

## SPECIAL PROVISIONS

The Standard Specifications for this project are the "Public Works Construction Standards", 2004 Edition, as published under the authority of the North Central Texas Council of Governments.

### **A. Special Provisions to the General Provisions of the Standard Specifications:**

1. Technical Specifications (Special Specifications), if included, in the Contract document package shall supersede the standard Specifications.
2. Prospective bidders may make written request to the City Engineer for clarification and alterations in the plans, Specifications, and form of contract. Such request must be received by the City Engineer no later than 2:00 p.m. on the Wednesday first preceding the Thursday on which the bids are to be opened. The City Engineer will be the sole judge as to the necessity to an addendum or letter of clarification. Oral statements shall in no way be considered as part of the contract and will not be considered as binding.
3. Five (5) sets of the contract documents, exclusive of the "Public Works Construction Standards" referenced above will be furnished without charge to the CONTRACTOR for construction purposes. Additional copies may be obtained from the City at actual reproduction cost.

4. **Item 102.3 Examination of Plans, Specifications and Site of the Work:** Add the following paragraph after Paragraph 2:

In preparation of Drawings and Specifications, The ENGINEER has established and relied upon the following report of explorations and tests of subsurface conditions at the site of the work: *Geotechnical Exploration, Prairie Creek East Trunk Interceptor off North Mill Street near Valley Ridge Boulevard, Lewisville, Texas* dated June 2020 prepared by ALPHA Testing in Dallas, Texas. The technical data contained in such report is the log of borings shown for Borings B-1 through B-12 provided in the Appendix of the report and represents the conditions only at the point of the borings at the time the borings were made and are furnished for general information only. Copies of these reports are included in these documents. Variations from the conditions indicated by the borings shall not be used as a basis for a claim of changed conditions. The CONTRACTOR may take borings at the site to satisfy themselves as to subsurface conditions prior to bidding.

5. **Item 102.4. Preparation of Proposal:** Sentence 4 shall be changed to read: "In the cases of discrepancy between unit prices and amounts, the unit price shown in figures shall stand and the amount and total will be adjusted to correspond to the unit price shown".
6. **Item 103.3.1.1. Performance Bonds:** Paragraph (a) Performance Bond. The last sentence of this paragraph is hereby deleted and replaced with: This Bond shall provide for the repair and/or replacement of all defects due to faulty materials and workmanship that appears within a period of two years from the date of acceptance of the improvements project by the Lewisville City Council.
7. **Item 103.3.3. Sureties: The following applies to Surety Bonds:**

**Texas Government Code Title 10, Chapter 2253**

“(d) A bond required by this section must be executed by corporate surety in accordance with Chapter 3503, Texas Insurance Code.”

**Texas Insurance Code Section 3503.005. Additional Requirements for Certain Bonds**

“(a) A bond that is made, given, tendered, or filed under Chapter 53, Property Code, or Chapter 2253, Government Code, may be executed only by a surety company that is authorized to write surety bonds in this state. If the amount of the bond exceeds \$100,000, the surety company must also:

- (1) hold a certificate of authority from the United States secretary of the treasury to qualify as a surety on obligations permitted or required under federal law; or
- (2) have obtained reinsurance for any liability more than \$100,000 from a reinsurer that:
  - (A) is an authorized reinsurer in this state; and
  - (B) holds a certificate of authority from the United States secretary of the treasury to qualify as a surety or reinsurer on obligations permitted or required under federal law.

“(b) To determine whether the surety on the bond or the reinsurer holds a certificate of authority from the United States secretary of the treasury, a party may conclusively rely on the list published in the Federal Register by the United States Department of the Treasury, covering the date on which the bond was executed, of the companies holding certificates of authority as acceptable sureties on federal bonds and as acceptable reinsuring companies. A purchaser, insurer of title, or lender acquiring or insuring an interest in or title to real property may also conclusively rely on, and is protected by, a statement on a recorded bond or a sworn, recorded statement by the surety that refers to the specific recorded bond and states that, at the time the bond was executed, the surety complied with Subsection (a)(1) or (2).”

8. **Item 103.4. Insurance:** delete and replace with the following:

Vendor shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the vendor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Vendor’s bid.

A. **MINIMUM SCOPE OF INSURANCE**

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage “occurrence” form CG 00 01 (10 01). **Claims Made” for is unacceptable.**
2. Workers’ Compensation insurance as required by the Labor Code of the State of Texas, including Employers’ Liability Insurance.
3. Automobile Liability – as required by the State of Texas, covering all owned, hired, or non-owned vehicles. Automobile Liability is only required if

vehicle(s) will be used under this contract. Coverage not required for delivery services.

**B. MINIMUM LIMITS OF INSURANCE**

CONTRACTOR shall maintain throughout contract limits not less than:

1. Commercial General Liability: \$500,000 per occurrence/\$1,000,000 aggregate for bodily injury, personal injury, and property damage. Policy will include coverage for:
  - a. Premises – Operations
  - b. Broad Form Contractual Liability
  - c. Products and Completed Operations
  - d. Use of Contractors and Subcontractors
  - e. Personal Injury
  - f. Broad Form Property Damage
  - g. If applicable, Explosion Collapse and Underground (XCU) Coverage, Fire Damage, and Medical Expenses.

*NOTE: The aggregate loss limit applies to each project.*

2. Workers' Compensation and Employer's Liability: Workers' Compensation Statutory limits as required by the Labor Code of the State of Texas and Employer's Liability minimum limits of \$500,000 per injury, \$500,000 per occurrence, and \$500,000 per occupational disease.
3. Automobile Liability - \$500,000 Combined Single Limit. Limits can only be reduced if approved by the HR Director or designee.
4. Builders' Risk Insurance (as applicable) – Completed value form, insurance carried must equal the completed value of structure.

**C. DEDUCTIBLES AND SELF-INSURED RETENTIONS**

Any deductible or self-insured retentions must be declared to and approved by the City.

**D. OTHER INSURANCE PROVISIONS**

The policies are to contain, or be endorsed to contain the following provisions:

1. General Liability and Automobile Liability Coverages
  - a. The City, its officers, officials, employees, Boards/Commissions and volunteers are to be added as "Additional Insured" as respects liability arising out of activities performed by or on behalf of the vendor, products and completed operations of the vendor, premises owned, occupied or used by the CONTRACTOR. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officers, officials, employees, or volunteers. It is understood that the business auto policy under "Who is an Insured" automatically provides liability coverage in favor of the City. The coverage shall include defense of claims against the City as additional insured.

- b. The vendor's insurance coverage shall be primary and non-contributory insurance as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, or volunteers shall be excess of the contractor's insurance and shall not contribute with it.
- c. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the City, its officers, officials, employees, Boards and Commissions or volunteers.
- d. The vendor's insurance shall apply separately to each insured against whose claim is made or suit is brought, except to the limits of the insured's liability.

**2. Waiver of Subrogation – All coverages**

Each insurance policy required by this section shall waive all rights of subrogation against the City, its officers, officials, employees, and volunteers for losses arising from work performed by the vendor for the City.

**3. Notice of Cancellation - All Coverages**

Each insurance policy required by this section shall be endorsed to state that coverage shall not be suspended, voided, canceled or non-renewed by either party, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given the City, or ten (10) days prior written notice for non-payment of premium.

**E. ACCEPTABILITY OF INSURERS**

The City prefers that Insurance be placed with insurers with an A.M. Best's rating of no less than **A-:VI, or, A or better** by Standard and Poors.

**F. VERIFICATION OF COVERAGE**

CONTRACTOR shall furnish the City with certificates of insurance affecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance must be provided on forms approved by the Texas Department of Insurance. City will not accept Memorandums of Insurance or Binders as proof of insurance. The City reserves the right to require complete, certified copies of all required insurance policies at any time.

**G. HOLD HARMLESS AND INDEMNIFICATION**

THE CONSULTANT/CONTRACTOR AGREES TO DEFEND, INDEMNIFY AND HOLD THE CITY, ITS OFFICERS, AGENTS AND EMPLOYEES, HARMLESS AGAINST ANY AND ALL CLAIMS, LAWSUITS, JUDGEMENTS, COSTS AND EXPENSES FOR PERSONAL INJURY (INCLUDING DEATH),PROPERTY DAMAGE OR OTHER HARM FOR WHICH RECOVERY OF DAMAGES IS SOUGHT, SUFFERED BY ANY PERSON OR PERSONS, THAT MAY ARISE OUT OF OR BE OCCASIONED BY CONSULTANT'S/CONTRACTOR'S BREACH OF ANY OF THESE TERMS AND CONDITIONS OR BY ANY

NEGLIGENT OR STRICTLY LIABLE ACT OR OMISSION OR INTENTIONAL TORT OF CONSULTANT/CONTRACTOR, ITS OFFICERS, AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THIS AGREEMENT; EXCEPT THAT THE INDEMNITY PROVIDED FOR IN THE PARAGRAPH SHALL NOT APPLY TO ANY LIABILITY RESULTING FROM THE SOLE NEGLIGENCE OR FAULT OF THE CITY, ITS OFFICERS, AGENTS, EMPLOYEES OR SEPARATE CONTRACTORS, AND IN THE EVENT OF JOINT AND CONCURRING NEGLIGENCE OR FAULT OF THE CONSULTANT/CONTRACTOR AND THE CITY, RESPONSIBILITY AND INDEMNIFY, IF ANY, SHALL BE APPORTIONED IN ACCORDANCE WITH THE LAW OF THE STATE OF TEXAS, WITHOUT WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW AND THE CITY'S REASONABLE ATTORNEY'S FEES SHALL BE REIMBURSED IN PROPORTION TO THE CONSULTANT'S LIABILITY. THE PROVISIONS OF THIS PARAGRAPH ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY.

**H. PROOF OF INSURANCE**

Contractor is required to submit proof of insurance on a form acceptable to the City of Lewisville. Certificates of Insurance like the ACCORD form are acceptable. City will not accept Memorandums of Insurance or Binders as proof of insurance. City, at its own discretion, may require a copy of any policy presented to the City.

