



Public Works

SPECIFICATIONS AND CONTRACT DOCUMENTS
FOR THE CONSTRUCTION OF

EAST RENFRO STREET WATER LINE IMPROVEMENTS
(CPN# 21PC02)

FOR THE
CITY OF BURLESON, TEXAS
PUBLIC WORKS DEPARTMENT

MAY 2022



 , P.E.

Date: MAY 13, 2022

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SECTION 1
ADVERTISEMENT FOR BIDS

City of Burleson
Burleson, Texas
East Renfro Street Water Line Improvements Project

General Notice

The City of Burleson (Owner) is requesting Bids for the construction of the following Project:

East Renfro Street Water Line Improvements

City of Burleson Project No. 21PC02

Bids for the construction of the Project will be received electronically in Bonfire, The City of Burleson's bidding platform.

The Project includes the following Work:

800 LF of Water Line Installation

Bids are requested for the following Contract: **East Renfro Street Water Line Improvements**

Owner anticipates that the Project's total bid price will be approximately \$383,000.00. The Project has an expected duration of 45 calendar days.

Obtaining the Bidding Documents

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

<https://burlesontx.bonfirehub.com/portal/?tab=openOpportunities>

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

Instructions to Bidders.

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

This Advertisement is issued by:

Owner: **City of Burleson, Texas**

By: **Justin Scharnhorst**

Title: **Purchasing Manager**

Date: **May 20th, 2022**

SECTION 2
INSTRUCTIONS TO BIDDERS

1. PROPOSAL:

- 1.1 The Proposal is included in these Bidding Documents; additional copies may be obtained from OWNER.
- 1.2 All blanks on the Proposal shall be completed in printed handwritten ink or by typewriter.
 - a. Bidder may use the original proposal forms included in these bid documents or the Bidder may substitute a computer-generated proposal for the original proposal included in these bid documents. The substitute submittal shall be word-for-word as written in the original proposal contained herein. The Bidder shall also sign the Substitute Proposal.
 - b. If the Substitute Proposal changes the intent of a bid item or contains an error in the quantities, unit prices, or extension of prices, the OWNER may reject the bid submitted. Substitute Proposals must be Included in the same envelope as the remainder of the bid documents. The original proposal shall be clearly marked that a Substitute Proposal is obtained in the bid package submitted.
 - c. The Bid price of each item on the form shall be stated in words and numerals. Words take precedence in case of a conflict. In the case of a conflict between the unit price indicated and the extended amount shown, the unit indicated multiplied by the state quantity shall govern.
- 1.3 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.
- 1.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title shall appear under the signature and at the official address of the partnership shall be shown below the signature.
- 1.5 All names shall be typed or printed below the signature.
- 1.6 The bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which must be filled in on the Proposal).

- 1.7 The address and telephone number for communications regarding the bid shall be shown.
- 1.8 The bid shall be complete with prices stated for all alternates. The Bidder should be aware that the OWNER to stay within the City's available funds could adjust the scope of the project. Alternates selected and revisions to limits of construction and resulting quantity adjustments will be identified in the Notice of Award and will be adjusted in the proposal contained in the executed contract.

2. **SUBMISSION OF BIDS:**

It shall be the Bidder's responsibility for the delivery of his proposal at the proper place by the time stated in the Notice to Bidders. The mere fact that a proposal was dispatched will not be considered. Each Proposal shall be in a sealed envelope plainly marked with the name or description of the project as shown on the front cover of the Contract Documents. The CONTRACTOR shall acknowledge, on the outside of the envelope, receipt of any addenda.

3. **BID SECURITY:**

Each bid must be accompanied by a certified or cashier's check or an approved bidder's bond made payable to the Owner in an amount of five (5%) percent of the largest possible total of the bid as a guarantee that, if awarded the contract, the Bidder will enter into a Contract and execute all necessary bonds. Bid securities will be returned to Bidders when the Contract award is made or bids are rejected.

4. **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 acceptable to and approved by the Owner, 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.

5. **QUALIFICATION OF BIDDERS:**

All Bidders on this project must be qualified to perform work as outlined within the contract documents. The City of Burleson Department of Engineering Services will verify the work history and qualifications. The following subcontractors must also be qualified if applicable to the project: water and sewer, paving, storm drain, excavation and parkway and median landscape work (includes seeding, sod, irrigation and tree and shrubbery planting). Bidders must be familiar with the North Central Texas Council of Governments (NCTCOG) Standard Specifications for Public Works Construction, latest edition, and the construction methods, Standards and related Ordinances of the City of Burleson.

6. **BIDDERS KNOWLEDGE OF CONDITIONS:**

- 6.1 Prior to submission of a proposal, bidders shall make a thorough inspection of the site of work and a thorough examination of the plans and specifications and shall become informed as to the nature of the work, labor conditions, federal, state and local Laws and Regulations, and all other matters that may affect the cost, progress, performance and time of completion of the Work.
- 6.2 Bidder shall notify OWNER of all conflicts, errors or discrepancies in the Contract Documents.
- 6.3 Bidder shall pay particular attention to providing methods of ingress and egress to adjacent private and public properties, procedures for protection existing improvements and disposition of all materials to be removed.
- 6.4 Information and data reflected in the Contract Documents with respect to underground facilities at or contiguous to the site is based upon information and data furnished to OWNER by owners of such underground facilities or other, and OWNER does not assume responsibility for the accuracy or completeness thereof.
- 6.5 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 or storage of materials and equipment not provided by OWNER, are to be obtained and, if necessary, paid by Contractor.
- 6.6 The submission of a bid will constitute an incontestable representation by Bidder that Bidder has complied with every requirement of the Article 6, that without exception the bid is premised upon performing and furnishing the work required by the Contract Documents and such means, method, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey

understanding of all terms and conditions for performance and furnishing of the work.

7. **AVAILABILITY OF UTILITY SERVICES**

OWNER shall not make available or guarantee any utility services to the Contractor such as (but not all inclusive) water, sewer, electricity, gas, or telephone for performance of his work in this contract. Contractor shall be solely responsible for completing all requirements, make all arrangements, and make all payments as necessary to procure any utility services necessary to complete the work as prescribed in this contract.

8. **INTERPRETATION OF DOCUMENT:**

If any person contemplating submitting a bid is in doubt as to the meaning of any part of the plans, specifications, or other proposed contract documents, they may submit to the OWNER a written request for an interpretation thereof at least five (5) days prior to opening of bids. The person submitting the request will be responsible for its prompt delivery. Any interpretation of these documents will be made only by addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. Only questions answered by formal written Addenda are to be binding. Oral interpretations or clarification will be without legal effect. The Owner will not be responsible for any other explanations or interpretations.

9. **STANDARD SPECIFICATIONS:**

9.1 All work for this project including but not limited to all grading, utility and paving improvements described in this Proposal and Construction Drawings shall be done 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.

9.2 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.

10. **AWARD OF CONTRACT:**

10.1 OWNER reserves the right to reject any bid, to waive any and all informalities and to negotiate contract amendments with the successful Bidder, and the right to disregard all nonconforming, non-responsive, unbalanced or conditional bids. Also, OWNER reserves the right to reject the bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard of criteria established by OWNER. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the correct multiplication. Discrepancies between the unit price in words and the unit price in figures will be resolved in favor of the price in words. Discrepancies between the indicated sum of a column of figures and the correct sum therefore will be resolved in favor of the correct sum.

10.2 In evaluating bids, OWNER will consider the qualifications of the Bidder, whether or not the bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the bid form or prior to the Notice of Award.

11. **ALTERNATE BIDS:**

No bids for alternate work items shall be submitted except as shown on the Proposal. The OWNER reserves the right to choose either the base bid or alternate bid whichever is most advantageous to the OWNER. There will be no adjustments to unit prices bid due to the OWNER'S choice of alternate bids.

12. **EXECUTION OF CONTRACT**

12.1 The successful Bidder shall execute the formal Contract Agreement and required Bonds to the OWNER within fifteen (15) days after the Notice of Award.

12.2 A Notice to Proceed authorizing the Contractor to commence work will be issued after the Contract Documents have been executed by the Owner.

13. **PROTECTION OF THE PUBLIC:**

For protection and convenience of the public and emergencies, the successful Bidder shall furnish the City with a telephone number at which the contractor can be contacted 24 hours a day during the entire construction period of this project. This telephone number shall be furnished to the City in writing prior to the beginning of construction.

14. **AFFIDAVIT AGAINST PROHIBITED ACTS:**

It shall be the successful Bidder's responsibility to complete this affidavit (Section 5 of the Contract Documents) prior to execution of the Contract by the City of Burleson. Failure to complete this form may prohibit the contractor's ability to secure the Contract.

15. **WAGE RATES**

Contractor shall pay no less than the general prevailing rates for the Project location as determined in accordance with statutory requirements. The minimum rates for various labor classifications as established by the OWNER are included in the contract documents.

16. **SALES TAXES**

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

17. **GOVERNING DOCUMENTS:**

The Work shall conform to the requirements of these specifications and the details as shown therein. These contract documents are intended to be Primary. Requirements of any of the contract documents are as binding as if called for by all. In case of conflict between the referenced Specifications and the Special Project Specifications, the Special Project Specifications shall govern.

18. **SOIL INVESTIGATION:**

Investigation of soil and foundation conditions of the size and areas near the site is considered subsidiary to the paving portion of the work. A certified lab competent to do such investigations for subgrade stabilization shall be used to determine the amounts of cement or lime necessary for the structural ability of the roadway. It has been assumed to use the rate of 30# per square yard of lime or Portland cement, but the actual amount is to be verified by the lab prior to pavement work. A copy of the lab report shall be submitted to the City of Burleson for approval.

19. **REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK:**

All work that has been rejected or condemned shall be repaired, or if it cannot be repaired satisfactorily, it shall be removed and replaced at the contractor's expense. Defective materials shall be immediately removed from the site of the work. Work done without line and grade having been given, work done beyond the lines or not in conformity with the grades

shown on the drawings or as given, save as herein provided, work done without proper inspection, or any extra or unclassified work done without written authority and prior agreement in writing as to prices, shall be done at the contractor's risk, and will be considered unauthorized, and at the option of the OWNER, may not be measured and paid for, and may be ordered removed at the contractor's expense. If the contractor fails to satisfactorily repair, replace or remove the rejected, condemned or unauthorized work or materials immediately upon receipt of written notice, the OWNER will have the authority to cause such remediation to be performed and to deduct the cost thereof from any monies due or to become due to the contractor.

20. **TRENCH SAFETY:**

20.1 A trench safety system must be provided for all trench excavations according to current OSHA requirements.

20.2 On all public projects bid by the City or private projects to be constructed within right-of-way or easements to be conveyed to the City, compliance with the current minimum Occupational Safety and Health Administration (OSHA) or other governmental agencies standards for trench safety will be required as part of the plans and specifications. Prior to start of construction a detailed trench safety system must be provided to the City by the contractor. This detailed trench safety system must meet all requirements by OSHA or other governmental agencies, and be designed and certified by a professional engineer licensed in the State of Texas.

20.3 A pay item shall be included in the plans and specifications for the trench safety system. Payment will be on a linear-foot basis and will be full compensation for labor, tools, materials, equipment and incidentals necessary to complete the work, including the removal of the trench safety system and back-filling the trench. Pursuant to Texas law, the City of Burleson has adopted a trench safety policy, which is addressed in Section 13 of the Specifications. Each bidder should be familiar with Section 13 prior to submitting a bid.

21. **BID TABULATION:**

A tabulation of all bids will be available within seven (7) working days of the bid opening.

22. **ADDENDUM:**

22.1 The OWNER reserves the right to issue addendum(s) to the Plans, Proposal, Specifications, and Special Provisions. When possible, the OWNER shall fax addendum(s) to the bidders.

22.2 The Bidders will acknowledge the receipt of the addendum(s) by re-faxing the owner's cover sheet of the fax of the addendum(s) back to the owner with proper acknowledgement of receipt of addendum(s).

