONS

N/A

SECTION 12.0
STARTING OF THE SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Procedures for starting provided systems, including equipment, pumps, and processes.
2. Provisions for pre-startup inspections by equipment manufacturers.
3. Provisions for instruction and demonstration of operation, adjustment, and maintenance of each system and the component parts.
4. Procedures to place each system in service and operate the system to prove performance and to provide for initial correction of defects in workmanship, calibration, and operation.

1.2 PRICE AND PAYMENT PROCEDURES

A.Measurement and Payment

1. Lump Sum Price - Work associated with this Item is included in the total lump sum price.

1.3 REFERENCES [NOT USED]

1.4 ADMINISTRATIVE REQUIREMENTS

A.Scheduling

1. Schedule training sufficiently in advance to accommodate City staff schedules.

1.5 SUBMITTALS [NOT USED]

1.6 ACTION SUBMITTALS/INFORMATIONAL SUBMITTALS

A.Test and Evaluation Reports

1. Equipment installation reports.

B.Special Procedure Submittals

1. A plan of action for testing, checking, and starting major equipment and process piping systems. Submit reports as required by this Section.

1.7 CLOSEOUT SUBMITTALS

A.Operation and Maintenance Data

1.8 MAINTENANCE MATERIAL SUBMITTALS [NOT USED]

1.9 QUALITY ASSURANCE [NOT USED]

1.10 DELIVERY, STORAGE, AND HANDLING [NOT USED]

1.11 FIELD [SITE] CONDITIONS [NOT USED]

1.12 WARRANTY [NOT USED]

PART 2 - PRODUCTS

2.1 OWNER-FURNISHED PRODUCTS [NOT USED]

2.2 MATERIALS

A. Testing Instrumentation

1. Furnish any instrumentation or other testing devices necessary to conduct tests.

2.3 ACCESSORIES [NOT USED]

2.4 SOURCE QUALITY CONTROL [NOT USED]

PART 3 - EXECUTION

3.1 INSTALLERS

A. Services of Manufacturer's Representatives

1. The Manufacturer's representative for inspection, supervision of installation, and training must be an experienced and competent technical (not sales) representative of the Manufacturer or Supplier.
2. Perform installation, adjustment, and testing of the equipment under the direct supervision of the Manufacturer's representative where specified.
3. The Manufacturer's representative is to instruct the City or his authorized personnel on operational procedures and maintenance requirements.
4. Include the cost of the services of the Manufacturer's representative in the equipment price.

3.2 EXAMINATION [NOT USED]

3.3 PREPARATION

A. Inspection and Start-Up

1. Inspect equipment prior to placing any equipment or system into operation. Make adjustments as necessary for proper operation.
 - a. Check for adequate and proper lubrication.
 - b. Determine that parts or components are free from undue stress from structural members, piping or anchorage.
 - c. Adjust equipment for proper balance and operations.
 - d. Determine that vibrations are within acceptable limits.
 - e. Determine that equipment operates properly under full load conditions.
 - f. Determine that the equipment is in true alignment.

B. Provide instruction and demonstration of the care and operation of the equipment to the Owner's personnel. Instruction is to include classroom and hands-on training.

C. Provide training in adequate detail to ensure that the trainees who complete the program will be qualified and capable of operating and maintaining the equipment, products, and systems provided.

3.4 OPERATOR TRAINING

- A. Operations Training is to include but not be limited to:
1. Orientation to provide an overview of system/subsystem configuration and operation
 2. Terminology, nomenclature, and display symbols.
 3. Operations theory.
 4. Equipment appearance, functions, concepts, and operation.
 5. Operating modes, practices and procedures under normal, diminished, and emergency conditions.
 6. Start-up and shutdown procedures.
 7. Safety Precautions.
 8. On-the-job operating experience for monitoring functions, supervisory, or command activities. Include functions and activities associated with diminished operating modes, failure recognition, and responses to system/subsystem and recovery procedures.
 9. Content and use of Operation and Maintenance manuals and related reference materials.
- B. Provide training for performing on-site routine, preventive, and remedial maintenance of the equipment, product, or system. Maintenance Training is to include but not be limited to:
1. Orientation to provide an overview of system/subsystem concept, configuration, and operation.
 2. Operations theory and interfaces.
 3. Instructions necessary to ensure a basic theoretical and practical understanding of equipment appearance, layout and functions.
 4. Safety Precautions.
 5. Use of standard and special tools and test equipment.
 6. Adjustment, calibration, and use of related test equipment.
 7. Detailed preventive maintenance activities.
 8. Troubleshooting, diagnostics, and testing.
 9. Equipment assembly and disassembly.
 10. Repair and parts replacement.
 11. Parts ordering practices and storage.
 12. Failure and recovery procedures.
 13. Cabling and/or interface connectors.
 14. Content and use of Operation and Maintenance manuals and related reference materials.
 15. Procedures for warranty repairs.
 16. Lubrication.
 17. Procedures, practices, documentation, and materials required to commence system maintenance.
- C. Provide a training plan that indicates the schedule and sequence of the training programs. The training plan is to include for each course:

1. Number of hours for the course.
2. Agenda and narrative description, including the defined objectives for each lesson.
3. Draft copy of training handbooks.
4. A descriptive listing of suggested reference publications.
5. Audio-visual equipment required for training.
6. Type and number of tools or test equipment required for each training session.

D. Provide and use training aids to complement the instruction and enhance learning.

1. Provide training handbooks for use in both the classroom and the hands-on phases of training for each course.
2. Instructional materials shall include references to the Operation and Maintenance Manuals and identify and explain the use of the manual.
3. Provide a copy of all audio/visual training materials used in the presentations.

E. Provide qualified instructors to conduct the training.

1. Instructors must have knowledge of the theory of operation and practical experience with the equipment, product, or system.
2. Instructors must have successfully conducted similar training courses.

F. Training may be recorded by the Owner or its consultants for use in future training. Provide legal releases or pay additional fees required to allow training by the manufacturer to be recorded.

G. Schedule for training is to be approved by Owner.

1. Schedule training and start-up operations for no more than one (1) piece of equipment or system at a time.
2. Owner may require re-scheduling of training if operations personnel are not available for training on a scheduled date.
3. Provide a minimum of two (2) weeks notice if training must be rescheduled.
4. Training is to be limited to twenty (20) hours per week. Time required for training is to be considered in the development of the project schedule.

H. Schedule and coordinate training for equipment, products, or systems which depend upon other equipment or systems for proper operation so that trainees can be made familiar with the operation and maintenance of the entire operating system.

I. Conduct a training course for the equipment products and systems listed below. Training is to be adequate to meet the training objectives described above and is to be for at least the minimum time indicated.

Equipment/System Description	Minimum Hours / Sessions
Submersible Pumps	4 / 1
Standby Generator Set	4 / 1
Process Control Systems Training	4 / 1

3.5 REPAIR [NOT USED]**3.6 RE-INSTALLATION [NOT USED]****3.7 FIELD QUALITY CONTROL****A.Initial Maintenance**

1. Maintain equipment until the project is accepted by the Owner.
 - a. Ensure that mechanical equipment is properly greased, oiled, or otherwise cared for as recommended by the Manufacturer.
 - b. Operate air handling equipment only when filters are in place and are clean. Change filters weekly during construction.
2. Service equipment per the Manufacturer's instructions immediately before releasing the equipment to the Owner.
 - a. Replace replaceable filters and clean permanent filters associated with other packaged equipment.
 - b. Remove and clean screens at strainers in piping systems.
 - c. Clean insects from intake louver screens.

3.8 SYSTEM STARTUP

A.Start, test, and place equipment and systems into operation for 30 days to allow the City and Engineer to observe the operation and overall performance of the equipment and to determine that controls function as intended.

B.Equipment which operates on a limited or part-time basis shall be operated in the presence of the City and Engineer to demonstrate that controls function as specified.

C.Perform acceptance test as specified in individual specification sections. Demonstrate that equipment and systems meet the specified performance criteria.

D.Unless specifically stated otherwise in the individual equipment specifications, equipment and systems are not substantially complete until the end of this initial operation period. If an exception to this requirement is specifically noted in an individual equipment specification, the exception shall only apply to that particular piece of equipment and not to the remaining components provided under the project.

3.9 ADJUSTING [NOT USED]**3.10 CLEANING [NOT USED]****3.11 CLOSEOUT ACTIVITIES [NOT USED]****3.12 PROTECTION [NOT USED]****3.13 MAINTENANCE [NOT USED]****3.14 ATTACHMENTS [NOT USED]**

END OF SECTION