**I. STATE REQUIREMENTS FOR WORKERS COMPENSATION INSURANCE**

As required by 28 Tex. Admin. code §110.110(c)(7):

*A. 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 (DWC-81, DWC-82, DWC-83, or DWC-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.*

*B. 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.*

*C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.*

*D. 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.*

*E. The contractor shall obtain from each person providing services on a project, and provide to the governmental entity:*

*(1) 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*

*(2) no later than seven 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.*

*F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.*

*G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 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.*

*H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Department of Insurance, Division of Workers' Compensation, 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.*

*I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:*

*(1) 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;*

*(2) 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.*

*(3) 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.*

*(4) obtain from each other person with whom it contracts, and provide to the contractor:*

*(a) a certificate of coverage, prior to the other person beginning work on the project; and*

*(b) 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.*

*(5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter.*

*(6) notify the governmental entity in writing by certified mail or personal delivery, within 10 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*

*(7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.*

*J. 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.*

*K. 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.*

9. **Item 105.1.1. Priority of Contract Documents** is revised as follows: Insert the words "addenda (last over first)" between "Proposal" and "Special Provision".
10. **Item 105.1.3. Contract Drawings and Specifications:** Obtaining copies of NCTCOG Public Works Construction Standards is the responsibility of the CONTRACTOR.
11. **Item 105.2.2. Special Warranty:** The first sentence of this paragraph is hereby deleted and replaced with:

"If within two years after the final acceptance of the work by the OWNER, as evidenced by the final certificate of acceptance or within a longer or shorter period of time as may be prescribed by law or by the terms of any other special warranty on designated equipment, any of the work is found to be defective or not in accordance with the contract documents, the CONTRACTOR shall correct it promptly after receipt of a written notice from the OWNER to do so".
12. **Special Provision to Item 105.3. Shop Drawings, Product Data and Samples:** add the following:

"Review of Shop Drawings by the CITY and/or ENGINEER shall be for the sole purpose of determining the sufficiency of said drawings or schedules to result in finished improvements in conformance with the plans and Specifications, and shall not relieve the CONTRACTOR of his duty as an independent contractor. It being understood and agreed that the Engineer does not assume any duty to pass upon the propriety or adequacy of such drawings or schedules or any means or methods reflected thereby in relation to the safety of either person or property during the contractor's performance hereunder."
13. **Item 105.4: "Construction Stakes" is amended to the extent that the ENGINEER** will provide initial horizontal and vertical control and construction staking for the project. The ENGINEER will provide the following construction staking:
  - a. Verify and re-establish the design baseline and monuments set for horizontal and vertical control.
  - b. Stakes will be set at a minimum of 50-foot intervals and at all P.C.'s, P.T.'s, and P.I.'s along the design baseline.
  - c. No staking other than that mentioned above will be provided.
  - d. Staking will be performed one time only. RJN will make one additional trip back to the site to replace lost or destroyed stakes. Additional lost or destroyed stakes will be replaced at the CONTRACTOR'S expense.
  - e. A minimum of five (5) working days' notice will be given by the CONTRACTOR.
  - f. The CONTRACTOR will set all blue tops and be responsible for all staking not specifically provided above.



- g. The CONTRACTOR shall provide any additional stakes and other materials and incidentals necessary for the correct construction of all facilities at no additional charge. It is the CONTRACTOR'S sole responsibility to ensure the correctness of any additional stakes and that the work is constructed to the lines and grades shown on the plans.

14. **Item 105.6 Supervision by Contractor:** The CONTRACTOR shall designate a **full-time superintendent, with at least 5 years of roadway and drainage experience and who also shall be on the job site at all times during construction including times when work is being performed by subcontractors.** The OWNER'S Representative will communicate only with the superintendent. The CONTRACTOR may replace the designated superintendent by written notification to the OWNER.

15. **Special Provision to Item 105.7.1. Authority of the Engineer:** add the following:

“The Engineer shall make periodic visits to the site to familiarize himself generally with the progress of the executed work and to determine if such work generally meets the essential performance and design features and the technical and functional engineering requirements of the Contract Documents; provided and except, however, that the Engineer shall not be responsible for making any detailed, exhaustive, comprehensive or continuous on-site inspection of the quality or quantity of the work or be in any way responsible, directly or indirectly, for the construction means, methods, techniques, sequences, quality, procedures, programs, safety precautions or lack of same incident thereto or in connection therewith. Notwithstanding any other provision of this agreement or any other Contract Document, the Engineer shall not be in any way responsible or liable for any acts, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR'S or sub-contractor's agents, or employees or any other person, firm or corporation performing or attempting to perform any of the work.”

16. **Item 106.5: Samples and Tests of Materials:** Delete the first and last paragraphs on Item 106.5 and replace with the following:

“The CONTRACTOR shall engage the services of an acceptable testing laboratory company to perform all required testing services. The CONTRACTOR (not the OWNER) shall pay all costs for these services, including any retesting after failure to pass tests. The CONTRACTOR shall obtain OWNER'S acceptance of the testing laboratory before having the services performed.”

Written reports of tests and engineering data furnished by CONTRACTOR for OWNER'S review shall be submitted as specified in Item 105.3, “Shop Drawings, Product Data and Samples” and as modified by the Special Specifications.

17. **Special Provisions to Item 107.2. Indemnification:** delete Item 107.2. in its entirety and substitute the following:

"The CONTRACTOR and his sureties shall indemnify, defend and save harmless the OWNER and all of their officers, agents and employees, Engineer and all of its officers and employees from all suits, actions or claims of any character, name and description brought for or on account of any injuries, including death or damages received or sustained by any person, persons or property on account of the operations of the CONTRACTOR, his agents, employees or subcontractors; or on account of any negligent act or fault of the

CONTRACTOR, his agents, employees or subcontractors in the execution of said contract; or on account of the failure of the CONTRACTOR to provide the necessary barricades, warning lights or signs; and shall be required to pay any judgment, with cost, which may be obtained against the OWNER or Engineer growing out of such injury, including death or damage."

18. **Item 107.11. Supervision and Construction Procedures:** The CONTRACTOR'S attention is drawn to paragraphs 1 and 4 of this item and paragraphs 1 and 3 of Item 105.6.

19. **Item 107.24. Project Clean-Up:** All objectionable surplus and waste material due to construction shall be removed from the site at the CONTRACTOR'S expense.

20. **Item 108.1. Progress Schedule:** add the following paragraph:

"The CONTRACTOR shall submit to the OWNER a construction schedule setting out items of construction, road closings, detours, utility interruptions, limits, times and actual dates. If the schedule is acceptable to the OWNER, the OWNER will approve it; if the schedule is unacceptable, it will be returned to the CONTRACTOR for revision and resubmittal. If the CONTRACTOR wants to deviate from the approved schedule, he must submit a revised schedule to the OWNER for consideration. The entire work shall be prosecuted in a continuous manner in accordance with the approved schedule. Proposed stockpile locations must be approved by the OWNER prior to depositing material. The CONTRACTOR shall update this schedule monthly."

21. **Item 108.5. Subcontracts:** add the following paragraph:

"The CONTRACTOR shall perform with his own organization and with the assistance of workmen under his immediate superintendence, work of a value not less than 50 percent of the value of all work embraced in the contract exclusive of items not commonly found in contract for similar work and exclusive of items that require highly specialized knowledge, craftsman and/or equipment not ordinarily available in the organization of CONTRACTORS performing work of the character embraced in the contract". For evaluating the percentage of work performed by subcontractors, the cost of all equipment, supplies, and materials used or installed on the project by subcontractors shall be considered as part of the work of subcontractors. This will apply even if the contractor supplies and pays for some or all equipment, supplies, or materials used by subcontractors.

22. **Item 108.8. Delays; Extension of Time; Liquidated Damages:** Delete the first paragraph of Section 108.8. and replace with the following:

"The CONTRACTOR hereby agrees that no work will be performed on CITY holidays or on Sundays. In addition, he agrees that work will be performed between 7:00 a.m. and sunset on weekdays and between 8:00 a.m. and 6:00 p.m. on Saturdays. The only exception to the preceding will be the performance of work in response to emergency situations and/or when directed to work by the OWNER. Also, the CONTRACTOR hereby concurs that the preceding has been taken into account in setting the contract time." The CONTRACTOR will be responsible for reimbursing the City of Lewisville for overtime charges for construction inspection services on Saturdays, Sundays, and all City holidays. The overtime charges will be based on the top of range overtime rate for an Engineering Construction Inspector plus eighteen percent (18%) per hour and a minimum of four (4) hours will be charged for each occurrence of such service. The overtime charges will be billed monthly.

Failure to pay for these services will result in delaying the final acceptance and payment.

“The CONTRACTOR shall be entitled to an extension of working time under this contract only when claim for such extension is submitted to the OWNER in writing by the CONTRACTOR within seven days from and after the time when any alleged cause of delay shall occur; and then only when such time is approved by the OWNER. In adjusting the working time for the completion of the project, the OWNER will consider delays due to acts of God, or the public enemy, acts of the OWNER, fires, floods, epidemics, and quarantine restrictions. The OWNER may, but is not obligated to, take into account any unforeseeable causes of delay which the OWNER considers beyond the control and without the fault or negligence of the CONTRACTOR. It is anticipated that during the course of the contract, inclement weather (rain or freezing temperatures) will hinder or prevent work. The contract time has been established assuming that up to 20% of the contract days will be inclement weather days, during which no work can be performed. No extension of time will be granted for such inclement weather days. The OWNER may grant an extension of time for inclement weather days beyond 20% of the contract time but is under no obligation to do so.”

23. **Item 109.3. Payment for Extra Work:** Replace the first sentence of 109.3.1. General; with the following:

“No work shall be undertaken which requires extra payment without having executed a change order or field change approved by the CONTRACTOR and the OWNER, except when specifically ordered to do so in writing.”

24. **Item 109.5. Monthly Estimate, Partial Payments, Retainage, Final Inspection, Acceptance and Final Payment**

Delete from the first paragraph of 109.5.1: "The monthly estimate may include acceptable non-perishable materials delivered to the work; such payment shall be allowed on same percentage basis of the net invoice value as provided hereinafter."