- 22.3 It shall be the Bidder's responsibility to ensure that they are aware of all addendum(s) issued by the owner.
- 22.4 Upon receipt of the addendum(s), the Bidder shall acknowledge the receipt of the addendum(s) in the appropriate spaces provided in the proposal.
- 22.5 A statement acknowledging receipt of each addendum identified by its number must be shown on the outside of the bid envelope.
- 22.6 **Bids that have not properly acknowledged addendum(s) on the outside of the bid envelope will not be opened.**

SECTION 3

PREVAILING WAGE RATES FOR MUNICIPAL CONSTRUCTION IN BURLESON, TEXAS

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

THE STATE OF TEXAS §

COUNTY OF JOHNSON §

AFFIDAVIT

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 stated as follows:

"My name is _____. I am of sound mind and capable of making this affidavit. "I am a _____ for the _____ which company entered into a contract on the _____ day of _____, 20____, to construct the East Renfro Water Line Improvements Project, 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

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: _____

"General Decision Number: TX20220025 02/25/2022

Superseded General Decision Number: TX20210025

State: Texas

Construction Type: Highway

Counties: Archer, Callahan, Clay, Collin, Dallas, Delta, Denton, Ellis, Grayson, Hunt, Johnson, Jones, Kaufman, Parker, Rockwall, Tarrant and Wise Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at

[https://www.dol.gov/agencies/whd/government-contracts.](https://www.dol.gov/agencies/whd/government-contracts)

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

* SUTX2011-007 08/03/2011

	Rates	Fringes
CONCRETE FINISHER (Paving and Structures).....	\$ 14.12	**
ELECTRICIAN.....	\$ 19.80	
FORM BUILDER/FORM SETTER		
Paving & Curb.....	\$ 13.16	**
Structures.....	\$ 13.84	**
LABORER		
Asphalt Raker.....	\$ 12.69	**
Flagger.....	\$ 10.06	**
Laborer, Common.....	\$ 10.72	**
Laborer, Utility.....	\$ 12.32	**
Pipelayer.....	\$ 13.24	**
Work Zone Barricade		
Servicer.....	\$ 11.68	**
POWER EQUIPMENT OPERATOR:		
Asphalt Distributor.....	\$ 15.32	
Asphalt Paving Machine.....	\$ 13.99	**
Broom or Sweeper.....	\$ 11.74	**
Concrete Pavement		
Finishing Machine.....	\$ 16.05	
Concrete Saw.....	\$ 14.48	**
Crane Operator, Lattice		
Boom 80 Tons or Less.....	\$ 17.27	
Crane Operator, Lattice		
Boom over 80 Tons.....	\$ 20.52	
Crane, Hydraulic 80 Tons		
or Less.....	\$ 18.12	
Crawler Tractor.....	\$ 14.07	**
Excavator, 50,000 pounds		
or less.....	\$ 17.19	
Excavator, over 50,000		
pounds.....	\$ 16.99	
Foundation Drill , Truck		
Mounted.....	\$ 21.07	
Foundation Drill, Crawler		
Mounted.....	\$ 17.99	
Front End Loader 3 CY or		
Less.....	\$ 13.69	**
Front End Loader, over 3 CY.	\$ 14.72	**
Loader/Backhoe.....	\$ 15.18	
Mechanic.....	\$ 17.68	
Milling Machine.....	\$ 14.32	**
Motor Grader, Fine Grade....	\$ 17.19	
Motor Grader, Rough.....	\$ 16.02	
Pavement Marking Machine....	\$ 13.63	**
Reclaimer/Pulverizer.....	\$ 11.01	**
Roller, Asphalt.....	\$ 13.08	**
Roller, Other.....	\$ 11.51	**
Scraper.....	\$ 12.96	**
Small Slipform Machine.....	\$ 15.96	

Spreader Box.....\$ 14.73 **
 Servicer.....\$ 14.58 **
 Steel Worker (Reinforcing).....\$ 16.18
 TRUCK DRIVER
 Lowboy-Float.....\$ 16.24
 Off Road Hauler.....\$ 12.25 **
 Single Axle.....\$ 12.31 **
 Single or Tandem Axle Dump
 Truck.....\$ 12.62 **
 Tandem Axle Tractor with
 Semi Trailer.....\$ 12.86 **
 Transit-Mix.....\$ 14.14 **
 WELDER.....\$ 14.84 **

 WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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 ** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$15.00) or 13658 (\$11.25). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

 The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can

be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
 Wage and Hour Division
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

SECTION 4

OUT OF STATE CONTRACTOR COMPLIANCE TO STATE LAW

The State Legislature of the State of Texas at its 1985 Legislative Session passed House Bill 620 relative to the award of contracts to non-resident bidders. This law provides that, in order to be awarded a contract as low bidder, a non-resident bidder (out-of-state contractor whose corporate office or principal place of business is outside the State of Texas) bid projects in Texas at an amount lower than the lowest Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a non-resident bidder in order to obtain a comparable contract in the state in which the non-resident's principal place of business is located. The appropriate blanks in the following statement must be filled out by all out-of-state or non-resident bidders in order for those bids to meet specifications. The failure of out-of-state or non-resident contractors to do so will automatically disqualify that bidder.

Non-resident contractor in _____ (give state), our principal place of business, is required to be _____ percent lower than resident bidders by State Law. A copy of the statute is attached.

Non-resident contractor in _____ (give state), our principal place of business, is not required to underbid resident bidders.

BIDDER

GRA TEX UTILITIES

Company

By **MICHAEL BRAGGS**

(Please Print)

PO BOX 700

Address

Michael Braggs

Signature

Digitally signed by Michael Braggs
DN: c=US, e=GRATEXESTIMATING@GMAIL.COM, o=Gra Tex
Utilities, ou=Estimator/PM, cn=Michael Braggs
Reason: I am approving this document
Date: 2022.06.15 08:35:03-0500

ARLINGTON, TX 76004

City

State

Zip

ESTIMATOR/PM

Title (Please Print)

SECTION 5

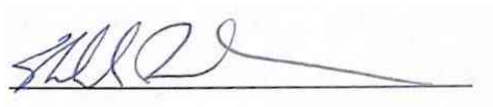
AFFIDAVIT AGAINST PROHIBITED ACTS

I hereby affirm that I am aware of the provisions of the Texas Penal Code Sec. 36.02, 36.08, 36.09, and 36.10 (a copy of which follows), dealing with Bribery and Gifts to Public Servants. I further affirm that I will adhere to such rules and instruct and require all agents, employees, and sub-contractors to do the same. I am further aware that any violation of these rules subjects this agreement to revocation, my removal from bid lists, prohibiting future contract/subcontract work, revocation of permits, and prosecution.

Michael Braggs

Digitally signed by Michael Braggs
DN: c=US,
e=GRATEXESTIMATING@GMAIL.COM, o=Gra
Tex Utilities, ou=Estimator/PM, cn=Michael
Braggs
Reason: I am approving this document
Date: 2022.06.15 08:59:21-05'00'

Signature



ATTEST (if corporation)

06/15/22

Date

06/15/22

Date

TEXAS PENAL CODE

TITLE 8: OFFENSES AGAINST PUBLIC ADMINISTRATION

CHAPTER 36. BRIBERY AND CORRUPT INFLUENCE

36.02 BRIBERY

- (a) A person commits an offense if he intentionally or knowingly offers, confers or agrees to confer on another, or solicits, accepts or agrees to accept from another:
- (1) any benefit as consideration for the recipient's decision, opinion, recommendation, vote or other exercise of discretion as a public servant, party official or voter;
 - (2) any benefit as consideration for the recipient's decision, vote, recommendation or other exercise of official discretion in a judicial or administrative proceeding;
 - (3) any benefit as consideration for a violation of a duty imposed by law on a public servant or party official; or
 - (4) any benefit that is a political contribution, as defined by Title 15, Election Code, if the benefit was offered, conferred, solicited, accepted or agreed to, pursuant to an express agreement, to take or withhold a specific exercise of official discretion if such exercise of official discretion would not have been taken or withheld but for the benefit; notwithstanding any rule of evidence or jury instruction allowing factual inferences in the absence of certain evidence, direct evidence of the express agreement shall be required in any prosecution under this subdivision.
- (b) It is no defense to prosecution under this section that a person whom the actor sought to influence was not qualified to act in the desired way whether because he had not yet assumed office, or he lacked jurisdiction or for any other reason.
- (c) It is no defense to prosecution under this section that the benefit is not offered or conferred or that the benefit is not solicited or accepted until after:
- (1) the decision, opinion, recommendation, vote or other exercise of discretion has occurred; or
 - (2) the public servant ceases to be a public servant.
- (d) It is an exception to the application of Subdivisions (1), (2) and (3) of Subsection (a) of this section that the benefit is a political contribution accepted as defined by Title 15, Election Code.
- (e) An offense under this section is a felony of the second degree.

36.08 GIFT TO PUBLIC SERVANT BY PERSON SUBJECT TO HIS JURISDICTION

- (a) A public servant in an agency performing regulatory functions or conducting inspections or investigations commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows to be subject to regulation, inspection or investigation by the public servant or his agency.
- (b) A public servant in an agency having custody of prisoners commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows to be in his custody or the custody of his agency.
- (c) A public servant in an agency carrying on civil or criminal litigation on behalf of government commits an offense if he solicits, accepts or agrees to accept any benefit from a person against whom the public servant knows litigation is pending or contemplated by the public servant or his agency.
- (d) A public servant who exercises discretion in connection with contracts, purchases, payments, claims or other pecuniary transactions of government commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows is interested in or likely to become interested in any contract, purchase, payment, claim or transaction involving the exercise of his discretion.
- (e) A public servant who has judicial or administrative authority, who is employed by or in a tribunal having judicial or administrative authority, or who participates in the enforcement of the tribunal's decisions, commits an offense if he solicits, accepts or agrees to accept any benefit from a person the public servant knows is interested in or likely to become interested in any matter before the public servant or tribunal.
- (f) A member of the legislature, the governor, the lieutenant governor or a person employed by a member of the legislature, the governor, the lieutenant governor or an agency of the legislature commits an offense if he solicits, accepts or agrees to accept any benefit from any person.
- (g) A public servant who is a hearing examiner employed by an agency performing regulatory functions and who conducts hearings in contested cases commits an offense if the public servant solicits, accepts or agrees to accept any benefit from any person who is appearing before the agency in a contested case, who is doing business with the agency, or who the public servant knows is interested in any matter before the public servant. The exception provided by Section 36.10(b) of this code does not apply to a benefit under this subsection.
- (h) An offense under this section is a Class A misdemeanor.

36.09 OFFERING GIFT TO PUBLIC SERVANT

- (a) A person commits an offense if he offers, confers or agrees to confer any benefit on a public servant that he knows the public servant is prohibited by law from accepting.
- (b) An offense under this section is a Class A misdemeanor.

36.10 NON-APPLICABLE

- (a) Sections 36.08 (Gift to Public Servant) and 36.09 (Offering Gift to Public Servant) of this code do not apply to:
- (1) a fee prescribed by law to be received by a public servant or any other benefit to which the public servant is lawfully entitled or for which he gives legitimate consideration in a capacity other than as a public servant;
 - (2) a gift or other benefit conferred on account of kinship or a personal, professional or business relationship independent of the official status of the recipient; or
 - (3) a benefit to a public servant required to file a statement under Chapter 421, Acts of the 63rd Legislature, Regular Session, 1973 (Article 6252-9b, Vernon's Texas Civil Statutes), or a report under Title 15, Election Code, that is derived from a function in honor or appreciation of the recipient if:
 - (A) the benefit and the source of any benefit in excess of \$50 is reported in the statement; and
 - (B) the benefit is used solely to defray the expenses that accrue in the performance of duties or activities in connection with the office which are nonreimbursable by the state or political subdivision;
 - (4) a political contribution as defined by Title 15, Election Code; or
 - (5) a gift, award or memento to a member of the legislative or executive branch that is required to be reported under Chapter 305, Government Code.
- (b) Section 36.08 (Gift to Public Servant) of this code does not apply to food, lodging, transportation or entertainment accepted as a guest and, if the donee is required by law to report those items, reported by the donee in accordance with that law.
- (c) Section 36.09 (Offering Gift to Public Servant) of this code does not apply to food, lodging, transportation or entertainment accepted as a guest and, if the donor is required by law to report those items, reported by the donor in accordance with that law.

SECTION 5A

CONFLICT OF INTEREST

The Contractor covenants and agrees that Contractor and its officers, employees, and agents will have no interest, including personal financial interest, and will acquire no interest, either directly or indirectly, which will conflict in any manner with the performance of the services called for under this Contract. No officer or employee of the City shall have a financial interest, direct or indirect, in any contract with the City, or be financially interested, directly or indirectly, in the sale to the City of any land, materials, supplies or services, except on behalf of the City or in compliance with the provisions of the City of Burleson Personnel Policies and Procedures Manual. Any violation of this provision shall render this contract voidable at the discretion of the City.

