

**CONTRACT DOCUMENTS
AND
CONSTRUCTION SPECIFICATIONS
FOR
MAIN STREET SMITHFIELD
PAVING, WATER, SEWER,
STORM, ILLUMINATION, AND
LANDSCAPE IMPROVEMENTS
(SMITHFIELD RD TO DAVIS
BLVD)
FOR THE
CITY OF NORTH RICHLAND HILLS**



MAY 2026

**City of North Richland Hills
Public Works Department**

Project RFB 26-017

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NRH PURCHASING GUIDANCE



PURCHASING DEPARTMENT

REQUEST FOR BID

26-017

MAIN STREET SMITHFIELD

**PAVING, WATER, SEWER,
STORM, ILLUMINATION, AND
LANDSCAPE IMPROVEMENTS**

**(SMITHFIELD RD TO DAVIS
BLVD)**

BIDS DUE TUESDAY, JUNE 23, 2026

BY 2:00 P.M.

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INVITATION TO BID

The City of North Richland Hills is accepting sealed bids from all interested parties for:

- Bid Number: 26-017
- Bid Type: REQUEST FOR BID
- Bid Name: MAIN STREET SMITHFIELD PAVING, WATER, SEWER, STORM, ILLUMINATION, AND LANDSCAPE IMPROVEMENTS (SMITHFIELD RD TO DAVIS BLVD)
- Bid Due Date: Tuesday, June 23, 2026
- Bid Due Time: 2:00 P.M. Central Standard Time
- Pre-Bid Conference: 10:00 A.M. Central Standard Time, Tuesday, June 02, 2026
- Location: Community Room, 4301 City Point Dr, North Richland Hills, TX 76180
- Deadline for questions:
 - Date: Friday, June 12, 2026
 - Time: 12:00 P.M. Central Standard Time

DOCUMENTS MUST BE SUBMITTED ELECTRONICALLY VIA:

www.publicpurchase.com

No oral explanation in regards to the meaning of the specifications will be made, and no oral instructions will be given after the pre-bid meeting and before the award of the contract. Requests from interested vendors for additional information or interpretation of the information included in the specifications should be directed in writing as a question related to this bid on Public Purchase and the question will be answered on Public Purchase. All addendums will also be posted to Public Purchase. It will be the vendor's responsibility to check all information related to this bid on Public Purchase before submitting a response.

All bid responses must be turned in complete from cover page to end of Section 2 – pages in order. Should any page not be filled out (in Section 2 based on Qualification of Bidders), that page is still required to be a part of the bid response; however, Contractor to write ‘to be provided with Contract Documents if awarded to the construction contract.’

The City of North Richland Hills reserves the right to reject in part or in whole all bids submitted, and to waive any technicalities for the best interest of the City of North Richland Hills.

GENERAL CONDITIONS

In submitting this bid, the Bidder understands and agrees to be bound by the following terms and conditions. These terms and conditions shall become a part of the purchase order or contract and will consist of the invitation to bid, specifications, the responsive bid and the contract with attachments, together with any additional documents identified in the contract and any written change orders approved and signed by a city official with authority to do so. All shall have equal weight and be deemed a part of the entire contract. If there is a conflict between contract documents, the provision more favorable to the City shall prevail.

1. **BID TIME**

It shall be the responsibility of each Bidder to ensure his/her bid are submitted to the Public Purchase website on or before **2:00 P.M. Tuesday, June 23, 2026**. The official time shall be determined by the Public Purchase Website. The Public Purchase Website will NOT allow bid responses to be uploaded after the closing time.

All attached bid documents are to be returned completely filled out, totaled, and signed. The City of North Richland Hills will not accept any bid documents other than the attached.

2. **WITHDRAWING BIDS/PROPOSALS/QUOTES**

Bids may be withdrawn at any time prior to the official opening; request for non-consideration of bids must be made in writing to the Purchasing Manager and received prior to the time set for opening bids. The bidder warrants and guarantees that his/her bid has been carefully reviewed and checked and that it is in all things true and accurate and free of mistakes. Bidder agrees that a bid price may not be withdrawn or canceled by the bidder for a period of ninety (90) days following the date designated for the receipt of bids.