Add in its place, the following:

The OWNER will pay for materials on hand only under the following conditions:

- a. The CONTRACTOR shall provide proof of payment for the materials.
  - b. The materials shall be secured in a manner acceptable to the OWNER.
  - c. Payment will not be made for small items, and other items not easily measured.
  - d. No payment will be made for small quantities of material on hand (less than 0.5 percent of the contract amount).
  - e. No payment for materials on hand will be made for items such as paint, mastics, cement, and other similar materials.
25. Delays associated with delivery of materials of appurtenances by the manufactures will not be considered for any extension of contract time. It shall be the sole responsibility of the CONTRACTOR to ensure that the materials are manufactured and delivered on time.

**B. Special Provisions to the Materials and Construction Methods of the Standard Specifications:**

Only items in the Proposal are Pay Items. Other specification items will be complied with; however, their measurement and payment provisions are hereby deleted.

The price bid covers all work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the work, are included in the unit and lump sum prices bid. All work not specifically set forth as a pay item in the Proposal are considered a subsidiary obligation of the CONTRACTOR and all costs in connection therewith are included in the prices bid.

**The Contractor is required to abide by the Buy America Compliance Requirements and must supply the required documentation to the City indicating compliance with this provision. The following documents must be supplied prior to installation of the materials:**

- 1) Form 1818 - Material Statement**
- 2) Material Test Reports or Certifications**

Work that is subsidiary to pay items includes, but is not limited to the following:

Additional surveying and construction staking, coordination with franchise utilities, confirming location of franchise utilities, temporary fencing, maintaining water and wastewater service to adjacent properties; sodding, topsoil and establishment of a growth of grass outside of pay limits; placement of sod in all remaining disturbed areas after contract time has expired, temporary irrigation, removal of waste material from the site; tree protection; replacement of property markers or monuments disturbed; pipe removal (not covered in pay items), pipe fittings, bends, concrete thrust blocks, valve stack risers, concrete valve boxes, testing, landscape irrigation system replacement, surface drains and subdrains damaged during construction; flood protection; dewatering of trenches or subgrade; concrete and/or asphalt pavement replacement (in areas outside of the pay limits that was damaged by the CONTRACTOR); additional traffic control not in the plans; clean up; and all other work required to complete the project and restore the areas of construction to their preconstruction condition.

1. Payment for “**Mobilization**” is based on price bid per lump sum (LS). The amount bid for these items shall not exceed five (5) percent of the Total Amount Bid. If the bid for these items exceeds 5% of the total amount bid, the amount more than 5% will be paid on the project progress estimates throughout the duration of the project, with the amount determined by the percent complete on all other bid items for the project.
2. **Surveying and Construction Staking** includes all survey work required for construction of the project except the initial one-time only, setting of alignment control and project benchmarks by the CONSULTANT as shown on page SS-28, Item 13, Special provision to Item 105.4. Construction Stakes. The CONTRACTOR will offset alignment control and benchmarks as required to ensure that they are protected during construction.
3. Payment for “**Abandon Existing Sanitary Sewer Line in Place and Grout Fill**” is based on price per bid per cubic yard (CY) and is the total compensation for furnishing all labor,

materials, and equipment to complete the necessary work. All work shall be in accordance with City of Lewisville and NCTCOG.

4. Payment for “**Abandon Existing Water Line in Place and Grout Fill**” is based on price per bid per cubic yard (CY) and is the total compensation for furnishing all labor, materials, and equipment to complete the necessary work. All work shall be in accordance with City of Lewisville and NCTCOG.
5. Payment for “**Remove Existing Wastewater Manhole**,” is based on the price bid per each (EA) and is full compensation for the complete removal, disposal, and furnishing all labor, materials, equipment, backfill, and any other incidentals necessary to complete all work. All work shall be in accordance with City of Lewisville and NCTCOG.
6. Payment for “**Remove Existing Wastewater Cleanout**,” is based on the price bid per each (EA) and is full compensation for the complete removal, disposal, and furnishing all labor, materials, equipment, backfill, and any other incidentals necessary to complete all work. All work shall be in accordance with City of Lewisville and NCTCOG.
7. Payment for “**Remove and Salvage Existing Fire Hydrant**” is based on the price bid per each (EA) is the total compensation for furnishing all labor, materials, equipment, backfill, and any other incidentals necessary to complete the work. Adjustment of associated gate valve is subsidiary to this item. Return Fire Hydrants to the City if requested.
8. Payment for “**Remove and Salvage Existing Gate Valve**” is based on the price bid per each (EA) and is the total compensation for furnishing all labor, materials, equipment, backfill, and any other incidentals necessary to complete the work. Return valves to the City if requested.
9. Payment for “**Remove and Salvage Existing Water Meter and Box**” is based on the price bid per each (EA) and is the total compensation for furnishing all labor, materials, equipment, backfill, and any other incidentals necessary to complete the work. This item governs the removal of the existing water meter outside the proposed improvements and adjusting the existing service line.
10. Payment for “**Saw Cut, Remove, and Dispose of Asphalt Pavement**” is based on the bid per square yard (SY) and shall include full compensation for labor, materials, and incidentals to include the cost of saw cutting, removing, and disposing off-site the existing pavement, curb and gutter, driveways, alleys, and sidewalks. Neatly sawcut all flatwork along straight lines and to the nearest joint in location shown in plans. All work shall be in accordance with City of Lewisville and NCTCOG.
11. Payment for “**Saw Cut, Remove, and Dispose of Concrete Pavement**” is based on the bid per square yard (SY) and shall include full compensation for labor, materials, and incidentals to include the cost of saw cutting, removing, and disposing off-site the existing pavement, curb and gutter, driveways, alleys, sidewalks, flumes, concrete lined channel and rip rap. Neatly sawcut all flatwork along straight lines and to the nearest joint in

location shown in plans. All work shall be in accordance with City of Lewisville and NCTCOG.

12. Payment for “**Install 48-inch Diameter Standard Manhole (+5 additional VF)**,” is based on the bid per vertical foot (VF) and shall include full compensation for labor, materials, and incidentals for constructing a complete manhole with composite ring and bolt down cover to the elevations shown on the plans. Concrete shall be Class “F” concrete having a minimum compressive strength of 4,200 psi at 28 days. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.
13. Payment for “**Sanitary Sewer Cleanout**” is based on the price bid per each (EA) and is total compensation for furnishing all labor, materials, excavation, form work, concrete, reinforcing steel, backfill, equipment and any other incidentals necessary to complete the work. Sanitary sewer cleanout shall be constructed in accordance with the plan details. This item shall cover cleanouts installed on public sanitary sewer mains where identified on the plans.
14. Payment for Flowable Fill Grout is based on the price bid per cubic yard and is the total compensation for furnishing all labor, materials, and other incidentals necessary to complete the work. Flowable Fill Grout shall be controlled low-strength material (minimum 1000 psi concrete) consisting of fluid mixture of cement, fly ash, aggregate, water and with admixtures as necessary to provide workable properties to flow into and fill the pipe, with no voids.
15. Payment for install “**8-Inch PVC SDR-26 (ASTM D-3034), Sanitary Sewer Lines BOTOC**” is based on the price bid per linear foot (LF) and shall be total compensation for furnishing all labor, materials including Tunnel Liner Plate and equipment, testing all lines, reinstatement of service and services, excavation, embedment, and backfill and other incidentals necessary to complete the work. A partial payment of 30% inclusive of the standard 5% retainage, for bid items for all sanitary sewer pipe will be withheld until the sanitary sewer has been successfully tested. Sewer tests include television inspection, mandrel deflection test, and air test. The CONTRACTOR is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.

If existing sanitary sewer main flows are disrupted, the CONTRACTOR must use bypass sewage pumping to avoid disrupting sewer flow during construction of the new sewer main. The cost of sewage pumping is covered under these bid items. There is no separate pay for sewage pumping.

The CONTRACTOR must have pumps on the job site capable of handling the peak wet weather flow at that location. The CONTRACTOR must have staff available 24/7 to monitor pumps when pumps are running. The unit price bid for this item consists of all materials, equipment, labor, tools, and incidentals necessary to complete the work. Determine the location of each service line before construction. The unit price includes all measures required to maintain sanitary sewer service at each residence during construction of the new main.

16. Payment for install “**8-Inch PVC SDR-26 (ASTM D-3034), Sanitary Sewer Lines by Open Cut**” is based on the price bid per linear foot (LF) and is the total compensation for furnishing all labor, materials, and equipment, including testing all lines, reinstatement of

service and services, excavation, embedment, and backfill and other incidentals necessary to complete the work. A partial payment of 30% inclusive of the standard 5% retainage, for bid items for all sanitary sewer pipe will be withheld until the sanitary sewer has been successfully tested. Sewer tests include backfill compaction, television inspection, mandrel deflection test, and air test. The CONTRACTOR is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.

If existing sanitary sewer main flows are disrupted, the CONTRACTOR must use bypass sewage pumping to avoid disrupting sewer flow during construction of the new sewer main. The cost of sewage pumping is covered under these bid items. There is no separate pay for sewage pumping.

The CONTRACTOR must have pumps on the job site capable of handling the peak wet weather flow at that location. The CONTRACTOR must have staff available 24/7 to monitor pumps when pumps are running. The unit price bid for this item consists of all materials, equipment, labor, tools, and incidentals necessary to complete the work. Determine the location of each service line before construction. The unit price includes all measures required to maintain sanitary sewer service at each residence during construction of the new main.

17. Payment for install **“8-inch PVC DR-18 (AWWA C900) Water Line Pipe BOTOC”** is based on the price bid per linear foot (LF) and is the total compensation for furnishing all labor, materials, and equipment, including testing all lines, reinstatement of service and services, excavation, embedment, and backfill and other incidentals necessary to complete the work. A partial payment of 30% inclusive of the standard 5% retainage, for bid items for all water pipes will be withheld until the water line has been successfully tested. Water tests include backfill compaction, hydrostatic testing (150 psi for 4 hours), chlorination, and water samples. The CONTRACTOR is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.

18. Payment for install **“8-inch PVC DR-18 (AWWA C900) Water Line Pipe by Open Cut”** is based on the price bid per linear foot (LF) and is the total compensation for furnishing all labor, materials, and equipment, including testing all lines, reinstatement of service and services, excavation, embedment, and backfill and other incidentals necessary to complete the work. A partial payment of 30% inclusive of the standard 5% retainage, for bid items for all water pipes will be withheld until the water line has been successfully tested. Water tests include backfill compaction, hydrostatic testing (150 psi for 4 hours), chlorination, and water samples. The CONTRACTOR is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.