A person or business, and their agents, contract or enter into an agreement with the City, are required by Texas Local Government Code, Chapter 176, to file a conflict of interest questionnaire FORM CIQ. Form CIQ is available online at www.ethics.state.tx.us or electronically at www.tml.org/legal - Ethics Form ECIQ.

Sec. 176.002. APPLICABILITY TO CERTAIN VENDORS AND OTHER PERSONS.

- (a) This chapter applies to a person who:
 - (1) enters or seeks to enter into a contract with a local governmental entity; or
 - (2) is an agent of a person described by Subdivision (1) in the person's business with a local governmental entity.
- (b) A person is not subject to the disclosure requirements of this chapter if the person is
 - (1) a state, a political subdivision of a state, the federal government, or a foreign government; or
 - (2) an employee of an entity described by Subdivision(1), acting in the employee's official capacity.

Sec. 176.006. Disclosure requirements for vendors and other persons; questionnaire.

- (a) A person described by Section 176.002(a) shall file a completed conflict of interest questionnaire if the person has a business relationship with a local governmental entity and:
 - (1) has an employment or other business relationship with an officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A); or
 - (2) has given an officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1).

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

- (1) the date that the person:
 - (A) begins discussion or negotiations to enter into a contract with the local governmental entity; or
 - (B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the person becomes aware:

The form must be filed with the City Secretary no later than seven days after the date the person or business contracts with the City. Such persons and businesses, and their agents, must also file an updated questionnaire not later than September 1 of each year in which the person or business contract begins, and within seven days after the date of an event that would make a filed questionnaire incomplete or inaccurate. An updated complete questionnaire is not required if the person or business filed a questionnaire or updated questionnaire after June 1 but before September 1.

SECTION 5B

HOUSE BILL 89 VERIFICATION FORM

PROHIBITION ON CONTRACTS WITH COMPANIES BOYCOTTING ISRAEL

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

1. does not boycott Israel; and
2. will not boycott Israel during the term of the Contract Pursuant to Section 2270.001,

TEXAS GOVERNMENT CODE:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

I, (authorized official), do hereby depose and verify the truthfulness and accuracy of the contents of the statements submitted on this certification under the provisions of Subtitle F, Title 10, Government Code Chapter 2270 and that the company named below:

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

Company Name

Signature of Authorized Official

Title of Authorized Official Date

SECTION 6

PROPOSAL

To: The City of Burleson
141 W. Renfro
Burleson, TX 76028

For: East Renfro Street Water Line Improvements Project
City Project No. 21PC02

TO THE CITY OF BURLESON, TEXAS:

The undersigned hereby proposes to furnish the equipment, fuel, labor, materials, power, tools, superintendence, transportation, and to perform the work required for the construction of the East Renfro Street Water Line Improvements Project, City of Burleson Project No. 21PC02, in the City of Burleson, Texas, for the following prices, which prices it is clearly and definitely understood shall include all construction materials and equipment as set out in the basis of payment in the contractual documents and maintaining same as required by the detailed specifications.

Contractor understands that these quantities are approximate and that the actual price paid by the City to the Contractor will be made based on the actual quantity installed in the field.

PROPOSAL FORM EXHIBIT 'A'

City of Burleson
E. Renfro Street Water Improvements Project

Item No.	Estimated Quantity	Unit	Item Description Total Unit Price Written in Words	Unit Price	Extension
1	1	LS	Site Preparation and Mobilization _____ Dollars and _____ Cents Per Lump Sum	\$ _____	\$ _____
2	106	LF	16" PVC (DR 18) Water Line By Open Cut _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
3	467	LF	8" PVC (DR 18) Water Line By Open Cut _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
4	131	LF	8" PVC (DR 18) Water Line Thru Casing Pipe _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
5	131	LF	20" Steel Casing By Bore _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____

PROPOSAL FORM EXHIBIT 'A'

City of Burleson
E. Renfro Street Water Improvements Project

Item No.	Estimated Quantity	Unit	Item Description Total Unit Price Written in Words	Unit Price	Extension
6	1.6	TON	Water Line Fittings <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents Per Ton	\$ _____	\$ _____
7	43	LF	4" PVC Water Pipe By Open Cut <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
8	55	LF	6" PVC Water Pipe By Open Cut <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
9	2	EA	4" Gate Valve and Box <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
10	2	EA	6" Gate Valve and Box <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
11	6	EA	8" Gate Valve and Box <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____

PROPOSAL FORM EXHIBIT 'A'

City of Burleson
E. Renfro Street Water Improvements Project

Item No.	Estimated Quantity	Unit	Item Description Total Unit Price Written in Words	Unit Price	Extension
12	1	EA	10" Gate Valve and Box <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
13	1	EA	16" Gate Valve and Box <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
14	8	EA	Connect to Existing Water Line <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
15	1	EA	Relocate Existing Fire Hydrant Assembly <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
16	106	LF	Remove Existing 16" PVC Water Line <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
17	3	EA	Remove Existing Valve <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____

PROPOSAL FORM EXHIBIT 'A'

City of Burleson
E. Renfro Street Water Improvements Project

Item No.	Estimated Quantity	Unit	Item Description Total Unit Price Written in Words	Unit Price	Extension
18	40	LF	8" PVC SDR-26 (DD2241) Sanitary Sewer Line <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
19	40	CY	Cement Stabilized Backfill <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Cubic Yard	\$ _____	\$ _____
20	238	SY	Concrete Pavement Repair <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Square Yard	\$ _____	\$ _____
21	50	LF	Concrete Curb Repair <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
22	1	EA	Water Service Connections <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Each	\$ _____	\$ _____
23	1	LS	Exploratory Excavation <hr style="width: 100%;"/> _____ Dollars and _____ Cents Per Lump Sum	\$ _____	\$ _____

PROPOSAL FORM EXHIBIT 'A'

City of Burleson
 E. Renfro Street Water Improvements Project

Item No.	Estimated Quantity	Unit	Item Description Total Unit Price Written in Words	Unit Price	Extension
24	671	LF	Trench Safety _____ Dollars and _____ Cents Per Linear Foot	\$ _____	\$ _____
25	1	LS	Traffic Control, TxDOT Approved _____ Dollars and _____ Cents Per Lump Sum	\$ _____	\$ _____
26	138	SY	Surface Restoration and Sodding _____ Dollars and _____ Cents Per Square Yard	\$ _____	\$ _____
27	1	LS	Temporary Water Service (Water Line 'A') _____ Dollars and _____ Cents Per Lump Sum	\$ _____	\$ _____
28	1	LS	Temporary Water Service (Water Line 'B') _____ Dollars and _____ Cents Per Lump Sum	\$ _____	\$ _____
29	1	LS	Temporary Water Service (Water Line 'C') _____ Dollars and _____ Cents Per Lump Sum	\$ _____	\$ _____

PROPOSAL FORM EXHIBIT 'A'

City of Burleson
E. Renfro Street Water Improvements Project

Item No.	Estimated Quantity	Unit	Item Description Total Unit Price Written in Words	Unit Price	Extension
30	1	LS	Construction Contingency, As Directed by Owner, Complete for an Amount Not to Exceed <hr style="width: 80%; margin-left: 0;"/> _____ FIFTEEN THOUSAND Dollars and _____ ZERO Cents Per Lump Sum	\$ 15,000 _____	\$ 15,000 _____

<p>Total Base Proposal</p> <hr style="width: 80%; margin-left: auto; margin-right: auto;"/> <p style="text-align: right;">_____ Dollars and</p> <p style="text-align: right;">_____ Cents \$ _____</p>
--

Construction Time: Offeror shall complete the work within 45 calendar days from notice to proceed to substantial completion.

Successful BIDDER:

1. The undersigned bidder agrees to begin work within fifteen (15) calendar days after date of written notice to do so and to complete the work within 45 calendar days after the date on which he is required to begin; provided, however, that the OWNER'S construction funds are available.

Enclosed with this Proposal is a Bidder's Bond or Cashier's Check for \$363,427.12 (\$18,171.36 5%) dollars, which it is agreed shall be collected and retained by the OWNER as liquidated damages if the OWNER accepts this bid within sixty (60) days after the opening of bids, and the undersigned bidder then fails to execute the contract and bonds with the said OWNER within ten (10) days after official notice of such acceptance; otherwise, said Bidder's Bond or Check shall be returned to the undersigned on demand. This sum of money is not to be considered as a penalty, but shall be deemed, taken and treated as reasonable liquidated damages. The sum of money is fixed and agreed on between the bidder and OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damage to the owner.

2. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

BIDDER has examined copies of all the Bidding Documents and of the following Addenda (receipt of which is hereby acknowledged):

Addendum No. 1 Michael Braggs

Digitally signed by Michael Braggs
DN: C=US, E=GRATEXESTIMATING@GMAIL.COM, O=Gra Tex Utilities,
OU=Estimator/PM, CN=Michael Braggs
Reason: I am approving this document
Date: 2022.06.15 08:24:01-05'00'

Addendum No. 2 _____

Addendum No. 3 _____

3. BIDDER is familiar with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
4. BIDDER has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all necessary examinations, investigations, explorations, tests and studies which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by BIDDER for such proposes.

5. BIDDER has reviewed and checked all information and data shown, indicated in the Contract Documents with respect to existing underground facilities at, or contiguous to the site and assumes responsibility for the accurate location of said underground facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said underground facilities are or will be required by BIDDER in order to perform or furnish the Work at the Contract Price, within the contract time and in accordance with the other terms and conditions of the Contract Documents.
6. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other BIDDER to submit a false or sham BID; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.
7. Total calendar days to complete all units (Note: Contractor has the option to construct all or some units simultaneously. Total calendar days to be determined based upon how Contractor intends to schedule the work. Schedules for various units may overlap at Contractor's discretion).
TOTAL DAYS: 45

BIDDER agrees that the work shall be substantially complete and ready for final payment within the number of calendar days listed herein from the date when the contract time commences to run. See Section 7 regarding contract time.

8. BIDDER has included the cost of everything which will be needed to construct all the work called for in the specifications or the contract documents, in the unit cost for the bid items listed above. All such work for which there is not a specific bid item is considered subsidiary to the related major bid item and its cost is included in the appropriate bid item listed above.
9. BIDDER acknowledges that the quantities indicated in the previous schedule are not guaranteed and may be changed to conform with the Work. BIDDER has not detected any inaccuracies in the lengths, sizes and quantities shown in the plans. The quantities as shown in the proposal are presumed to be the actual quantities required to construct the Work.
10. BIDDER acknowledges that the City of Burlison reserves the right to delete any portion of this project, as it may deem necessary to stay within the City's available funds. Should the City elect to delete any portion, the contract quantities will be adjusted accordingly.

11. BIDDER has reviewed and understands the various additive alternate work scoped associated this project and has provided corresponding prices and time frames for each as requested in the proposal. Bidder acknowledges that the City of Burleson reserves the right to add or delete these alternates in any combination, as it may deem necessary to stay within the City's available funds.
12. BIDDER accepts the provisions as to liquidated damages (\$240.00 per calendar day) in the event of failure to complete the work on time.
13. The terms used in the Bid which are defined in the *Standard Specifications for Public Works Construction*, published by the North Central Texas Council of Governments (NCTCOG), have the meanings assigned to them therein.

Respectfully Submitted,

BIDDER

GRA TEX UTILITIES

Company

By **MICHAEL BRAGGS**

(Please Print)

ESTIMATOR/PM

Title

PO BOX 700

Address

ARLINGTON, TX 76004

City

State

Zip

(Seal if corporation)

Submitted by **MICHAEL BRAGGS** _____

An Individual
A Corporation
A Partnership

Doing Business as _____

(Complete A or B below, as applicable)

[]A. The principal place of business of our company is in the State of _____.

Non-resident bidders in the State of _____, our principal place of business, are required to be _____% lower than resident bidders by State Law.

A copy of statute is attached.

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

STATEMENT OF MATERIAL AND OTHER CHARGES

MATERIALS INCORPORATED INTO THE PROJECT: \$ 0

ALL OTHER CHARGES: \$ 0

*TOTAL: \$ 363,427.12

This total must agree with the total figure shown in the Item and Quantity Sheets in the bound contract.

For purpose of complying with the Texas Tax Code, the Contractor agrees that the charges for any material incorporated into the project in excess of the estimated quantity provided for herein will be no less than the invoice price for such material to the Contractor.