3. **IRREGULAR BIDS/PROPOSALS/QUOTES**

Bids will be considered irregular if they show any omissions, alterations of form, additions, or conditions not called for, unauthorized alternate bids, or irregularities of any kind. However, the City of North Richland Hills reserves the right to waive any irregularities and to make the award in the best interest of the City.

4. **REJECTION/DISQUALIFICATION**

Bidders will be disqualified and/or their bids rejected, among other reasons, for any of the specific reasons listed below:

- a) Bid received after the time set for receiving bids as stated in the advertisement;
- b) Reason for believing collusion exists among the Bidders;
- c) Bid containing unbalanced value of any item; bid offering used or reconditioned equipment;
- d) Where the bidder, sub-contractor or supplier is in litigation with the City of North Richland Hills or where such litigation is contemplated or imminent;
- e) Uncompleted work which in the judgment of the City will prevent or hinder the prompt completion of additional work, or having defaulted on a previous contract;
- f) Lack of competency as revealed by reference checks, financial statement, experience and equipment, questionnaires, or qualification statement;
- g) Bid containing special conditions, clauses, alterations, items not called for or irregularities of any kind, which in the Owner's opinion may disqualify the Bidder.

However, the City of North Richland Hills reserves the right to waive any irregularities and to make the award in the best interest of the City of North Richland Hills.

5. BID EVALUATION

Award of bid, if it be awarded, will be made to the lowest responsible bidder or may be awarded to the bidder that offers the goods and/or services at the *best value* for the City (Texas Local Government Code, 252.043). In determining the best value the City will consider the following:

- a) The purchase price; terms and discounts; delivery schedule;
- b) The reputation of the bidder and of the bidder's goods or services;
- c) The quality of the bidders' goods or services;
- d) The extent to which the bidder's goods or services meet the City specifications and needs;
- e) The bidder's past relationship with the City;
- f) Total long term cost to the city to acquire the bidder's goods or services;
- g) Any relevant criteria specifically listed in the specifications;
- h) Compliance with all State and local laws, General Conditions and Specifications;
- i) Results of testing, if required;
- j) Warranty and/or guarantee, maintenance requirements and performance data of the product requested;
- k) City's evaluation of the bidder's ability to perform to specifications.

6. AWARD OF BID

The bid award will be made within sixty (60) days after the opening of bids. No award will be made until after investigations are made as to the responsibilities of the best bidder.

The City of North Richland Hills reserves the right to award bids whole or in part when deemed to be in the best interest of the City. Bidder shall state on bid form if their bid is "all or none", otherwise it shall be considered as agreeing to this section.

Information contained in submitted bid documents shall not be available for inspection until after the award has been made by the City Council. Requests for this information must be submitted in writing.

7. ASSIGNMENT

The successful bidder may not assign his/her rights and duties under an award without the written consent of the North Richland Hills City Manager. Such consent shall not relieve the assignor of liability in the event of default by his assignee.

8. SUBSTITUTIONS/EXCEPTIONS

Exceptions/variations from the specifications may be acceptable provided such variations, in each instance, is noted and fully explained in writing and submitted with bid. NO substitutions or changes in the specifications shall be permitted after award of bid without prior written approval by the Purchasing Manager.

9. DELIVERY/ACCEPTANCE

The delivery date is an important factor of this bid and shall be considered during the evaluation process. The City considers delivery time the period elapsing from the time the order is placed until the City receives the order at the specified delivery location. All

material shall be delivered F.O.B. City of North Richland Hills to the address specified at the time of order. Acceptance by the City of North Richland Hills of any delivery shall not relieve the Contractor of any guarantee or warranty, expressed or implied, nor shall it be considered an acceptance of material not in accordance with the specifications thereby waiving the City of North Richland Hills right to request replacement of defective material or material not meeting specifications.

10. NOTICE OF DELAYS

Whenever the contractor encounters any difficulty which is delaying or threatens to delay timely performance, written notice shall immediately be given to the Purchasing Manager, stating all relevant information. Such notice shall not in any way be construed as a waiver by the City of any rights or remedies to which it is entitled by law. Delays in performance and/or completion may result in cancellation of agreement.

11. SALES TAX

The City of North Richland Hills is exempt from Federal Excise and State sales tax; therefore tax must not be added to bid.