19. Payment for install “**12-inch PVC DR-18 (AWWA C900) Water Line Pipe by Open Cut**” is based on the price bid per linear foot (LF) and is the total compensation for furnishing all labor, materials, and equipment, including testing all lines, reinstatement of service and services, excavation, embedment, and backfill and other incidentals necessary to complete the work. A partial payment of 30% inclusive of the standard 5% retainage, for bid items for all water pipes will be withheld until the water line has been successfully tested. Water tests include backfill compaction, hydrostatic testing (150 psi for 4 hours), chlorination, and water samples. The CONTRACTOR is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.
20. Payment for “**Gate Valve**” is based on the price bid per each (EA). This item shall conform to the City of Lewisville Standard Details. The unit price bid for this item consists of all materials, equipment, labor, tools, and incidentals necessary to complete the work.
21. Payment for install and furnish “**Ductile Iron Water Fittings with Restraint**” is based on the price bid per ton and includes
22. Payment for “**Connect to Existing Sanitary Sewer Line**” is based on the price bid per each (EA). This item shall govern only for “in-line” connection to existing mains without a manhole. Make connections with suitable adaptors. This item shall include locating end of pipe and furnishing and installing the adaptors.
23. Payment for “**Connect to Existing Waterline**” is based on the price bid per each (EA) and includes locating end of pipe, shutdown of line and removal of plug (if required) and concrete blocking. The CONTRACTOR shall coordinate shutdown of water lines with City of Lewisville personnel. Excavation to locate exact end of pipe is the Contractor’s responsibility.
24. Payment for “**Furnish and Install Water Meter and Box**,” is based on price bid per each (EA) and includes labor, materials, and incidentals for installing and connecting a new water meter and meter box at each location shown on the plans. All work shall be in accordance with City of Lewisville and NCTCOG.
25. Payment for “**Cut and Plug Sanitary Sewer Line**,” is based on price bid per each (EA) and includes labor, materials, and incidentals for cutting the existing pipe and installing a cap at each location shown on the plans. All work shall be in accordance with City of Lewisville and NCTCOG.
26. Payment for “**Cut and Plug Water Line**” is based on price bid per each (EA) and includes labor, materials, and incidentals for cutting the existing pipe and installing a cap at each location shown on the plans. All work shall be in accordance with City of Lewisville and NCTCOG.
27. Payment for “**Steel Encasement Pipe**” is based on price bid per linear foot (LF) of encasement and consists of installing 18-inch, 20-inch, and 24-inch, steel encasement pipe,



½ -inch thick in the locations and to the depth as shown on the construction plans. The Contractor is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work will be in accordance with City of Lewisville and NCTCOG Division 500.

Measurement and Payment for work performed and materials provided for installing the steel encasement is total compensation for furnishing all labor, materials, and equipment, including excavation, embedment, backfill, galvanized straps, anchor bolts, neoprene pad, casing pipe spacers, end seals, and any other incidentals necessary to complete the work.

28. Payment for install “**Fire Hydrant Assembly**” is based on price bid per each (EA). The unit price includes a 6-inch gate valve installed at the tee from the mainline, 6-inch PVC pipe (various lengths), fire hydrant, painting of the fire hydrant, backfill, compaction, and testing. The unit price shall include all labor, materials, tools, equipment, and incidentals necessary to complete the work in accordance with the plans, specifications, and details.
29. Payment for install “**6-inch DI Water Line Pipe by Open Cut (Fire Hydrant)**” is based on the price bid per linear foot (LF) and is the total compensation for furnishing all labor, materials, and equipment, including testing all lines, reinstatement of service and services, excavation, embedment, and backfill and other incidentals necessary to complete the work. A partial payment of 30% inclusive of the standard 5% retainage, for bid items for all water pipes will be withheld until the water line has been successfully tested. Water tests include backfill compaction, hydrostatic testing (150 psi for 4 hours), chlorination, and water samples. The CONTRACTOR is responsible for taking any necessary precautions or construction measures necessary to protect and support existing utilities. Work shall be in accordance with City of Lewisville and NCTCOG Division 500.
30. Payment for “**Trench Safety,**” is based on the price bid per linear foot (LF) for the actual implementation of the trench safety excavation and support system required for the actual construction activities and is the total compensation for furnishing the design and all materials, tools, equipment, labor, and any incidentals necessary to complete the work. The paid item shall consist of the design and implementation of a trench safety excavation and support system required for construction activities. The CONTRACTOR must furnish a site-specific trench safety plan prior to construction. The system must meet the requirements of Occupational Safety and Health Administration (OSHA).  
  
The CONTRACTOR is directed to become knowledgeable with the standards as set forth by OSHA and to provide a viable trench safety system at all times during construction activities, and the CONTRACTOR is responsible for conforming to such regulations as prescribed by OSHA standards. This pay item includes all additional excavation, backfill, pavement reconstruction, and repair made necessary by the protection system. No separate payment will be made for excavation protection due to the selection of an optional design or sequence of work that creates the need for a protection system. The trench safety plan must be signed and sealed by a Texas Licensed Professional Engineer.
31. Payment for “**Bypass Pumping,**” is based on the bid per month (MO) and shall include full compensation for labor, materials, and incidentals for bypass pumping to avoid disrupting sewer flow during construction of the new sewer main.

The CONTRACTOR must have pumps on the job site capable of handling the peak wet weather flow at the location shown in the plans. The CONTRACTOR shall have staff available 24/7 to monitor pumps when pumps are running. The location of each service line shall be determined prior to construction. The unit price shall include all measures required to maintain sanitary sewer service at each residence during construction of the new main.

32. Payment for **“Seeding with 4-inch Topsoil,”** is based on price bid per square yard (SY) and is the total compensation for full restoration furnishing all materials, equipment, labor (including fine grading), placing the topsoil, seeding, fertilizing, water, disposal of waste materials, and any incidentals necessary to complete the work.
33. Payment for installation of **“Silt Fence”** is based on the price bid per linear foot (LF) and is the total compensation for furnishing all material, equipment, and labor necessary for installation. Silt fence fabric shall conform to the requirements of Material Specification SD-592 with wood posts having minimum dimensions of 1.5”x1.5” by the length shown on the plans.
34. Payment for installation of **“Filtration socks”** is based on the price bid per linear foot (LF) and is the total compensation for furnishing all material, equipment, and labor necessary for installation. Filtration socks to meet AASHTO specifications.
35. Payment for **“Replace Concrete Sidewalk 4-inch Thick (Class C)”** is based on the bid price per square yard (SY) and is the total compensation for furnishing all labor, materials, equipment, and any incidentals to complete the work. Work shall be constructed in accordance with the City of Lewisville Standard Details in the locations shown in the plans.
36. Payment for **“Remove and Replace 6-inch Curb and Gutter”** is based on the bid per linear foot (LF) and shall include full compensation for labor, materials, and incidentals to include the cost of saw cutting, removing, and disposing off-site the existing pavement, curb and gutter, driveways, alleys, sidewalks, flumes, concrete lined channel, and rip rap. Neatly sawcut all flatwork along straight lines and to the nearest joint in location shown in plans. All work shall be in accordance with City of Lewisville and NCTCOG.
37. Payment for **“2-Inch-Hot Mix Type “D” Asphalt”** is based on the price bid per square yard (SY) and is the total compensation for furnishing all labor, materials, equipment, and any other incidentals necessary to complete the work. Install 2-Inch-Thick Type “D” Asphalt pavement to the thickness, lines and limits shown on the plans and in accordance with the project details and the applicable provisions of NCTCOG Item 302.9 “Hot Mix Asphalt Pavement.” Asphaltic concrete shall meet the requirements for Type “D” of TxDOT Item 340. A tack coat shall be applied at a 0.05 gal/SY rate to the prepared Type “B” base course before placement and shall meet the requirements for MC-30 of TxDOT Item 310.
38. Payment for **“4-inch Concrete Pavement Subgrade”** is based on the price bid per square yard (SY) and is the total compensation for furnishing all labor, materials, equipment, and any other incidentals necessary to complete the work.
39. Payment for **“Removal and Replacement of Existing Trees,”** is based on price per each (EA) and is the total compensation for removal, disposal, and furnishing all labor, materials, equipment, backfill, and any incidentals necessary to complete the work.

This item includes the costs of removal and disposal of trees 6-inches in diameter (measured at a height of 4.5 feet above the ground) or greater as determined by the Engineer or City Inspector. Costs include the complete removal and disposal of tree, stumps, roots, and debris. Remove all organic material.

40. Payment for **“Traffic Control,”** is based on price bid per month (MO). This pay item consists of installing, maintaining, and removing the required traffic control devices during each phase of construction in accordance with the traffic control plan.

Inclusive with this pay item is the requirement for adequate notification and instruction to be given to adjacent business and property owners and to the traveling public regarding interruptions or changes to established traffic flow patterns to, from, and along the work site. This item includes detours, barrels, panels, arrow boards, removing striping, temporary Lane lines and or markers, construction signing and barricades, construction pavement markers, temporary asphalt, message 4 words and all other work required to provide for passage of vehicular traffic for all phases of construction. Access must always be maintained to all houses and businesses. The amount bid 4 this item is paid over the duration of the project with the amount paid on each monthly progress estimate determined by the percent complete on all other bid items.

41. Payment for **“Post-Construction Cleaning & TV Study of All Pipe Installed,”** shall be based on bid price per linear foot (LF). Total compensation shall include all labor, equipment, and incidentals to complete the work. Recordings shall be supplied to the Owner’s Representative on a DVD or Flash Drive. The CONTRACTOR shall make repairs on installed pipe if the Engineer or Owner notes problems with the pipe structure, grade, pulled joints, etc. at the CONTRACTORs Expense. If repairs are required, another television inspection of the repaired area may be required deemed necessary by the Owner’s Representative, at the CONTRACTOR’s expense.

### C. Special Specifications

1. Shop Drawings:

The CONTRACTOR shall submit four copies of shop drawings to the OWNER for all proposed materials. CONTRACTOR shall keep one (1) set of prints for making construction notes and mark-ups for submittal of as-built drawings.