NOTE: THIS PAGE MAY REMAIN BLANK FOR THE INITIAL SUBMITAL OF THE BID. THE COPY OF THIS FORM IN THE EXECUTED CONTRACTS IS REQUIRED TO BE FILLED OUT.

SECTION 7

STATE OF TEXAS§

Contract

COUNTY OF JOHNSON §

PROJECT NO. 177372

This Contract, made and entered into this _____ day of _____, 20____, by and between the City of Burleson of Johnson County, Texas, a municipal corporation, 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:

East Renfro Street Water Line Improvements

City of Burleson Project No. 21PC02

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 it may be amended from time to time (hereinafter called "Standard Specifications"), and under the terms of the Special Provisions 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, and the specifications as prepared by **City of Burleson** hereinafter called Owner, who has been identified by the endorsement of the Contractor's written proposal, these General Provisions of the Standard Specifications, the Special Provisions 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 within fifteen (15) calendar days after the date written notice to do so shall have been given to him

or her and to complete same within 45 calendar days after the date of written notice to commence work.

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 therein.

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 of Owner.

It is further agreed that one or more instances of forbearance by the City 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:

CITY OF BURLESON, TEXAS

Amanda Campos
City Secretary

Bryan Langley
City Manager

THE STATE OF TEXAS §

Corporate Acknowledgment

COUNTY OF JOHNSON §

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 the 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: _____

SECTION 8

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 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 the City of Burleson 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:

East Renfro Street Water Line Project

City of Burleson Project No. 21PC02

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 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

Company

By _____
Signature

By _____
Signature

Typed/Printed Name

Typed/Printed Name

Title

Title

Address

Address

City State Zip

City State Zip

WITNESS

SURETY

Company

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

SECTION 9

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 City of Burleson, 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:

East Renfro Street Water Line Improvements Project

City of Burleson Project No. 21PC02

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

Company

By _____
Signature

By _____
Signature

Typed/Printed Name

Typed/Printed Name

Title

Title

Address

Address

City State Zip

WITNESS

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

City State Zip

SURETY

Company

By _____
Signature

Typed/Printed Name

Title

Address

City State Zip

The Resident Agent of the SURETY in either Tarrant or Johnson 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 10

THE STATE OF TEXAS §

Maintenance 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," 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 City of Burleson, 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:

East Renfro Street Water Line Improvements

City of Burleson Project No. 21PC02

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

Company

By _____
Signature

By _____
Signature

Typed/Printed Name

Typed/Printed Name

Title

Title

Address

Address

City State Zip

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

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

Project Name: East Renfro Street Water Line Improvements Project
Project Number: 21PC02
Owner: City of Burleson, Texas
Contractor: _____
Engineer: Teague Nall & Perkins, Inc.

The Surety Company, on bond of the Contractor listed above for the referenced project, in accordance with the Contract Documents, hereby approves final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to the Owner under the terms of the Contract and as set forth in said Surety Company's bond.

In witness whereof, the Surety Company has hereunto set its hand this _____ day
of _____ 20 _____

Surety Company

By _____
Authorized Representative

Title

Address

City State Zip

Attach Power of Attorney

CONTRACTOR'S AFFIDAVIT OF FINAL PAYMENT

THE STATE OF TEXAS
COUNTY OF JOHNSON

§ 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 _____

, a _____ (corporation, partnership, trade name)
of _____ (County, State of Texas) the ("Contractor"), which said Contractor
was awarded the contract dated the _____ day of _____, 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 CITY OF BURLESON (the "Owner") 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 510 of the Revised civil Statues of the State of Texas, or any other applicable statues 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 Owner, 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 Owner 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 Owner. The Contractor shall defend, hold harmless and indemnify the Owner from any such claims of such Subcontractors. The contractor further releases the Owner from any claim or liability arising from any act or neglect of the Owner related to or connected with the contract and shall not be deemed to 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), as it may be amended from time to time, hereinafter referred to as the Standard Specifications.

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 2004, 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 specifications is located in the city of Burleson, Texas and consists of East Renfro Street Water Line Improvements Project, City of Burleson Project No. 21PC02. The project includes the installation of water distribution pipeline complete and in place as outlined within the Contract Documents and Specifications.
- 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 Owner 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 Engineer or his authorized representative. Any provision of the agree-

ment vesting in the City of Burleson, Department of Engineering Services, 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 of Burleson, Department of Engineering Services 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.

Whenever the City of Burleson 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.

Under urgent circumstances, the City of Burleson 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 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 (No standard coverages are to be excluded by endorsement.)	\$1,000,000 Per Occurrence
--	----------------------------

Automobile Liability Insurance

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

Umbrella Liability

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

- 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, 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:

City of Burleson
Public Works Capital Division
141 W. Renfro
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 or the City of Burleson's property might be responsible or encumbered (less amounts withheld by City of Burleson) 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 of Burleson, (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 by the City of Burleson, 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 by the City of Burleson. If a subcontractor refuses to furnish a release or waiver required by the City of Burleson, the Contractor may furnish a bond satisfactory to the City of Burleson to indemnify the City of Burleson against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the City of Burleson all money that the City of Burleson 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 governmental entity 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 governmental entity 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 of 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 Bidders."

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. The time, as set out in SECTION 5 of this contract, will be the maximum number of **calendar** days allowed to substantially complete this project. **Substantially complete is defined as having completed all bid items included in the contract to allow the facilities to function as designed.** Failure of the Contractor to complete the work within this time will result in damages being sustained by the City of Burleson. Such damages are, and will continue to be, impracticable and extremely difficult to determine. The Contractor will pay the City of Burleson **TWO HUNDRED FORTY DOLLARS (\$240.00)** 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 **TWO HUNDRED FORTY (\$240.00)** 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.

The days as outlined in the Bid Summary for each section is given as a guide to the amount of time assumed to complete that particular portion of work. Liquidated damages will incur as a relation to completion of the entire Project within the allotted total number of Calendar days, which is 180 days.

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).

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 15 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 City of Burlison 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, City of Burlison 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 City of Burleson 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 of Burleson 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 City of Burleson 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 of Burleson does not use a monthly pay estimate schedule. The City will process the estimate within a reasonable time. It is 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 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 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 3 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 3. 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 3 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 of Burleson 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 bid 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 City owned meters and only these meters. The Contractor is responsible for paying the current security deposit for the meter at the Utility Billing Department Office, 141 W. Renfro, City Hall, prior to picking up the meter. These meters will be furnished by the City of Burlison and will be picked up at City Hall. The assigned company is liable for any theft and/or damage done to the meter once in the Contractor's possession. The loss of the meter or failure to turn it in when the job is completed will result in the forfeiture of the security deposit. Damages to the meter will be billed. It will be up to the assigned company to supply the monthly meter reading, meter number and signature of the company employee in writing to the Utility Billing department no later than the 10th of each month. That written reading may be dropped off to the Utility Billing department at City Hall or faxed to 817-447-3928. This procedure will be followed wherever construction water is needed. No exceptions to the rule will be sanctioned. Where water is necessary only to settle dust on the street at the request of the property owners, the engineer or inspector will notify the Contractor. The necessary application of water for dust shall be considered subsidiary to the other bid items listed in SECTION 7 (PROPSAL) of this contract.

11A-12 DETOURS AND BARRICADES/TRAFFIC CONTROL:

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 bid 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 bid 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 bid 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 bid 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-13 SALES TAX EXEMPTION:

The Contractor is cautioned that Texas law regarding tax exemption for City projects has been revised. The Contractor is responsible for obtaining the latest information from the State Comptroller's Office and/or other appropriate entities and bidding accordingly.

11A-14 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 bid. 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 bid 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 of Burleson 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 of Burleson 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 City Inspector, deemed necessary, shall have the authority to test materials, equipment and in-place construction to verify compliance with project specifications. The expense of tests shall be paid for by the City as follows:

1. *Sanitary Sewer Lines*

- Trench backfill density- City pays initial testing, Contractor pays for retesting.
- Pressure Testing of the Line - Contractor pays.
- Manhole Vacuum Test – Contractor pays.

2. *Water Lines*

- Trench Backfill Density – City pays initial testing, Contractor pays for retesting.

- Pressure Testing of the Line- Contractor pays.
- Line Sterilization – Contractor pays for sterilization. City takes water sample and pays for the initial testing, Contractor pays for retesting.

3. *Storm Drain*

- Trench Backfill density – City pays initial testing, Contractor pays for retesting.

4. *Paving*

- Lime or cement stabilized subgrade gradation and density – City pays initial testing, contractor pays for retesting.
- Mix design/plant control – Contractor pays
- Strength test/ cylinders – City pays initial testing, Contractor pays for retesting.
- Thickness test/coring - City pays initial testing, Contractor pays for retesting and additional tests to isolate deficient areas.

5. *Structures*

- Mix design/plant control – Contractor pays
- Strength test/cylinders – City pays initial testing, Contractor pays for retesting.

The failure of the City to make any tests shall in no way relieve the Contractor of his responsibility to provide materials, equipment, and in-place construction which comply with project specifications. 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 of Burleson.

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 which 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 of Burleson. 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 of Burleson 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:

<u>Utility</u>	<u>Representative</u>	<u>Phone Number</u>
ATMOS (formerly TXU Gas) 100 W. Morningside Dr. Fort Worth, TX 76110	CORNELIUS WIEBE Construction Manager	682-201-0337

CHARTER COMMUNICATIONS SHERI TRAHAN 817-271-8108
Relocation Consultant

AT&T DANIEL DUNN 817-994-3700
1116 Houston Street Engineering Department
Fort Worth, TX 76102

PUBLIC WORKS TRAVIS ROSENBAUM, P.E. 817-426-9620
1675 John Jones Dr. Project Engineer
Burleson, TX 76028

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:

In the preparation of plans and specifications, the engineer has endeavored to indicate the location of existing underground utility lines which are known to the engineer. No attempt has been made to show minor lines or service lines however, and it is not guaranteed that all major lines or structures have been shown on the plans. Prior to the start of construction, the Contractor shall communicate with the local representative of all 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. It is the Contractor's responsibility to uncover and determine the elevation and location of all potential conflicts well ahead of the excavation.

11A-25 RIGHT-OF-WAY PREPARATION: N/A

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 City of Burleson 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: N/A

11A-28 SITE GRADING: N/A

11A-29 COMPACTED ROADWAY FILL & EMBANKMENT: N/A

11A-30 BORROW: N/A

11A-31 FILLING: N/A

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: N/A

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, 2004*, Item 301, or the most recent edition. The cost of proof rolling shall be considered subsidiary to this item.
- B. 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 the OWNER, 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

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 OWNER, 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. OWNER 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 OWNER. 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 OWNER 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 Communications & Environmental Services at (817) 447-5410. ext. 269 during City Hall working hours and to the Burleson Fire Department Dispatcher (817) 295-5498, ext. 230 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 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:

Concrete curb and gutter shall be placed at locations along the project where portions of the existing curb and gutter is removed. In cases where 100% of the existing curb and gutter is to be removed, it shall be replaced with the Standard 30 inch curb and gutter section. All concrete used for curb and gutter in the City of Burleson will have a cement content of not less than five (5) sacks of cement 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 bid for curb and gutter shall include 3-#3 bars of reinforcing steel. Expansion joints shall be placed at all intersections, P.Cs, P.Ts, driveways, inlets, other curb and gutter or every 200 feet. All expansion joints shall not be less than one-half inch (1/2") in thickness with longitudinal dowels. Dowel shall be three No. 4 smooth bars, 24 inches in length. One-half of the dowel shall be coated with asphalt and terminated with an expansion cap. All work shall be in compliance with NCTCOG Section 305.1. All loose material between the form will be removed and the grade wetted prior to the placing of the concrete. An approved curing compound shall be applied to the surface in accordance with the Curing Specification.

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:

1. **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 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.

2. **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 1 3/4" sieve	±5%
Passing 1 3/4" 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 will be the responsibility of the City of Burleson. Any retest will be the responsibility of the Contractor. Additional information is provided in Section 11-18 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 ed. Payment for reinforcing steel shall be considered subsidiary to the various bid items.

11A-42 TEMPORARY BATCH PLANT: N/A

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 shall be paid for by the City

of Burleson. 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 bid 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: N/A.

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.

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.

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.

Transverse expansion joints shall be three-fourths (3/4") inch in width and be 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.

Contraction joints shall be made in the sidewalk at regular intervals, such intervals generally being equal to the width of the sidewalk.

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: N/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 Burlson 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.

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.

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: N/A

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: N/A

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 bid 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 of Burleson.