2. **Property Owner Notification/Approval:**

**The CONTRACTOR must notify all affected property owners 30 days prior to accessing the property. Notification must be made by certified mail with a copy of the letter, certified mail receipt and domestic return receipt submitted to the City. The CONTRACTOR shall obtain a written letter of approval from the affected property owners prior to city acceptance of the work.**

3. Inspection:

The word "inspection" or other forms of the word, as used in the contract documents for this project shall be understood as meaning the OWNER'S Representative will observe the construction on behalf of the OWNER. The OWNER'S Representative will observe and check the construction in sufficient detail to satisfy himself that the work is proceeding in general accordance with the contract documents, but he will not be a guarantor of the CONTRACTOR'S performance.

4. Construction signing shall be placed on new 4" X 4" wooden posts (two required except "Street Construction Ahead" may be on one post). Upon post removal, the holes shall be filled and compacted. Signs shall be new.

5. The CONTRACTOR shall provide detour signs, barricades, barrels, vertical panels, flashing lights, construction pavement markers, construction and maintenance signs, construction lights, construction speed limit signs, channelizing devices, and flagmen as required providing for the safety of the traveling public. These items shall be in accordance with the traffic control plan and the recommended practices of the "Texas Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition. The installation of "Street Construction Ahead," "Utility Construction Ahead" and "End Construction" signs shall be made and such approved at least 48 hours prior to any construction or the moving of any equipment or materials onto or nearby the site.

6. The CONTRACTOR shall provide a project sign at that site with active construction, the cost of which will be subsidiary to the various bid items. Signs will be installed as directed by the City. The City will provide the CONTRACTOR with information with regards to the size of lettering, content, and size of signs (see detail at back of spec book). The two project signs shall be relocated, as directed by the City, as the work locations progress within each stage of construction.

7. Construction signing shall not be removed from the project until approved by the OWNER.

8. No existing street shall be closed except upon written authority from the OWNER.

9. The CONTRACTOR shall remove all trees, stumps, vegetation, roots, brush, logs, shrubs, plants, and landscaping within the right-of-way. All trees, stumps, slashings,

brush, other debris, or deleterious material generated as a part of this work shall be removed from the project. Any required disposal permits shall be in the sole responsibility of the CONTRACTOR. All stumps shall be grounded to below the finished grade, using a stump grinder. Tree branches that overhang into the right-of-way shall be trimmed by the CONTRACTOR, if required, to facilitate the construction. Tree removal or trimming shall be paid for as a part of the bid item "Prepare Right of Way".

Trees to remain outside the right-of-way or easement on private property will be protected from damage by the CONTRACTOR. Employees of the CONTRACTOR (his subcontractors) will not part closer than ten (10) feet to any tree that is to remain.

10. The CONTRACTOR shall coordinate his activities with other CONTRACTOR'S working within, and close proximity to the project. To facilitate cooperation, regular progress meetings will be held among all CONTRACTOR'S.
11. Water and sanitary sewer service shall be maintained for all properties during construction. This includes the construction of temporary connections, if required. Temporary connections shall be considered subsidiary to the various bid items.
12. At the end of each day, the CONTRACTOR shall prepare the work to the satisfaction of the OWNER.
13. Prior to beginning construction, the CONTRACTOR shall contact all utility companies with utilities in the area and the property owners, 48 hours in advance of starting work. If necessary, test ditches will be dug to verify actual locations and conditions.

Frontier (Attn: Carl Shipman).....	972-318-3245
Texas-New Mexico Power Company (Attn: Carlos Estrada).....	972-353-5006
Coserv (Attn: Jody Padron).....	940-321-7800
AT&T (Attn: Eric Williams).....	214-745-2964
Spectrum Cable (Attn: Mathew Bossart).....	972-670-1222
Grande Communications (Attn: Mike Bowden) .....	972-410-0592
United Private Networks (Attn: Tom Marvel) .....	972-841-5695
City of Lewisville Parks Department .....	972-219-3689
City of Lewisville Public Services	
Attn: David Evans .....	972-219-3527
United States Post Office .....	(Fax) 972-436-7230
Atmos Energy (Attn: Patrick McKenzie) .....	972-360-4428
For line locates, call.....	811

14. Information shown on these plans concerning type and location of underground utilities is not guaranteed to be accurate or all-inclusive. The CONTRACTOR is responsible for making his own determination as to type and location of underground utilities as may be necessary to avoid damage thereto. The CONTRACTOR shall verify location of underground pipelines, conduits, and structures by contacting the owners of the underground facilities and prospecting in advance of excavation operations. The CONTRACTOR shall pay for all repairs of damaged of utilities resulting from the construction of this project and no additional payment will be made by the CITY.

Furthermore, whenever the OWNER requests the CONTRACTOR to uncover any water line, sewer line or pipe line, or any other underground utility line well in advance of his

construction activity in order to confirm locations of utilities, the CONTRACTOR shall comply with the OWNER'S request.

15. Boundary fences or other improvements removed to permit this construction shall be replaced in the same location as specified on the plans. Temporary fencing shall be installed as required and subsidiary to contract.
16. The CONTRACTOR shall always keep the job site as free from all material, debris, and rubbish as is practical and shall remove same from any portion of the job site as construction of that portion is completed. No item of work will be considered complete for payment purposes until required cleanup has been performed.

Upon completion of the work, the CONTRACTOR shall remove from the site all plants, materials, tools, and equipment belonging to him and leave the site with an acceptable appearance.

17. No material, which has been used by the CONTRACTOR for any temporary purpose whatever, is to be incorporated in the permanent structure without written consent of the CITY.

Where materials or equipment are specified by a trade or brand name, it is not the intention of the OWNER to discriminate against an equal product of another manufacturer, but rather to set a definite standard of quality of performance, and to establish an equal basis for the evaluation of bids. Where words "equivalent", "proper", or "equal to" are used, they shall be understood to mean that the thing referred to shall be proper, the equivalent to, or equal to some other thing, in the opinion or judgment of the ENGINEER. Unless otherwise specified, all materials shall be the best of their respective kinds and shall be in all cases fully equal to approved samples. Notwithstanding that the words "or equal to" or other such expressions may be used in the Specifications in connection with a material, article or process specifically designated shall be used, unless a substitute shall be approved in writing by the ENGINEER, and the ENGINEER shall have the right to require the use of such specifically designated material, article or process.

18. Tree Protection

The CONTRACTOR shall be responsible for taking measures to minimize damage to tree limbs, tree trunks, and tree roots adjacent to the project unless otherwise specified in the plans to remove trees. CONTRACTOR shall inspect the work site in advance and arrange to have any tree limbs pruned that might be damaged by equipment operations. The City shall be notified at least 24 hours prior to any tree trimming work. Nothing shall be stored or parked over the tree root system within the drip line area of any tree. The CONTRACTOR shall employ a qualified landscaper for all the work required for tree care to ensure utilization of the best agricultural practices and procedures.

19. The following material tests will be required for the project:

- a. Embankment: The testing laboratory will make tests of in-place density in accordance with ASTM D 6938-08 of points selected by the City Inspector. A minimum of two field density tests shall be conducted per lift for each 5,000 square

feet of compacted area, except that in critical areas such as around and over structures, the frequency of tests may be reduced to one test per 2,500 square feet.

- b. **Backfill Compaction:** The testing laboratory will make tests of in-place density in accordance with ASTM D 698 of points selected by the City Inspector. All trenches shall be compacted to 95% of standard Proctor maximum dry density within the range of 2% below and 5% above the material's optimum moisture content. A minimum of one density test will be made for each 100 linear feet of every lift of fill for gabion wall or mattress construction. When backfill tested fails to meet the required density, trench backfill in the vicinity of the test, i.e. for a minimum of 50 feet in both directions from the test location, shall be removed and replaced with compaction. Thereafter, three tests shall be performed on the material removed and replaced, to determine if it is in accordance with the project compaction requirements.
- c. **Concrete:** Four standard 6-inch test cylinders shall be made from each type or strength of concrete for each pouring operation, but not less than five cylinders from each 100 yards of concrete placed. For twenty-eight (28) day concrete test cylinders shall be made and cured, as prescribed by ASTM Specification C-31, and broken, one at seven (7) days, two at twenty-eight (28) days, and hold one, as prescribed by ASTM Specification C-39. For three (3) day concrete test cylinders shall be made and cured, as prescribed by ASTM Specification C-31, and broken, two at three (3) days, one at seven (7) days, and hold one, as prescribed by ASTM Specification C-39.

20. The CONTRACTOR'S attention is directed to the requirement by Item 505.1 Open Cut – General Conduit Installation in the Standard Specifications for Public Works Construction. Specifically, the last paragraph of 505.1.6 the CONTRACTOR is required to provide, and to install at the end of each working day or when work is suspended, a temporary plug or watertight seal in the end of the utility main being installed under this contract. All caps (plugs) used shall be manufactured by the supplier of the pipe being used or approved equal.

21. All excavated earth more than that required for backfilling shall be removed from the project site and disposed of in a satisfactory manner. All materials removed shall be properly disposed of offsite in a timely manner. Disposal of materials in City of Lewisville City limits must be taken to Waste Management.

22. Locate valves, fire hydrants, meter boxes, and cleanout outside the future sidewalk areas.

23. **Select Fill**

Select Fill soils shall consist of silty clay, clayey sand or sandy clay material with a Liquid Limit less than or equal to 45 and a Plasticity Index between 8 and 20 between 4 and 25. Select Fill shall be free from vegetation or other objectionable material. The material shall come from an approved site, and the CONTRACTOR shall submit samples of the material for approval prior to use. Delivery tickets shall be furnished to the City for each load of material. The ticket shall clearly state the source of the material. The Select Fill material shall be placed in loose lifts not exceeding 8 inches and shall be compacted to between 95% and 100% of standard proctor density (ASTM D 698). The moisture

content of the Select Fill soils shall be between -2 and 5 percentage points of the optimum moisture value. Fill shall be placed in accordance with the Geotechnical Report for the project and General Notes for Soils and plan sheet 2.

24. **Granular Wall Backfill**

All free draining granular wall backfill material should be a crushed stone, sand/gravel mixture, or san/crushed stones mixture. The material should have less than 3% passing the No. 200 sieve and less than 30 percent passing the No. 40 sieve. The minus No. 20 sieve material should be non-plastic. The material shall come from an approved site, and the CONTRACTOR shall submit samples of the material for approval prior to use. Delivery tickets shall be furnished to the City for each load of material. The ticket shall clearly state the source of the material.

25. **Rock Riprap**

This item "Riprap Construction Methods" modifies the provision of Item 803.3.3 of the NCTCOG Specifications and covers the furnishing of all labor, materials, and equipment required to place loose rock riprap on filter fabric at the locations shown on the drawings. The measured thickness of rock riprap in place shall not be less than 18 inches.

a. *Foundation Preparation*

The subgrade surfaces on which the riprap or bedding course is to be placed shall be cut or filled and graded to the lines and grades shown on the drawings. Bedding material shall conform to the gradation as shown on the drawings. When fill to subgrade lines is required, it shall consist of approved materials and shall conform to the requirements of the specified class of fill. Riprap shall not be placed until the foundation preparation is completed and the subgrade surfaces have been inspected and approved by the City Inspector.

b. *Filler Material*

Shall be well graded coarse rounded river gravel with 100% passing a 3" U.S. Standard Sieve and 0% passing a 1" U.S. Standard Sieve.

c. *Riprap*

Rock for riprap shall be durable, free from cracks, seams, and other defects which would tend to increase unduly its deterioration from natural causes, and reasonably well graded between the prescribed limits as hereinafter specified. Materials from certain localized areas, zones, and strata may be rejected when failing to meet the following specific requirements:

- 1) Weight – One hundred fifty pounds per solid cubic foot minimum calculated from the bulk specific gravity (saturated surface dry) of the sample determined in accordance with procedure in ASTM Specifications C127-59, "Methods of Test for Specific Gravity and Absorption of Coarse Aggregate".
- 2) Soundness in Magnesium Sulfate – Maximum loss 20 percent weighted average 5 cycles when tested for soundness in Magnesium Sulfate in accordance with ASTM Standard C88-61T, using particles passing a 2-1/2" sieve and retained on a



1-1/2" sieve. After final drying, the material will be screened over the 1-1/2" sieve.

- 3) Resistance to Abrasion – Maximum percentage of wear 50 after 500 revolutions, as determined by ASTM Standard C535, Grading 1.
- 4) Gradation – Rock for riprap shall conform to the gradation as shown on the drawings.

*d. Rock Placement*

Riprap shall be placed in such a manner as to produce a reasonably well-graded mass of rock with the minimum practicable percentage of voids and shall be constructed to the lines, grades and elevations shown on the plans. The larger stones shall be well distributed, and the finished riprap shall be free from objectionable pockets of small stones or clusters of large stones. Rock riprap filler material shall be placed as part of the riprap placement process.

During installation all voids shall be filled and compacted with filler material. This process shall include a minimum of one application of filler material per vertical foot of rock riprap thickness. For applications below the top layer, filler material shall be placed to a depth of approximately 50% of the thickness of the previous rock riprap layer to allow the interlocking of stones between successive rock riprap layers. Washing/jetting and compacting procedure to facilitate the filling of all rock riprap voids will be permitted for the top layer.

Rearranging of individual stones by mechanical equipment or by hand will be required to the extent necessary to obtain a reasonably well-graded distribution of stone sizes as specified above. The CONTRACTOR shall maintain the riprap protection until accepted and any material displaced by any cause shall be replaced at his expense to the lines and grades shown on the plans. Riprap shall be stockpiled and placed in a manner to prevent damage to adjacent structures. Care shall be exercised in placing stones to prevent damage to filter fabric.

*e. Testing and Reporting*

Prior to delivery of rock riprap to the project site, the CONTRACTOR shall submit to the CITY test results for the following:

- 1) Specific Gravity
- 2) Soundness in Magnesium Sulfate
- 3) Resistance to Abrasion
- 4) Gradation of Riprap

*f. Measurement and Payment*

Rock riprap shall be measured for payment by the square yard of the specified minimum thickness. The unit price shall include excavation, subgrade preparation, furnishing and placing filter fabric, filler material and stone, and for all labor, tools, equipment, and incidentals necessary to complete the work in accordance with the plans and Specifications.

**26. Filter Fabric**

Filter fabric shall be furnished in accordance with NCTCOG Item 201.9.2, Geotextile Fabric. Filter fabric shall meet the requirements of a non-protected drainage application. Filter Fabric Placement – Filter fabric shall be placed with a minimum overlap of 24". Fabric shall be secured by pins and washers according to manufacturer's recommendations. Also, a minimum lap of 18" is required onto adjacent concrete structures (headwalls, wingwalls, toewalls, etc.). In addition, the CONTRACTOR shall submit the manufacturer's Specifications for the filter fabric and submit a one square foot sample of the fabric.

27. Positive drainage shall be established during the initial phase of grading and maintained throughout construction. Any softening or saturation of any lift will necessitate removal and replacement of the affected area. Where surface drainage channels are blocked during construction, they shall be restored to their original grade and cross-section.
28. Delays associated with delivery of materials by the manufacturer will not be considered for any extension of contract time. It shall be the sole responsibility of the CONTRACTOR to assure that the materials are manufactured and delivered on time.

29. **Construction Sequencing and Temporary Traffic Control**

Prior to construction, the CONTRACTOR will be required to submit a detailed construction sequencing and temporary traffic control plan to address all issues not covered by the construction plans. A schedule shall also be submitted to address times of completion of each stage of the construction sequence and projected dates of road closings, detours, and utility interruptions. The CONTRACTOR shall update this schedule monthly.

The construction schedule shall address measures to be taken in the event of heavy rain or wet weather during construction

The CONTRACTOR shall provide all barricades, signing, and traffic control devices required for maintaining traffic flow.

Construction signing shall not be removed from the project until approved by the OWNER. **Construction signing shall be maintained in good working condition throughout the duration of the project.**

30. **Concrete Sidewalk**

All concrete work must be in accordance 2004 NCTCOG Standard Specifications sections 303 and 305. Portland cement must be a single brand conforming to ASTM C-150 Type 1, unless otherwise approved.

All additives for air entrainment, water reduction and set control shall be used in accordance with the manufacturer's directions. Normal weight aggregates shall conform to ASTM C-33. All concrete must use normal weight aggregates unless otherwise noted. The use of calcium chloride is not allowed.

31. Existing concrete pavement, sidewalks, driveways, curb, asphalt pavement, curb and gutter, or concrete channel paving to be removed, shall be sawed along neat lines where portions are to be left in place. When sidewalks must be removed, full panels shall be removed and then replaced.

32. Flowable Fill Grout shall be controlled low-strength material (minimum 1000 psi concrete) consisting of fluid mixture of cement, fly ash, aggregate, water and with admixtures as necessary to provide workable properties to flow into and fill the pipe, with no voids.
33. The CONTRACTOR shall furnish and install permanent pavement markings at locations as shown on the plans. The elimination of existing raised pavement markers and markings, and the surface preparation required prior to installation of new signs and markings shall be considered subsidiary to the bid item for "Pavement Markings and Signage". All pavement markings and signs will be in accordance with the Texas Department of Transportation (TxDOT) Standard Specifications for the Construction of Highways, Streets, and Bridges, as well as in accordance with TxDOT standard drawings for signs. Wood shall not be used in the construction of permanent signs or their supports.
34. All excavated earth more than that required for backfilling shall be removed from the project site and disposed of in a satisfactory manner. All materials removed shall be properly disposed of offsite in a timely manner. Disposal of materials in City of Lewisville City limits must be taken to Waste Management.
35. **Block Sodding with 4-Inch Depth Topsoil** Item 202.2 Topsoil and Item 202.5 Sodding of the Standard Specifications area hereby deleted and replaced with this specification. Item 202.4 Fertilizer is hereby revised as indicated below.
  - a. Description – The CONTRACTOR shall provide topsoil and block sod to all designated areas. The CONTRACTOR shall water, mow and protect the seeded areas until acceptance. Acceptance will not be made until all seeded areas are in full growth with a well-established root system. No on-site topsoil shall be used for establishing grass. The CONTRACTOR shall provide imported topsoil obtained from a commercial source.
  - b. Preparation of Areas – All areas to receive topsoil and sod shall be graded to the lines, grades and cross-sections shown on the plans and as provided for in other items of this contract, with the surface grade set four (4) inches low to allow for the placement of 4inch depth topsoil plus sod. All rocks and foreign material shall be raked off the surface prior to the placement of topsoil.
  - c. Imported Topsoil - Imported topsoil shall be obtained from an approved commercial source. Topsoil shall consist of natural, fertile, friable, screened, dark colored sandy loam. It shall contain no acidity or alkalinity detrimental to plant growth. It shall contain no subsoil, lumps, stones, roots, or other foreign matter.
  - d. Grass Type –Sod shall be of the same type as on areas adjacent to the area being sodded.
  - e. Block Sodding – Sod blocks shall be carefully placed on the prepared areas. Sod shall be so placed that the entire designated area and disturbed areas shall be covered. Any voids left in the block sod shall be filled with additional sod and tamped. The entire sodded areas shall be rolled and tamped to form a thoroughly compact solid mass. When necessary the sodded areas shall be smoothed after planting has been completed and shaped to conform to the cross-section. Any excess dirt shall be removed to give a neat appearance.

- f. Fertilizer – Fertilizer shall conform to the requirements of Item 202.4, Fertilizer of the Standard Specifications. Fertilizer shall be applied at the rate of 400 pounds/acre and be considered subsidiary to bid item “4-Inch Topsoil and Sodding”. Section 202.4.4, Measurement and Payment is hereby deleted.
- g. Watering – Sodded areas shall be watered by the CONTRACTOR as required to promote rapid growth of grass without unnecessary delay. The CONTRACTOR shall install a temporary irrigation system to water the grass in areas not covered by the permanent irrigation systems. Re-sodding shall be performed immediately, when required, without delay. Temporary irrigation, re-sodding, and replacing eroded topsoil are incidental to the contract.
- h. Acceptance – The CITY will accept sodding as complete upon establishment of a growth of grass covering all areas requiring seeding. The CONTRACTOR shall mow and maintain the grass until accepted. i. Payment – Payment will be per plan quantity. No measurement will be made. Topsoil, sod, and fertilizer required in areas disturbed by the CONTRACTOR outside of the designated areas shall be incidental to the project and not paid for separately. The CONTRACTOR shall pay for all water costs until grass is accepted by the CITY

**36. Reinforced Concrete Paving** for City Streets and Sidewalk Reinforced concrete pavement shall be installed in accordance with the construction plans and Item 303 of the Standard Specifications. Sidewalks shall have a minimum compressive strength of 3,000 PSI @ 28 days. No super plasticizers will be allowed in concrete mixes. The minimum cement ratio shall be 8.0 sacks per cubic yard for 4,200 PSI @ 3 days concrete. Fly ash will not be permitted in street and sidewalk concrete on the project. Bar chairs area required to support reinforcing steel and dowel bars. Hand finish of concrete pavement will not be a separate pay item on the project.