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 POLYETHYLENE PIPE (HDPE):** N/A

11A-55 **MECHANICALLY COMPACTED TRENCH BACKFILL**
SPECIFICATIONS:

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 at least ninety-five percent (95%) Standard Proctor density at optimum moisture content, \pm two percentage points as determined by ASTM D 698. 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 at least ninety-five percent (95%) Standard Proctor density at optimum moisture content, \pm two percentage points as determined by ASTM D 698.

For lines under the proposed roadway and 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, \pm two percentage points, to a density of at least ninety-five percent (95%) of maximum dry density, as determined by ASTM D 698.

The City of Burlison shall 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.

Payment shall be subsidiary to unit prices bid for pipe.

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	Structural Fill	Miscellaneous Uses
•Bridge abutments	•Road base	•Abandoned sewer mains
•Box culverts	•Pipe bedding	•Soil erosion
•Sewer trenches	•Mud jacking	•Slope stabilization
•Utility trenches		•Abandoned tank fill
•Conduit trenches		

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**: N/A

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

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 bid 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 of Burluson 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 bid, 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 bid 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 of Burleson 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 of Burleson 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 (± 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 (± 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 bid 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 bid 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 bid 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 City of Burleson 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.

A City of Burleson logo shall be incorporated into each project sign at the left end of the plywood signboard as indicated on the enclosed 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 bid 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. A bid item has been included which shall cover all costs related to fabricating, installing, and maintaining the signs.

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 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.
- 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 (CITY PROVIDE): N/A

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: N/A

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 the City of Burleson 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. It is the City of Burleson's hope that this meeting promotes a partnership between the Contractor and the City that lasts throughout this project, making the project more pleasant for the

Contractor, the City of Burleson, and the affected property owners/occupants.

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. The engineer will schedule the time and location, and determine the frequency of these meetings.

11A-82 TEMPORARY STREET REPAIR FOR STORM DRAIN:

A temporary driving surface shall be required on all street cut openings. It shall be composed of permanent type paving material, specifically excluding gravel or flexbase as the surface material, unless approved by the engineer. Four (4) inches of flexible base shall be placed to a level 2-inches below the existing surface. A 2-inch hot mix asphaltic concrete (Type D) surface shall then be placed by the Contractor as soon as possible after completing the backfill, but always within 5 working days after completion of the work involving the cut. Any temporary surface that fails to provide an acceptable driving surface shall be removed and replaced at the Contractor's expense, as directed by the engineer. Payment for this item is considered subsidiary to other bid items and shall not be a separate bid item.

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 the engineer. Restoration of paved surfaces shall be of asphalt, unless otherwise approved by the engineer. Should the Contractor be notified by the City of unacceptable roadway conditions, the Contractor shall restore the surface within 24 hours. Should it become necessary for the City 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 bid items on this contract.

11A-85 REPLACEMENT/ RELOCATION OF FENCES: N/A

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 event 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 the City.

11A-88 PAVEMENT MARKINGS:

This provision shall cover all the labor and materials necessary to install all pavement markings as indicated on the plans, details, and within the Contract Documents. Pavement markings shall include reflectorized pavement markings, prefabricated pavement markings, non-reflective traffic buttons, and raised pavement markers, and shall be installed in accordance with NCTCOG Item 804.2 "Painting and Marking". Compensation for this work shall be considered full compensation for all labor, materials, tools, any 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 the City.

SPECIAL PROVISIONS-WATER & SANITARY SEWER

1 PURPOSE OF SPECIAL PROVISIONS:

- A. This project shall be constructed in accordance with the latest revision of the Standard Specifications For Public Works Construction, as outlined by The North Central Texas Council of Governments (NCTCOG), as it may be amended from time to time, hereinafter referred to as "Standard Specifications;" provided that where any discrepancies occur between the Special Provisions and the Standard Specifications, the Special Provisions shall govern.
- B. The Special Provisions are included herein for the purpose of adapting the Standard Specifications to the project which is the subject of this agreement and of adding thereto such further provisions as may be necessary to state the agreement in its entirety. References in parentheses following headings indicate the corresponding section of the Standard Specifications.

2 SCOPE OF WORK:

- A. The work governed by these specifications is located in the city of Burleson, Texas and consists of East Renfro Street Water Line Improvements Project, City of Burleson Project No. 21PC02. The project includes the installation of water distribution pipeline. All work shall be bid and installed complete and in place as outlined within the Contract Documents and Specifications.
- B. The intent of the contract documents, including the Standard Specifications, Special Provisions, and other instruments, documents, drawings, maps, etc., comprising the Plans and Specifications, is to describe a completed work to be performed by the Contractor under the contract as an independent contractor.
- C. The work shall be performed subject to the right of inspection of the Director of Engineering Services or authorized representative. Any provision of the agreement vesting in the Owner or Engineer the right of supervision or inspection is understood by the parties hereto to be for the purpose of ensuring that the Plans and Specifications are complied with and that the completed work is obtained as therein described, and no such provision shall be interpreted as vesting in the Owner or Engineer the right to control the details of the work.

3 WARRANTY SERVICE CLAUSE:

- A. Under the terms of the warranties which arise from these contract documents and/or 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 of Burleson. 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 documents, either the City of Burleson or its designee may, after seven (7) day's written notice to contractor, correct and remedy any such deficiency.

4 DISPOSAL OF EXCESS MATERIAL:

- A. Excess material resulting from construction shall be removed and disposed of by the Contractor. The location of suitable disposal sites is solely the responsibility of the Contractor; the Owner shall in no way be responsible for the actions of the Contractor. No dumping will be allowed in flood plains or below the 100-year flood elevation of drainage ways.

5 INGRESS AND EGRESS:

- A. The Contractor shall try at all times to keep private drives and roadways along the street open to citizens and to provide residents with ingress and egress to their property. It is not the intent of this provision to work a hardship on the Contractor or his forces, and it is realized that there will be times when it is impossible to provide ready access to all property; however, the Contractor will attempt to keep drives open as long as it does not, in the opinion of the engineer, interfere with the progress of the work. At the end of each work day, the Contractor shall leave the job in such condition so that the street and drives are open to the public. In case of rain, the Contractor shall have men and equipment on the job to help cars that might become stuck as a result of the construction and to help provide ingress and egress.

6 SAFETY REQUIREMENTS:

- A. The Contractor shall exercise reasonable precautions, at all times, for the safety of employees and others on or near the work and shall comply with all applicable provisions of Federal, States, and Municipal Safety Laws and Building and Construction Codes. In particular, the Contractor must review and abide by the Occupational Safety and Health Act (OSHA) and amendments thereto.

7 INVESTIGATION OF LOCAL CONDITIONS:

- A. Prior to the submission of the proposal, the Contractor shall have made a careful examination of the site of the work and of the contract documents, including the plans and specifications, and shall become informed as to the location and nature of the proposed construction, the kind of facilities required before and during the construction period, labor conditions, and all other

matters that may affect the cost and time of completion of the work. Particular attention is called to the fact that all excavation will be unclassified and the Contractor is expected to satisfy himself fully as to the nature of the excavation.

8 CHANGE OF LOCATION:

- A. 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.

9 GUARANTEE:

- A. The Contractor shall guarantee all work for a period of two years from the date of written acceptance by the owner. Damage or leaks due to acts of God or from sabotage and/or vandalism are specifically excepted from this guarantee.
- B. 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 owner. Should the Contractor refuse or fail to make the repairs within one day thereafter, the Owner may make the necessary repairs and charge the Contractor with the actual cost of the labor and materials required.

10 POLY-VINYL CHLORIDE (PVC) WATER PIPE AND FITTINGS:

- A. SCOPE: The poly-vinyl chloride (P.V.C.) water pipe shall in all respects comply with the latest revision of A.W.W.A. Standard C900 for DR 18 (Class 150) P.V.C. pressure pipe, Standard C905 for DR 18 (235 psi Pressure Rating) P.V.C. pressure pipe. All fittings shall be mechanical joint ductile iron fittings.
- B. MATERIALS: Pipe shall be made from clean, virgin, approved Class 12454 or 14333 P.V.C. compound conforming to ASTM resin specification D 1784.
- C. PIPE: All pipe shall be suitable for use as a pressure water conduit. The pressure classifications refer to the maximum hydrostatic pressure to which the pipe shall be subject in normal operations.
- D. FITTINGS: Fitting joints shall be mechanical joints with Mega-Lug restraint glands. Lug Nuts and Bolts, and nuts for MJ fittings shall be of high-strength, corrosion-resistant, low-alloy steel and shall conform to ASTM A325 High Strength bolts for Standard Steel Joints or shall be stainless steel in accordance with ASTM A304.
- E. PLACEMENT: Water lines to be constructed in this project will typically be installed parallel to and at a distance of 2.5 Feet from the existing main measured between centerlines. The existing

water main is to remain in service during construction until the new line is fully tested and approved by the City of Burlison for service transfer. All embedment and backfill materials shall be subsidiary to these items.

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 35 P.V.C. as specified in ASTM D 3034, 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:
 - 1. 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:

NOMINAL SIZE	4"	6"	8"	10"	12"
Ft. - Lbs.	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 probably 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.

12 LOCATION AND PROTECTION OF EXISTING STRUCTURES AND UTILITIES:

- A. In the preparation of plans and specifications, the Owner 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 817-447-5410 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.
- B. 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.

- C. 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 Owner. All costs of temporarily or permanently relocating the conflicting utilities shall be borne by the Contractor without extra compensation from the Owner.
- D. 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.
- E. Payment will be considered subsidiary to pipe installation as outlined in the PROPOSAL.

13 CONCRETE CYLINDER WATER PIPE: N/A

14 PIPE HANDLING FOR CONCRETE CYLINDER PIPE (C4.4): N/A

15 PIPE HANDLING:

- A. 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.
- B. 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's 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.
- C. 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.
- D. 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.

16 PLUGGING EXISTING LINES:

- A. Plugs shall be inserted into the bells of all dead-end fittings. Spigot ends of fittings and plain ends of pipe shall be capped. Thrust blocking shall be provided at all dead ends of pipe that are capped or plugged. Capped or plugged outlets to fittings shall be tied to the fittings and shall be restrained according to the fitting manufacturer's recommendations. Where specified, the existing valves, lines, and/or tees shall be plugged. Unit price bid for plugging existing lines shall include the cost of all labor and material necessary to do this work.

17 RELOCATION OF EXISTING FIRE HYDRANTS:

- A. The unit price bid for relocating existing fire hydrants shall include the cost of the necessary fittings and extensions to relocate the fire hydrants as specified on the plans and to adjust them to the finished top of curb grade.

18 SALVAGING EXISTING FIRE HYDRANTS:

- A. Existing hydrants shall be salvaged and returned to city service center. All existing fire hydrants called to be replaced as completely new including valves.

19 2:27 CONCRETE BACKFILL MATERIAL:

- A. 2:27 Concrete Backfill Material 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 2:27. If CTS or CTB is used, it shall be sufficiently moist to set up and should be placed the same day it is delivered.
- B. 2:27 Concrete, 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 2:27 Concrete, CTS or CTB Backfill Material or as included in the unit price bid for Street Backfill.

20 EMBEDMENT REQUIREMENTS FOR WATER PIPE:

- A. 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. Prestressed 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.

- B. 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.

1. 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.
- b. The plasticity index of such part of the material which passes a No. 40 sieve shall not be greater than two (2).

- C. 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.

- D. 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.

- E. 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.

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

- A. The minimum bedding and embedment for PVC 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 six-inch (6") lifts and hand or mechanically tamped BEFORE the native material is placed in the ditch.
- B. 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.

C. Embedment and Bedding material shall meet the following requirements:

1. CRUSH STONE BEDDING AND EMBEDMENT GRADATIONS

Standard Crush Stone - Aggregate Grade 4

Passing or Retained on Sieve	Percent by Weight
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%

2. 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.
3. 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.
4. 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.

D. 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.

E. 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.
- F. GENERAL PROCEDURE: All pipes shall be backfilled prior to air testing.
1. Air tests shall be made by the pressure drop versus time method.
 2. 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.
- G. 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.
1. 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.
 2. 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.
 3. The air compressor shall be of adequate capacity for charging the system.
 4. The following procedure shall be used for air testing a sewer system:
 5. 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.
 6. 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.
 7. 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.

8. 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.
- H. 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.
- I. 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.
- J. 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.
 1. 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.