Reinforcing steel shall be 60-ksi steel, No. 4 bars placed on 18-inch center-to-center spacing each way. All work required for joints (including anchor joints), saw cutting joints and joint sealant is included in these items. Maximum joint spacing shall be 15 feet. The CONTRACTOR shall submit mix designs and concrete break histories for approval prior to construction.

**37. Storm Water Prevention Pollution Plan (SWPPP)**

It shall be the full responsibility of the CONTRACTOR to acquire and comply with all permits as may be required to avoid delay of the project.

Prior to construction, the CONTRACTOR shall comply with Federal and State storm water management regulations. The plan shall employ measures to prevent erosion and siltation from the construction disturbance from reaching stream beds, channels, storm water structures, ponds, etc. The plan shall comply with the requirements of the “Integrated Storm Water Management Design Manual for Construction” published by NCTCOG. In the event of a conflict between these requirements and Federal and State pollution control laws, rules, and regulations or other Federal, State or Local agency laws, rules, and regulations, the more restrictive shall apply. The release of the plan for construction by the CITY in no way relinquishes the CONTRACTOR of all responsibility and liability for the pollution control. The CONTRACTOR shall be solely

responsible and liable for all activities at the construction site necessary for compliance with Federal and State storm water regulations and the Storm Water Pollution Prevention Plan for the site.

The SWPPP shall conform to the following City of Lewisville requirements:

- a. All site-specific information required by the TCEQ Construction General Permit (Part III, Section F) must be included in the SWPPP. Restatement of information directly from the Construction General Permit is not acceptable. The CONTRACTOR must describe specifically what measures are planned at the construction site.
- b. All signature documents must be signed and dated prior to submittal for review. This includes SWPPP certifications, Notices of Intent (NOI), Construction Site Notices, and Inspector Delegation Letters. If there are multiple Operators for the project, each Operator's signature documents must be signed and dated. The City of Lewisville will complete its own signature documents during the review process. All forms must be signed by an appropriate signatory authority, and include the person's job title, where required. SWPPPS without the proper signatures will be returned without review.
- c. The specific inspection schedule must be described in the SWPPP. The CONTRACTOR must clearly state whether he will be implementing the 14-day (and within 24 hours after a ½ inch rainfall) schedule, or the 7-day schedule.
- d. The CONTRACTOR must include a copy of the inspection form that will be used. The form must include the required certification statement and allow for signature by the inspector, as required by the Construction General Permit.
- e. The SWPPP must include a section in which to document the dates of the following activities: when major grading activities occur; when construction activities temporarily or permanently cease on a portion of the site; the dates when stabilization measures are initiated. If there is no section for this information, the CONTRACTOR must document the information on the inspection reports, and the CONTRACTOR must state in the SWPPP that the information will be documented in this manner.
- f. The SWPPP must describe what types of temporary and/or permanent stabilization will be implemented at the site. For example, if the plan is to seed the disturbed area and maintain it until a uniform, established vegetative growth is achieved, then this must be detailed in the SWPPP.
- g. The CONTRACTOR must identify the erosion and sediment controls that are planned at the site, including sweeping activities. All structural controls (i.e. silt fence, check dams, rock entrances) must be shown on the site map. The CONTRACTOR must also describe how he plans to maintain those erosion and sediment controls in proper working order.
- h. The SWPPP must include both a General Vicinity Map and a Detailed Site Map. The site map must include all the information listed in Part III, Section F (g) of the Construction General Permit. The CONTRACTOR may use the Erosion Control map from the Construction Plans if it includes all of the necessary information. It is recommended that a separate site map be developed for the SWPPP, to avoid deficiencies.

- i. The SWPPP must clearly state whether any support activities, such as concrete or batch plants, are planned. This is because support activities do not always qualify for coverage under the Construction General Permit, and separate permit coverage may be necessary.
- j. If the project disturbs 10 acres or more with a common drainage location, and a sediment basin is not employed, the rationale for this decision must be documented in the SWPPP. The equivalent erosion and sediment control devices that are to be used must be described.
- k. Allow a minimum of 2 days for review of the SWPPP.
- l. The City of Lewisville does not currently utilize electronic submittal of Notices of Intent. **Construction will not be allowed to begin until 7 days after the NOI has been signed by the signatory authority and postmarked for delivery.** For this reason, early submission of the SWPPP and NOI are highly recommended.
- m. At least two copies of the completed SWPPP must be submitted to the City. One copy will be maintained by the Storm Water Division, and one other copy will be reviewed and returned to the CONTRACTOR.

The cost to the CONTRACTOR for the preparation of the SWPPP for the project shall be incidental to the various items of erosion control. The erosion control plan included in the project construction plans shall be incorporated into the SWPPP. Items required by the SWPPP that are not included as bid items are subsidiary to the various items of erosion control. The various bid items for erosion control shall include all costs for implementing and maintaining the Storm Water Pollution Prevention Plan, from the beginning of construction through final acceptance and establishment of grass coverage.

Any disturbed areas, whether inside or outside the project limits, where construction activities are complete or won't be worked on for 14 days, must be permanently or temporarily stabilized. **Stabilization measures must be initiated no later than one day after completing work in an area or determining that work will be temporarily stopped for more than 14 days in that area.** Temporary stabilization can include the use of erosion blankets such as Curlex or other methods approved by the City inspector. Permanent stabilization will require topsoil and sod, unless otherwise shown on the project landscaping plans.

Final acceptance of sodded areas will be granted when sod has taken root. Placement of temporary or permanent erosion control measures in unstabilized areas after contract time has expired will be considered subsidiary to this bid item. Once final acceptance of permanent stabilized areas is granted, **the CONTRACTOR shall notify the City inspector prior to removing the Construction Site Notice sign and submit the final copy to the City within one week of removal.**

- 38. **Flowable Fill Grout** shall be controlled low-strength material (minimum 1000 psi concrete) consisting of fluid mixture of cement, fly ash, aggregate, water and with admixtures as necessary to provide workable properties to flow into and fill the pipe, with no voids.
- 39. **Water Pipe:** The following water pipe is acceptable for this project in accordance with the assigned NCTCOG Standard Specifications, item number and AWWA Standard:

- a. Polyvinyl Chloride (PVC) Water Pipe, NCTCOG Item 501.14, AWWA C900, Class 235 (DR18).
  - b. Ductile Iron (DI) Water Pipe, ANSI/AWWA C151/A21.50 minimum pressure 150psi.
40. Waterline shall pass hydrostatic testing per the requirements of Item 506.5.
41. Waterline shall be purged and disinfected per the requirements of Item 506.7.

42. **Water for Construction**

Water will be furnished free of charge by the OWNER to the CONTRACTOR in the amounts needed to properly fill and test the water line. The owner reserves the right, however, to charge the prevailing rate for water wasted through carelessness or neglect on the part of the CONTRACTOR. All other water required for the project will be at the CONTRACTOR'S expense. The CONTRACTOR shall obtain a temporary water meter (deposit reimbursed when the meter is returned) from the OWNER and meter all water used for the project.

43. **PVC Gravity Sewer Pipe**

The work to be performed under this section of the Specifications shall consist of furnishing and installing PVC sanitary sewer pipe and fittings, including all clearing, grubbing, excavation, sheeting, shoring, dewatering, embedment with magnetic tape, encasement, pipe laying, jointing, testing, blocking, backfilling, and any other work that is required or necessary to complete the installation as shown in the plans and as specified herein.

Sanitary sewer pipe 15-inch diameter and smaller shall be manufactured in accordance with the latest edition of Standard Specification ASTM D-3040, SDR 26.

Sanitary sewer pipe 15-inch diameter and larger shall be manufactured in accordance with the latest edition of Standard Specification ASTM D-F679, PS 115.

The quoted standard Specifications cite other ASTM standards covering topics such as definitions, abbreviations, compounds or materials of construction, determination of dimensions, quality testing, recommendations for installation, tests for external loading and impact resistance, solvent cement compounds and application procedures, joints with elastomeric seals, and elastomeric seals. These related documents shall be considered part of the standard Specifications cited herein.

Installation of all pipe and materials shall be in accordance with ASTM D 2321-74 (89) and as shown on the plans and these Specifications.

The specified embedment shall be accurately shaped and trimmed to receive the pipe barrel and each pipe section, when in place, shall have a uniform bearing on the subgrade for the full length of the pipe barrel. Pipe shall not be laid unless the subgrade is free of water and in a satisfactory condition. Adjustments of the pipe to line and grade shall be made by scraping away or filling in with granular material, and not by wedging or blocking up the bell.

The interior of the pipe shall be clean and joint surfaces shall be clean and dry when the pipe is lowered into the trench. Each pipe, fitting and valve shall be lowered into the trench carefully and laid true to line and grade.

44. **Sanitary Sewer Manholes**

All sanitary sewer manholes shall be as indicated in the plans. All sanitary sewer manholes shall be vacuum tested and pass the requirements of 502.1.5.2.

45. **Wastewater Conduit Installation:**

The costs of all testing shall be the responsibility of the CONTRACTOR. These include low pressure air testing and deflection testing using the mandrel method. The CONTRACTOR shall perform a pre-construction television inspection of all sanitary sewer lines to determine existing service locations. The costs of this test are included under a separate pay item: Pre-Construction/Post-Construction Television Inspection for Sanitary Sewer.

The CONTRACTOR shall perform a post-construction television inspection of all sanitary sewer lines prior to the acceptance of the project. The costs of this test are included under a separate pay item; Pre-Construction/Post-Construction Television Inspection for Sanitary Sewer. Television inspection shall conform to the following: The CONTRACTOR shall use color recording in all television inspections.

The CONTRACTOR may employ a firm qualified in the type of work to make the television inspections, or if qualified and acceptable to the OWNER, he may perform the inspection himself. The OWNER'S Representative must be present during the television inspection, unless specifically otherwise authorized in writing. The visual inspection by photographic means of the sanitary sewer mains shall commence after the backfill, the air test, and the Mandrel test are completed.

The jet ball technique may be used to remove all foreign debris and silt, prior to photographic inspection. Television Inspection Equipment shall conform to the following:

- a. All television equipment used shall have a minimum of 600 lines of horizontal resolution.
- b. All information gathered must be legible, clearly understandable, and of good picture quality.
- c. A run sheet shall be made, and it shall be compatible with the recording in noting deficiencies.
- d. By audio on the recording the operator must:
  - (1) Note the date and time the recording is made.
  - (2) Note the CONTRACTOR'S name, project name, and contract number.
  - (3) Note the name of company performing the inspection, if other than the CONTRACTOR, and the operator's name.
  - (4) Note the location, line, designation, main size, and direction of run.
  - (5) Identify every 50-foot station.



- (6) Identify the station of each manhole.
- (7) Identify deficiencies and include station number.
- e. The sewer mains must be televised from manhole to manhole downstream and manhole to cleanout upstream.
- f. All sanitary sewer mains must be laced with water. The television inspection must be done immediately following the lacing of the main with no water flow.

TVI Recordings:

- a. Two recordings per visual photographic inspection shall be furnished to the OWNER. The recordings shall be made available to the OWNER as outlined in Item C below.
- b. Recordings must be submitted via DVD.
- c. All recordings and run sheets shall be submitted to the OWNER'S Representative for storage and inspection by the OWNER. All recordings and run sheets shall become the property of the OWNER.
- d. Flash Drives may be accepted in lieu of DVDs.

Criteria for Repair:

- a. The CONTRACTOR shall make repairs if the OWNER'S Representative notes problems, including but not limited to the following:
  - (1) Pulled or slipped joints.
  - (2) Water infiltration.
  - (3) Cracked or damaged pipe.
  - (4) If standing water is found in pipes of gradients equal to or greater than 0.7 percent.
  - (5) In pipes or gradients less than 0.7 percent, a maximum of one-half (1/2) inch of standing water will be allowed in 6 inches through 12 inches diameter pipes; and a maximum 10 percent of pipe size or 3 inches, whichever is less in pipes greater than 12 inches diameter.
  - (6) Structural damage to pipe.
  - (7) The OWNER shall make the final determination for repairs and shall review the visual photographic tape for additional data. A letter must be transmitted to the CONTRACTOR for needed repairs within five (5) working days after the inspection. (All verbal requests shall be valid and noted in the letter.)
- b. If repairs are required, another television inspection of the repaired area may be made after the repairs are complete if deemed necessary by the OWNER'S Representative at the CONTRACTOR'S expense.
- c. Repairs shall be made to the satisfaction of the OWNER'S Representative.

Measurement and Payment:

Sanitary sewer pipe shall be measured and paid for at the contract unit price per linear foot for all depths of cut.

46. **Low Pressure Air Test for Gravity Sewers**

The CONTRACTOR shall employ a firm qualified in the type of work to make the air tests on all sanitary sewer lines placed. The following air test requirements shall replace all less restrictive air test requirements of Item 507.5.1.3.2. Low Pressure Air Line Test Procedures. The low-pressure air test shall conform to the procedures described in ASTM C-828, ASTM C-924 or other appropriate procedures.

For sections of pipe up to 36-inch average inside diameter, the minimum time allowable for the pressure to drop from 3.5 pounds per square inch gauge to 2.5 pounds per square inch gauge shall be computed from the following equation:

$T = 0.0850 (D) (K) / (Q)$  where T = time for pressure to drop 1.0 pound per square inch gauge in seconds K =  $0.000419 (D) (L)$ , but not less than 1.0 D = average inside diameter in inches L = length of line in feet of same pipe size being tested Q = rate of loss, 0.0015 cubic feet per minute per square foot interval surface shall be used

Since a K value of less than 1.0 shall not be used, there are minimum testing times for each pipe diameter as outlined below:

<b>Pipe Diameter (inches)</b>	<b>Minimum Time (seconds)</b>	<b>Length for Minimum Time (feet)</b>	<b>Time for Longer Length (seconds)</b>
6	340	398	0.855 (L)
8	454	298	1.520 (L)
10	567	239	2.374 (L)
12	680	199	3.419 (L)
15	850	159	5.342 (L)
18	1020	133	7.693 (L)
21	1190	114	10.471 (L)
24	1360	100	13.676 (L)
27	1530	88	17.309 (L)
30	1700	80	21.369 (L)
33	1870	72	25.856 (L)

For sections of pipe that have an average inside diameter of 15 inches to 33 inches, the following option is available. If no pressure loss has occurred during the first 25% of the calculated testing time, then the test may be stopped at that point. If any pressure loss or leakage has occurred during the first 25% of the testing period, then the test shall continue for the entire test duration as outlined above or until failure.

47. **Storm Drain Inspection**

CONTRACTOR shall perform pre- and post-construction television inspection of all storm lines in the project area improved or subject to siltation to determine existing conditions required restoration post construction.

48. **Fire Hydrant Specification**

General Specifications

All fire hydrants shall comply with AWWA C-502 for dry barrel fire hydrants.

All fire hydrants shall be compression type, closing with the line pressure. The valve opening shall be 5¼-inch only.

All fire hydrants shall have an oil compatible sealed lubrication reservoir and be furnished with biodegradable grease or oil from the point of manufacture.

All fire hydrants shall have a bronze operating nut 1½-inch pentagon point to flat. The operating nut may be fully covered with a cast-iron weather shield and protection device measuring 1½-inch point to flat to protect the bronze operating nut when opening and closing the hydrant.

All fire hydrants shall be furnished with a breakable flange traffic feature, one that permits a full 360-degree rotation of the hydrant nozzle section. Un-notched electroplated bolts and nuts must be used to retain the safety flange that connects the nozzle section to the lower barrel. Traffic flange repairs and other maintenance will not require Allen wrenches to accomplish.

The interior and exterior of the hydrant shoe shall be “fusion-bonded” with an epoxy coating. All other methods are unacceptable. A minimum of four stainless steel bolts and nuts shall secure the hydrant shoe to the lower barrel.

All hydrants shall be able to deliver the required flow with a friction loss not to exceed 5 PSIG at 1000 GPM, as per AWWA test procedure. Certification of this standard shall be furnished from an independent testing laboratory prior to approval. All tests must be performed at the testing company’s own facilities.

All fire hydrants shall be designed for 200 PSI working pressure and tested to 400 PSI hydrostatic pressure. All fire hydrants shall drain automatically when the main valve is closed and shall be an integral part of the main valve. Drain valves that operate by toggles, springs, or adjustable mechanisms are unacceptable. The upper plate shall be of bronze and incorporate two hard rubber drain facings that activate the drain ports, or a

drain tube with all bronze crossarm and fusion bonded epoxy washer. The drain facings shall be attached to the upper valve plate with stainless steel screws or rolled pins. Other methods of attachment are unacceptable.

All fire hydrants shall have a field replaceable bronze main valve seat threaded into a bronze drain ring.

The main valve rubber shall be positioned between a bronze upper plate valve, or bronze crossarm and a fusion-bond epoxy upper valve washer, and a fusion-bond epoxy lower valve plat or washer and be field-replaceable.

All fire hydrants shall have two (2) 2½-inch hose nozzles and one (1) 4½-inch pumper nozzle. All threads shall be National Standard. All nozzles shall have O-ring seals. The nozzles shall be threaded and/or mechanically attached into the nozzle section and locked. Threads are to be NST.

All fire hydrants shall have a warranty of not less than five (5) years. A copy of the warranty must be submitted prior to approval.

All fire hydrants shall be able to be opened in a counterclockwise direction.

All fire hydrants and hydrant components shall be of domestic (USA) manufacture and assembly.

Each hydrant shall have a minimum of two (2) primer coats. The final coat of paint on the body of all hydrants shall be a silver color of an approved aluminum paint. The top and outlet caps of all fire hydrants shall be painted by the CONTRACTOR with a machine implement paint or approved equal, in accordance with the size of the line constructed.

#### Special Conditions

The City of Lewisville will approve no more than one (1) model/unit per manufacturer and/or ownership for use within the City.

Manufacturers shall have a minimum of ten (10) years of manufacturing experience in the USA.

Parts shall be available locally from a minimum of two (2) authorized distributors.

Fire hydrants known to meet the above specifications are the Mueller Super Centurion and the Waterous WB067.

#### **49. Prevailing Wage Rate Determination**

The General Services Commission has adopted the Federal Davis-Bacon wage rates for our use.

# PREVAILING WAGE



## General Services Commission

1711 San Jacinto - P.O. Box 13047

Austin, Texas 78711-3047

Web Site: [www.gsc.state.tx.us](http://www.gsc.state.tx.us)

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## Prevailing Wage Rate Determination Information

The following information from Chapter 2258 Texas Government Code Title 10 should be included in your bid specification documents and contract documents:

### 2258.021. Duty of Governmental Entity to Pay Prevailing Wage Rates

- (a) The state or any political subdivision of the state shall pay a worker employed by it or on behalf of it:
  - (1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and
  - (2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.
- (b) Subsection (a) does not apply to maintenance work.
- (c) A worker is employed on a public work for the purposes of this section if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

### 2258.023. Prevailing Wage Rates to be Paid by Contractor and Subcontractor; Penalty

- (a) The contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.
- (b) A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.  
**Note:** This penalty applies even if the contractor or subcontractor and the worker come to an agreement on the underpaid wages (see Attorney General Opinion DM-469).
- (c) A contractor or subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.
- (d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.
- (e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

### 2258.051. Duty of Public Body to Hear Complaints and Withhold Payment

- (a) A public body awarding a contract, and an agent or officer of the public body, shall:
  - (1) take cognizance of complaints of all violations of this chapter committed in the execution of the contract; and
  - (2) withhold money forfeited or required to be withheld under this chapter from the payments to the contractor under the contract, except that the public body may not withhold money from other than the final payment without determination by the public body that there is good cause to believe that the contractor has violated this chapter.