22 LOW PRESSURE AIR TEST OF SANITARY SEWER LINES:

- A. 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.
- B. 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.
- C. GENERAL PROCEDURE: All pipes shall be backfilled prior to air testing.
1. Air tests shall be made by the pressure drop versus time method.
 2. 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.
- D. 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.
1. 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.
 2. 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.
 3. The air compressor shall be of adequate capacity for charging the system.
 4. The following procedure shall be used for air testing a sewer system:
 5. 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.

6. 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.
 7. In areas where ground water is known to exist, the Contractor shall install a one-half inch (½") 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.
 8. 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.
- E. 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.
- F. 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.

23 DEFLECTION TESTING OF FLEXIBLE SANITARY SEWER:

- A. 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.

- B. 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.
- C. 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.
- D. 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.
- E. 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.
- F. 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.

24 TRENCH BACKFILL:

- A. 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.
- B. 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.
- C. Payment shall be subsidiary to unit prices bid for pipe.

- D. 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.

25 CLEARING AND GRUBBING: N/A

- A. 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.

26 DUCTILE IRON PIPE: N/A

- A. 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.
- B. 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.
- C. 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).
- D. 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).
- E. 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.

27 CRUSHED STONE FOR GRAVEL AND DIRT DRIVEWAYS: N/A

- A. 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.

28 CLEANING OF NEW WATER MAIN:

- A. 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.

29 ROCK CUSHION:

- A. 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").
- B. 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
- C. Cast-in-place concrete manholes shall have a minimum inside diameter of four feet (4') or 5 feet (5'). 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.

30 GATE VALVES:

- A. 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 in place and shall be the total compensation for furnishing all labor, materials, tools, and equipment for performing this particular phase of work.

- B. 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.

31 THRUST BLOCKS:

- A. 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.
- B. 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.
- C. 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.
- D. 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.

32 FIRE HYDRANTS:

- A. Fire hydrants shall comply with the latest revision of A.W.W.A. Standard C502. All hydrants will be factory painted with two (2) coats of aluminum paint over one (1) shop prime coat.

- B. Standard depth of bury is four feet (4'). A fire hydrant may be buried at six feet (6'), if it is necessary due to excessive depth of main. It shall be the Contractor's responsibility to provide ductile iron fittings including mega-lugs to adjust for the depth of bury. No additional payment will be made for this extra depth and it shall be considered subsidiary to the unit price bid for fire hydrants, complete in place. No more than two feet (2') of extension can be added. If the water main is deeper than six feet (6'), offsets, bends, and fittings shall be used to reduce the fire hydrant depth of bury to six feet (6').

33 DUCTILE IRON FITTINGS:

- A. 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),
- B. 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. All fittings shall be installed with a double layer of polyethylene wrap in compliance with A.W.W.A Standard C105 (ANSI A21.5).
- C. Ductile Iron Fittings on this project shall be subsidiary to the cost of installation of the water pipeline. All fittings shall be cement lined in accordance with A.S.A. 21.4.

34 STREET CUT AND BACKFILL:

- A. 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.

35 TEMPORARY ASPHALT STREET REPAIR AND BACKFILL:

- A. 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.

36 JOINT SEALING COMPOUND FOR REINFORCING CONCRETE PIPE AND MANHOLES:

A. 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:

1. The sealing compound shall be produced from blends of refined hydro-carbon 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.

2. 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"

37 CAST-IN-PLACE MANHOLES:

- A. Cast-in-place concrete manholes shall on lines larger than 12 inches in diameter.
- B. 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.

38 ABANDONING EXISTING GATE VALVE BOX:

- A. 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.

39 AIR RELEASE VALVES: N/A

- A. 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.
- B. 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.

40 TYING INTO EXISTING LINES:

- A. 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.

41 HOT MIX ASPHALTIC CONCRETE:

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

42 TACK COAT:

- A. See Special Projects, **Section 11B-39:** Tack Coat

43 SIDEWALK REPLACEMENT: N/A

- A. 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.

44 4" PVC SEWER SERVICE EXTENSIONS: N/A

- A. 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.
- B. 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.

45 WATER SERVICES:

- A. The Contractor shall use saddles as specified by the pipe manufacturer for one-inch (1") taps. When tying into an existing ¾-inch water meter, the one-inch (1") service line shall be reduced to ¾ inches at the meter. The cost of the reducer and associated fittings shall be subsidiary to the water service bid item.

- B. 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 ½ 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.
- C. 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.

46 RELOCATION OF EXISTING WATER METERS:

- A. 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 customer's side of the meter to the right-of-way line.
- B. 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.
- C. 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.
- D. 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.

47 TRAFFIC CONTROL ALONG STREET:

- A. Contractor shall install barricades and warning signs in the event of road closures or detours. The traffic control shall be in accordance with the most current edition of the Texas Manual on Uniform Traffic Control Devices (TxMUTCD). Prior to street closures or detours, Contractor shall provide a Traffic Control Plan to the inspector for approval. Contractor to inform residents of the need to move cars at least 48 hours prior to doing street work. The information shall contain all information necessary to allow the resident to remove the vehicles or other obstructions as to not hold up construction.

48 BACKFILL AND INITIAL CLEANUP:

- A. 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, barditches, and other drainage facilities should be maintained and cleaned on a daily basis so that they will function for their intended purposes.
- B. 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 2:27 concrete, 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.
- C. 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.
- D. 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.
- E. 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.

49 CLEAN-UP:

- A. 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.

- B. 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.

50 EXPLORATORY EXCAVATION:

- A. In some locations, the exact limits of the existing water pipeline are unknown. At the City's discretion, the Contractor shall perform exploratory excavation in order to verify and/or identify the limits of the existing water main and related water services. The Contractor shall perform Exploratory Excavation for Water Line 'C' along the existing Reserve at Village Creek Apartments property or for any other areas designated by the City.
- B. The Contractor shall be responsible for excavating and locating all water lines as directed by the City Inspector or Engineer. This includes all labor, materials, equipment, and tools, and incidentals necessary to complete the work including potholing.
- C. Upon completion of the work, the Contractor shall provide the City an exhibit detailing the location of the water line located in the field. The Contractor shall remove all construction debris and excess material from the job site, leaving nothing objectionable on either public or private property.
- D. Measurement and payment shall be made on the basis of the price bid per lump sum. The contract price shall be the total compensation for the furnishing of all labor, material, tools, equipment, grading, and incidentals necessary to complete the work.

51 SURFACE RESTORATION AND SODDING:

- A. The bid item shall be full compensation for grading and restoring the easement, right-of-way, and all disturbed areas to their pre-project conditions or better. Disturbed areas shall be defined by the City Representative in the field. The Contractor shall video tape all project location areas prior to construction to establish the existing condition.
- B. Sodding shall be placed in accordance with NCTCOG Item 204.5 "Sodding" and shall be watered and maintained per NCTCOG Item 204. 5.3.4 "Watering and Finishing Sod". Contractor shall solid block sod parkway from curb or edge of pavement to limits of disturbed areas as defined by the City Representative. Sod replacement shall be of the same specific of grass that existed prior to commencement of the construction operations. The Contractor shall be responsible for watering until final project acceptance.

- C. Measurement and payment shall be made on the basis of the price bid per square yard of surface restoration and sodding required. The contract price shall be the total compensation for the furnishing of all labor, material, tools, equipment, grading, and incidentals necessary to complete the work. In addition to sodding and grading, the unit bid price shall include full compensation for all irrigation repair, landscaping, and full restoration of project areas to their pre-project condition. The pre-construction video by the Contractor shall be provided to the City prior to construction and shall be considered subsidiary to this bid item.

52 TEMPORARY WATER SERVICE:

- A. Contractor to design and implement temporary water service for affected water utility clients prior to disruption of service by construction activities.
- B. Temporary water service plan shall be approved by the City Project Engineer prior to implementation.
- C. Measurement and payment shall be made on the basis of the price bid per lump sum. The contract price shall be the total compensation for the furnishing of all labor, materials, tools, equipment, and incidentals necessary to complete the work.

APPROVAL

To Travis Rosenbaum
City of Burleson
141 W. Renfro
Burleson, TX 76028-4261

Date 4/29/2022
Application No. FTW20220413094142
District App. No. 127-WL-FM3391-22
Highway FM 3391
Control Section 337201
Maintenance Section Johnson
County Johnson

TxDOT offers no objection to the location on the right-of-way of your proposed utility installation, as described by Notice of Proposed Utility Installation No. FTW20220413094142 (District Application No. 127-WL-FM3391-22) dated 4/29/2022 and accompanying documentation, except as noted below.

A COPY OF THIS PERMIT IN ITS ENTIRETY MUST BE ON SITE AT ALL TIMES! Contractor is Required to contact TxDOT Traffic Operations group at 817-370-3664 prior to beginning and excavation work in the area of existing utilities. Utility Owner is to send a CONDUCT INSPECTION action in the UIR website with Contractors contact information 48 hours prior to commencing work. Contractor shall give a Verbal Notification and Submit Traffic Control Plan (TCP) from the latest edition of the TxDOT Standards TCPs* 48 hours prior to start of work to Bryan Anderson at 817-291-0794 Office: 817-202-2900. The Utility Owner Shall Not cut into the pavement or concrete riprap without WRITTEN APPROVAL from TXDOT Area Engineer. . Below is the Link for the latest edition of the TxDOT Standards TCPs:

<http://www.dot.state.tx.us/insdot/orgchart/cmd/cserve/standard/toc.htm>

When installing utility lines on controlled access highways, your attention is directed to governing laws, especially to Texas Transportation Code, Title 6, Chapter 203, pertaining to Modernization of State Highways; Controlled Access Highways. Access for serving this installation shall be limited to access via (a) frontage roads where provided, (b) nearby or adjacent public roads or streets, (c) trails along or near the highway right-of-way lines, connecting only to an intersecting roads; from any one or all of which entry may be made to the outer portion of the highway right-of-way for normal service and maintenance operations. The Installation Owner's rights of access to the through-traffic roadways and ramps shall be subject to the same rules and regulations as apply to the general public except, however, if an emergency situation occurs and usual means of access for normal service operations will not permit the immediate action required by the Utility Installation Owner in making emergency repairs as required for the safety and welfare of the public, the Utility Owners shall have a temporary right of access to and from the through-traffic roadways and ramps as necessary to accomplish the required emergency repairs, provided TxDOT is immediately notified by the Utility Installation Owner when such repairs are initiated and adequate provision is made by the Utility Installation Owner for convenience and safety of highway traffic.

The installation shall not damage any part of the highway and adequate provisions must be made to cause minimum inconveniences to traffic and adjacent property owners. In the event the Installation Owner fails to comply with any or all of the requirements as set forth herein, the State may take such action as it deems appropriate to compel compliance.

It is expressly understood that the TxDOT does not purport, hereby, to grant any right, claim, title, or easement in or upon this highway; and it is further understood that the TxDOT may require the Installation Owner to relocate this line, subject to provisions of governing laws, by giving thirty (30) days written notice.

If construction has not started within six (6) months of the date of this approval, the approval will automatically expire and you will be required to submit a new application. You are also requested to notify this office prior to commencement of any routine or periodic maintenance which requires pruning of trees within the highway right-of-way, so that we may provide specifications for the extent and methods to govern in trimming, topping, tree balance, type of cuts, painting cuts and clean up. These specifications are intended to preserve our considerable investment in highway planting and beautification, by reducing damage due to trimming.

**Special Provisions:
FTW_SpecialProvision_49**

You are required to notify TxDOT 48 hours (2 business days) before you start construction to allow for proper inspection and coordination of work days and traffic control plans. Use the UIR website for the 48-hour notification. DO NOT start construction until you have coordinated the construction start date and inspection with TxDOT. You are also required to keep a copy of this Approval, the Notice of Proposed Installation, and any approved amendments at the job site at all times.



***Texas
Department
of Transportation***

***Specifications
for
Utility
Installations***

Fort Worth District (revised March 12, 2021)

Specifications for Utility Installations

Fort Worth District

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TXDOT DIRECTORY FOR UTILITIES

FORT WORTH DISTRICT UTILITY OFFICE

Bill McCoy	Right of Way Project Delivery Manager	817-370-6950
Doug Fain	Utility Section Lead	817-370-6542
Amar Akram, P.E.	Transportation Engineer	817-370-6681
Rebecca Booher	Utility Coordinator	682-760-1839
Ben Trevino	Utility Coordinator	817-370-6523
Luis Martinez	Utility Coordinator-Permits	682-201-9873
Francisco (Javier) Fuentes	Utility Coordinator	512-348-1148
Patrick Nunley	Utility Coordinator	469-719-0895
Gavino (Nino) Talamantez	Utility Coordinator-Permits	817-240-9134

(50) JOHNSON COUNTY AREA OFFICE

Janet Crawford, P.E.	Area Engineer	817-202-2900
Peter Ross, P.E.	Assistant Area Engineer	817-202-2939

(51) WISE & JACK COUNTY AREA OFFICES

Edrean Cheng, P.E.	Area Engineer	940-626-3400
Oscar Chavez, P.E.	Asst. Area Engineer	940-626-3400

(52) NORTH TARRANT COUNTY AREA OFFICE (N. OF IH30)

Minh Tran, P.E.	Area Engineer	817-399-4302
James Bell, P.E.	Assistant Area Engineer	817-399-4302

(54) SOUTH TARRANT COUNTY AREA OFFICE (S. OF IH30)

David Neeley, P.E.	Area Engineer	817-370-6640
Russell Poer, P.E.	Assistant Area Engineer	817-370-6640

(56) ERATH, HOOD & SOMERVELL COUNTY AREA OFFICES

David Fowler, P.E.	Area Engineer	254-965-3511
Sarah Horner, P.E.	Assistant Area Engineer.	254-965-3511

(57) PARKER & PALO PINTO COUNTY AREA OFFICES

Klinton Kuntz, P.E.	Area Engineer	682-229-2800
Gary Beck, P.E.	Assistant Area Engineer.	682-229-2800

DRIVEWAYS/STORM DRAINS/TEMPORARY ACCESS/OVERSIZE /OVERWEIGHT PERMITS

Matt Evans, P.E. - District Maintenance Director
Jennifer Giovando - Office Mgr.
Christine Jones- AAH, Damage Claims, & OS/OW
Margaret Jasso - Access/Driveways & Storm Drains

817-370-6521
817-370-6524
817-370-3636
817-370-6527

FORT WORTH DISTRICT MAINTENANCE OFFICES

JOHNSON COUNTY MAINTENANCE

John Nolt	Maintenance Supervisor	817-202-2900
Bryan Anderson	Utility Permits Inspector	CELL 817-291-0794

WISE & JACK COUNTY MAINTENANCE

Colt Wright	Maintenance Supervisor	940-626-3400
Keith Prochnow	Utility Permits Inspector (WISE)	817-296-1956
Jana Robinson	Utility Permits Inspector (JACK)	940-567-6611
Wesley Harrison	Utility Permit Inspector	817-709-6664

NORTH TARRANT COUNTY MAINTENANCE

Mike Sepeda	Maintenance Supervisor	817-399-4350
Gavino (Nino) Talamantez	Utility Permits Inspector	CELL 817-240-9134

SOUTH TARRANT COUNTY MAINTENANCE

Tom Brown	Maintenance Supervisor	817-370-6903
Gavino (Nino) Talamantez	Utility Permits Inspector	CELL 817-240-9134

ERATH, HOOD, SOMERVELL COUNTY MAINTENANCE

Jason Medders	Maintenance Supervisor	254-965-3511
Michael Millsap	Utility Permits Inspector	254-965-3511
		CELL 254-413-5058

PARKER & PALO PINTO COUNTY MAINTENANCE

Clinton Hyatt	Maintenance Supervisor	682-229-2800
Marc Cantrell	Utility Permits	682-229-2800
		CELL 817-287-9454
James Scoggin	Utility Permits	682-229-2800

EMERGENCY UTILITY CONTACT: Traffic Control Room - 24-Hours
817-370-3661

TXDOT'S MISSION STATEMENT

The mission of the Texas Department of Transportation is to provide safe, effective and efficient movement of people and goods.

SAFETY

Please refer to the Texas Manual on Uniform Traffic Control Devices (TMUTCD) for questions concerning traffic control plans.

<http://ftp.dot.state.tx.us/pub/txdot-info/trf/tmutcd/2011-rev-2/6.pdf>

WHILE WORKING ON THE TXDOT RIGHT OF WAY: HARD HATS, CLASS 3 SAFETY VEST AND STEEL TOED BOOTS ARE REQUIRED AT ALL TIMES. A COPY OF THE UTILITY OWNER'S PERMIT MUST BE ON SITE AT ALL TIMES.

PROTECTION OF HIGHWAY FACILITIES

All construction operations relative to installation of the Utility shall be conducted in such manner as to protect highway facilities from damage at all times. In addition, all work must be done in strict accordance with all applicable regulations of the occupational Safety and Health Administration (OSHA) of the US Department of Labor.

USE OF EXPLOSIVES

No explosives shall be used within limits of highway right-of-way without written permission.

PROTECTION OF EXISTING UTILITIES

Prior to beginning actual construction operations the Utility shall notify all other Utility Companies who may have facilities in the area so they can determine if the proposed construction will conflict with or otherwise damage their facilities.

REMEMBER: 1-800-DIG-TESS

DEVIATION FROM APPROVED PLANS

No changes shall be made to the approved location of utilities without prior authorization of TxDOT. The Utility shall make necessary arrangements with other Utility Owners for moving facilities and/or supporting same during trenching operations.

Any poles, anchors, etc. relocated to clear the proposed underground utility line shall be moved toward the highway right-of-way line and location shall be subject to TxDOT approval. All utility lines incorrectly installed shall be removed and laid in proper location at the entire expense of the Utility.

STAKING OF UTILITY LINES IN ADVANCE OF CONSTRUCTION

Utility lines shall be staked well in advance of construction so that TxDOT can inspect staking to verify that the alignment conforms to requirements set out herein and that there is no conflict with highway facilities.

FULL TIME SUPERVISION AND INSPECTION

The Utility shall provide competent full-time supervisors or inspectors for all utility installations.

NOTIFICATION OF JOB START

48 Hour notification is required for utility installations.

****CALL INSPECTOR ON PERMIT****

Please have the following information ready when you call or submit:

- APPROVED PERMIT NO.
- STATE HIGHWAY NO.
- UTILITY COMPANY
- UTILITY SUPERVISOR OR INSPECTOR'S NAME and UTILITY MOBILE NO.
- GENERAL CONTRACTOR'S NAME
- NAME OF FOREMAN and MOBILE PHONE NO.
- START DATE

TXDOT LOCATES

48 Hour notification is required for TXDOT locates. BE AWARE!! TXDOT has a considerable investment in traffic signals, lighting, and traffic management system. These systems include underground electric and fiber optic lines. If any of the above facilities are within the limits of the utility project, the utility is required to call the phone number listed: **Signals and lighting: (817) 370-3661**

AERIAL CROSSINGS

Notification is required for aerial crossings.

Notify Utility Office with TCP, Date of planned closure, permit number, and point of contact information. When

approve then **MESSAGE BOARDS MUST BE PLACED 7 DAYS PRIOR TO WORK.**

Crossings on controlled access highways and/or high volume roadways can only be performed on Sunday-Thursday, between the hours of 9 p.m. to 5 a.m. with police assistance and approved traffic control.

Crossings on non-controlled access roadways and/or low volume roadways can be performed anytime during the week, Monday thru Friday, between the hours of 9 a.m. and 3 p.m. with proper approved traffic control.

LANE CLOSURES

Notification is required for lane closures prior to the alteration of traffic flow.

Notify Utility Office with TCP, Date of planned closure, permit number, and point of contact information. When approve then **MESSAGE BOARDS MUST BE PLACED 7 DAYS PRIOR TO WORK.**

If a lane closure is required due to an unforeseen situation and after a utility permit has been approved, it will be necessary to call the TxDOT Utility Permit Office at **817-240-9134**. A traffic control plan must be submitted and approved by TxDOT prior to lane closures.

Note: An Engineer's seal may be required for lane closures on controlled access highways and high volume roadways.

STOCKPILES ON TXDOT ROW

Stockpiling will be allowed with permission from TxDOT. Once, permission has been granted, stockpiling can start forty-eight hours prior to construction. The stockpile shall be placed on the right of way line or as close as possible without obstructing the curb, pavement, or line of site. All materials must be removed from TxDOT right of way completion of the utility project.

COORDINATION OF WORK WITH HIGHWAY CONTRACTOR OR STATE FORCES

All work related to the installation of utilities shall be conducted in such manner as not to interfere in any way with highway construction or TxDOT maintenance operations.

WORK DAY RESTRICTIONS

Except, in cases of emergency, **NO WORK WILL BE ALLOWED ON SATURDAYS, SUNDAYS, FEDERAL or STATE HOLIDAYS OR AT NIGHT.**

EXCEPTIONS MAY BE GRANTED BY TXDOT IF the Utility shows that "off day" work is necessary to avoid service interruptions to the public and the Utility agrees to the following conditions:

Obtain TxDOT approval at least 48 hours in advance. The Contractor is required to have sufficient personnel and equipment on the job to efficiently execute the work. The utility will have a supervisor or inspector present on the job at all times while the work is in progress.

INCLEMENT WEATHER

To ensure the safety of the traveling public, as well as the contractor and his crew and TxDOT agents, **NO WORK SHALL BE ALLOWED DURING INCLEMENT WEATHER** such as, but not limited to rain, fog, snow and sleet effects visibility and/or traction.

PITS

All pits shall be excavated and closed within 48 hours. If the utility wishes to leave pits open overnight, reflective barricades must be employed.

BORE AND TUNNELING OPERATIONS

GENERAL REQUIREMENTS

Utilities crossing under surfaced roads within the limits of highway right-of-way shall be placed by auger bore or tunnel method, unless otherwise specifically authorized by TxDOT.

Bores or tunnels shall be placed at depths below the roadway structure which are sufficient for superimposed live and dead loads and also prevent collapse of supporting soil between hole and roadway.

Boring and tunneling operations shall extend outside of the front slope and clear zone of the highway.

Bores

Where material beneath pavement is **sandy or unstable** and will be subject to caving, the hole for the casing shall be bored and cased simultaneously and bored material removed through casing. **Cutting face of auger or drill shall not project more than six (6) inches ahead of casing and no water shall be used in connection with drilling.**

Where material beneath pavement is **stable and not subject to caving**, and allowed by TxDOT, the hole for the casing may be bored first and casing inserted in the hole immediately after completion of boring. If allowed by TxDOT, water may be used in conjunction with boring.

Bore Pit Location

Pits excavated for boring or tunneling operations shall be located so that any possible sloughing of sides of pit will not endanger shoulders or pavements and so that barricades can be placed as specified in the TMUTCD.

Bore pits should be located at least thirty feet from the edge of the nearest through traffic lane and not less than twenty feet from the edge of pavement on ramps. On low traffic roadways and frontage roads, bore pits should not be less than ten feet from the edge of pavement or five feet from face of curb.

Tunneling

While hole is being tunneled, casing shall normally be jacked into place as operations progress. Working face of excavation shall not precede advancing end of casing by more than two and one half (2^{1/2}) feet unless otherwise allowed by TxDOT.

Grouting

All voids around casing shall be pressure grouted. The grout shall be consisting of Portland Cement and washed sand and containing not less than two (2) sacks or Portland Cement per cubic yard of grout. Additional cement shall be added if workability and/or stability cannot be obtained. An air-entraining agent may also be added to the grout mixture to facilitate flow if necessary.

Grouting shall be done immediately after casing has been installed in hole in order to avoid any shearing of soil and settlement of over burden above casing.

Means shall be provided for proving that voids are filled around 24" diameter and larger casings in the event there is some doubt by TxDOT. TxDOT may require the Utility to install removable plugs at intervals inside the casing.

No holes shall be drilled in pavement or shoulders for grouting operations.

MARKERS

The Utility shall place a readily identifiable and suitable marker at each right-of-way line for highway crossings. Utilities that parallel the right of way shall place a marker every 1500 feet, at intersecting streets, and highway drainage culverts.

ABOVE-GROUND APPURTENANCES

Above-ground appurtenances, such as pedestals, fire hydrants, meters, etc., shall be located at the right-of-way line.

BACKFILL OF UTILITY TRENCHES

DESCRIPTION

This specification shall govern backfill of trenches, which have been opened for the removal, adjustment, or installation of utility lines within the limits of highway right-of-way. Except when permission is granted, compacted backfill will be used for utility installations. Backfill shall consist of compacted material obtained from suitable soil excavated from the trench, or from sources outside the highway right-of-way. Material shall be free of rock, lumps, or clods that will not break down under compaction.

Backfill material shall be placed in the trench in layers not to exceed 6" in depth and compacted. Water shall be added as required to facilitate compaction.

Compaction shall be done with rollers or mechanical tamps. Use of rollers will be allowed only when such use is not believed detrimental to any highway facility. The type of roller used must be acceptable to TxDOT. When rollers are used, mechanical tamps shall be used along the sides of trench to compact any backfill that cannot be reached with rollers. Compacting shall be continued until a backfill density is equal to that of the adjacent, undisturbed material. Where trenches lie within the limits of drainage ditches and channels, which are in solid rock, TxDOT may require 1' of concrete backfill, struck off flush with the top of rock.

SITE CLEAN UP

The Utility is responsible for site clean up at the end of each workday.

Roadways adjacent to the utility construction site shall be kept free from debris, construction materials, and mud. At the end of each day, construction equipment and materials shall be moved as far from the roadway as feasible within the safety rules. If mudding of the roadway occurs at any time, the roadway shall be cleaned immediately.

When the utility installation is complete, the right-of-way shall be reshaped to its original condition and the area reseeded or re-sodded to reduce erosion.

Should settlement or erosion occur within one (1) year of the utility installation, TxDOT may specify prompt replacement at the utility's expense for bringing the construction site to a satisfactory condition.

TxDOT will restore sites that are left at an unsatisfactory condition after notification has been sent to the utility. These sites will be restored to original condition. The utility shall fully reimburse all costs incurred by TxDOT for all repairs made by TxDOT. These costs include, but are not limited to matters of traffic safety, right of way contour, restoration and repairs to all highway structures: including, but not limited to roads, driveways, terrain, landscaping, fences, etc.

REPAIR AND REPLACEMENT OF RIPRAP AND EARTH SLOPES

Any existing riprap cut by trenching operations shall be replaced and surface of new riprap finished to match that of existing riprap. Concrete riprap shall contain not less than three (3) sacks of cement per cubic yard of concrete. Reinforcing steel shall conform to that of existing riprap.

SPECIAL PRECAUTIONS FOR EROSION CONTROL

Special precautions should be taken during utility installations to avoid disturbing existing drainage courses. In addition, soil erosion should be held to a minimum and sediment from the construction site should be kept away from the roadway and drain inlets.

During construction the roadbed and ditches shall be maintained in such condition to insure proper drainage at all times. Ditches and channels shall be maintained to avoid damage to the roadway.

To avoid soil erosion, it is advised and encouraged that the Utility Contractor use all applicable means (i.e. silt fences, hay bails, rock filter dams, etc.) to detour soil from eroding into roadway, ditches, and adjacent property.

SEEDING SPECIFICATIONS

RURAL AREA WARM-SEASON SEEDING RATE

In pounds, Pure Live Seed (PLS.)

		Mixture for Clay or Tight Soils		Mixture for Sandy Soils	
Dates	Eastern Section		Western Section		All Sections
Feb 1	Green Sprangletop	0.6	Green Sprangletop	0.6	Green Sprangletop 0.7
To	Sideoats Grama (El Reno)	1.8	Sideoats Grama (Haskell or El Reno)	1.8	Sideoats Grama (Haskell) 2.2
May 1	Bermudagrass	0.8	Little Bluestem	1.1	Bermudagrass 0.9
	Little Bluestem	1.1	Indiangrass (Lometa or Cheyenne)	1.5	Little Bluestem 1.4
	K-R Bluestem	0.7	K-R Bluestem	0.7	Sand Dropseed 0.2
	Switchgrass	1.2	Switchgrass (Alamo or Blackwell)	1.2	
	Total 6.2		Total 6.9		Total 5.4

URBAN AREA WARM-SEASON SEEDING RATE

In Pounds, Pure Live Seed (PLS)

		Mixture for Clay or Tight Soils		Mixture for Sandy Soils	
Dates	Eastern Section		Western Section		All Sections
Feb 1	Green Sprangletop	0.9	Green Sprangletop	1.1	Green Sprangletop 1.1
To	Bermudagrass	1.2	K-R Bluestem	1.3	K-R Bluestem 1.3
May 1	K-R Bluestem	1.0	Buffalograss	10.7	Buffalograss 1.5
	Buffalograss	8.0			
	Total 11.1		Total 13.1		Total 3.9

TEMPORARY COOL-SEASON SEEDING RATE

In pounds, Pure Live Seed (PLS)

Dates	All Sections	
Feb 1	Tall Fescue	4.0
To	Western Wheatgrass	5.0
May 1	Wheat (Red, Winter)	30.0
	Total	39.0

TEMPORARY COOL-SEASON LEGUME SEEDING RATE

In pounds, Pure Live Seed (PLS)

Dates	All Sections	
Aug 15 to Nov 30	Crimson Clover	7.0
	Total	7.0

TEMPORARY WARM-SEASON SEEDING RATE

In pounds, Pure Live Seed (PLS)

Dates	All Sections	
May 1 to Nov 30	Foxtail Millet	30.0
	Total	30.0

Note: Names in parenthesis () represent "improved" varieties of the species shown.

AESTHETICS

To preserve and protect trees, shrubbery, and other aesthetic features on the highway right-of-way, TxDOT may specify the extent and methods of tree removal, tree trimming, or their replacement. TxDOT may also specify the installation methods of the underground or overhead utility in order to protect and preserve trees and other aesthetic features.

REQUIRED PRUNING PRACTICES

PRIOR TO CUTTING

- Locate utility lines with the least possible interference with trees.
- Amount of clearance should be determined by the rate of tree growth.
- Remove minimum number of branches to provide adequate clearance.
- Maintain adequate clearance for lines, NOT EXCESSIVE CLEARANCE.
- ALL pruning shall conform to recognized tree surgery practice.
- Preserve natural character of tree.

WHERE TO CUT

In removing a limb, the cut should be made at a fork where the remaining branch will be at least one third the diameter of the one removed.

LIMB REMOVAL

1. In removing branches the cut should be made at a fork with the remaining branch at least one-third the diameter of the one removed.
2. Undercut 1/3 of the way through the limb, 8 to 12 inches from the main stem.
3. Remove limb 4 to 6 inches out from the first cut.
4. Remove stub with an even cut so that a trace (called a "collar") still protrudes (about ½ inch).
5. All cuts two (2) inches or over shall be painted with an approved tree dressing or paint. * See pg 11.

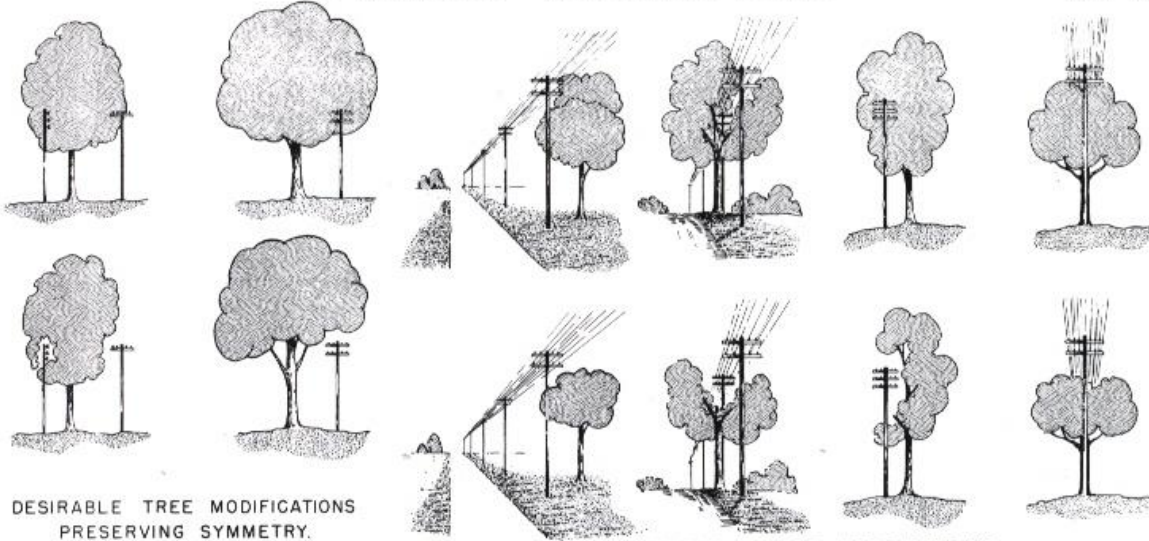
DISPOSAL OF CUTTINGS

All pruned wood and brush must be removed from the right of way and disposed of in accordance with the laws and regulations of the community, county, and state.

Disease branches (especially those infected with oak wilt) must be properly disposed of to prevent the further spread of the disease.

PRUNING SUGGESTIONS

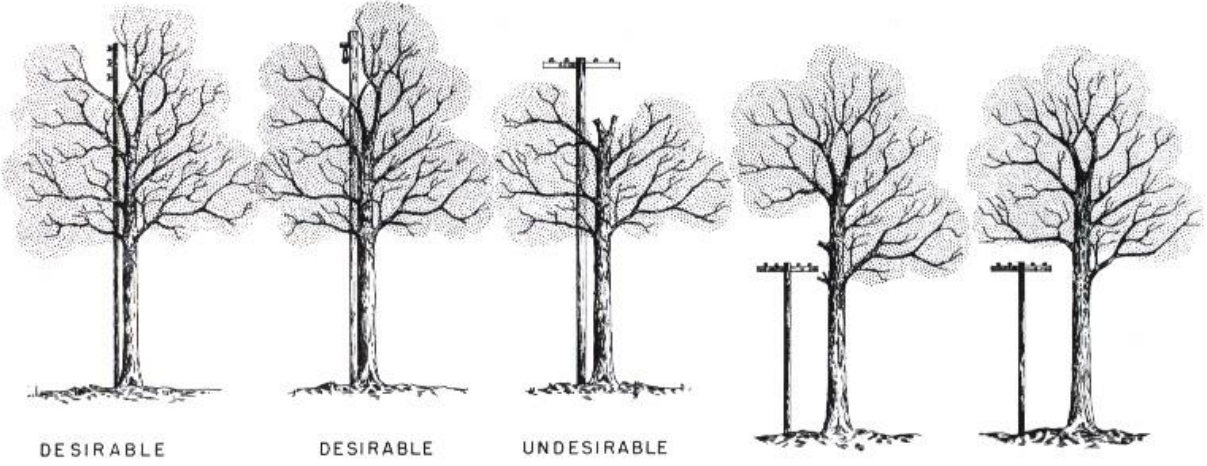
Supplement to Form 1023



DESIRABLE TREE MODIFICATIONS PRESERVING SYMMETRY.

UNDESIRABLE TREE MODIFICATIONS

Such tree-line relationships as illustrated perpetuates high maintenance costs and right-of-way unsightliness.



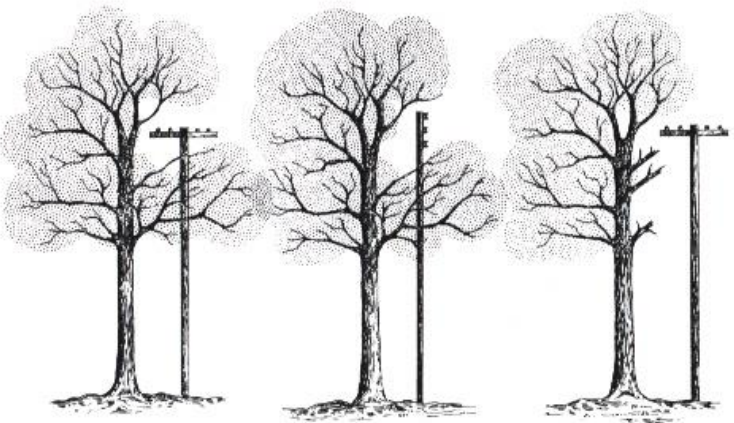
DESIRABLE

DESIRABLE

UNDESIRABLE

UNDESIRABLE

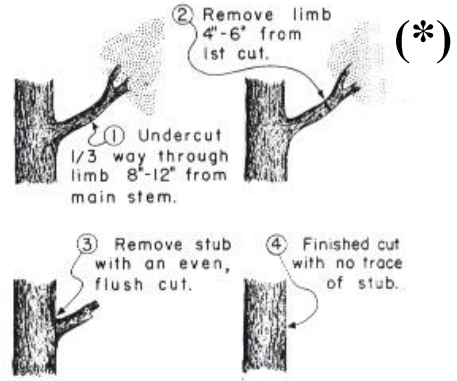
DESIRABLE



DESIRABLE

DESIRABLE

UNDESIRABLE



PROPER LIMB REMOVAL (2" dia. or more)

(*)