12. TIE BIDS

In the event of a tie bid, State Law provides the bid or contract shall be awarded to the local bidder. In cases where a local bidder is not involved, tie bids shall be awarded by drawing lots at the City Council meeting, or as otherwise directed by the Mayor.

13. BRAND NAME OR EQUAL

If items are identified by a "brand name" description, such identification is intended to be descriptive, not restrictive, and is to indicate the quality and characteristics of products that will be satisfactory. As used in this clause, the term "brand name" includes identification of products by make and model.

Such products must be clearly identified in the bid as an equal product and published specifications of the equal products offered must be included with the bid reply.

Bids offering equal products will be considered for award if determined by the Purchasing Manager and the user department to be equal in all material respects to the brand name products referenced. The decision of acceptable "equal" items or variations in the specifications will solely be the City of North Richland Hills. Unless the bidder clearly indicates in his/her bid that he is offering an "equal" product, his bid shall be considered as offering the brand name product referenced in the invitation for bids.

14. REFERENCES

A minimum of three (3) references, preferably located within the Dallas/Fort Worth Metroplex, must be submitted with each bid. Company name, contact and phone number must be included with each reference.

15. PROHIBITION AGAINST PERSONAL FINANCIAL INTEREST IN CONTRACTS

No employee of the City of North Richland Hills shall have a direct or indirect financial interest in any proposed or existing contract, purchase, work, sale or service to or by the City (CMA-074, Standards of Conduct, Section IV).

16. TERMINATION/NON PERFORMANCE

Continuing non-performance of the vendor in terms of Specifications shall be a basis for the termination of the contract by the City. The City of North Richland Hills reserves the right to enforce the performance of this contract in any manner prescribed by law or deemed to be in the best interest of the City in the event of breach or default of this contract. The City reserves the right to terminate the contract immediately in the event the successful bidder fails to 1.) Meet delivery schedules or, 2.) Otherwise not perform in accordance with these specifications.

Breach of contract or default authorizes the City to award to another bidder, and/or purchase elsewhere and charge the full increase in cost and handling to the defaulting successful bidder.

The contract may be terminated by either party upon written thirty (30) days' notice prior to cancellation without cause.

17. ATTORNEYS FEES

Neither party to this contract shall be entitled to attorney fees for any matter arising under this contract, whether for additional work, breach of contract, or other claim for goods, services, or compensation. All claims for attorney's fees are hereby WAIVED.

18. INDEMNITY

City shall not be liable or responsible for, and shall be saved and held harmless by Contractor from and against any and all suits, actions, losses, damages, claims, or liability of any character, type, or description, including claims for copyright and patent infringement, and including all expenses of litigation, court costs, and attorney's fees for injury or death to any person, or injury to any property, received or sustained by any person or persons or property, arising out of, or occasioned by, directly or indirectly, the performance of Contractor under this agreement, including claims and damages arising in part from the negligence of City, without; however, waiving any governmental immunity available to the CITY under Texas law and without waiving any defenses of the parties under Texas law. The provisions of this indemnification 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.

It is the expressed intent of the parties to this Agreement that the indemnity provided for in this section is an indemnity extended by Contractor to indemnify and protect City from the consequences of City's own negligence, provided, however, that the indemnity provided for in this section shall apply only when the negligent act of City is a contributory cause of the resultant injury, death, or damage, and shall have no application when the negligent act of City is the sole cause of the resultant injury, death, or damage, unmixed with the legal fault of another person or entity. Contractor further agrees to defend, at its own expense, and on behalf of City and in the name of City, any claim or litigation brought in connection with any such injury, death, or damage.

The Contractor will secure and maintain Contractual Liability insurance to cover this indemnification agreement that will be primary and noncontributory as to any insurance maintained by the City for its own benefit, including self-insurance.

19. PERFORMANCE AND PAYMENT BONDS

In the event the total contract amount exceeds \$100,000, the Contractor shall be required to execute a performance bond in the amount of one hundred (100) percent of the total contract price; if the total contract amount exceeds \$50,000 the contractor shall be required to execute a payment bond in the amount of one hundred (100) percent of the total contract price, each in standard forms for this purpose, guaranteeing faithful performance of work and guaranteeing payment to all persons supply labor and materials or furnishing any equipment in the execution of the contract. It is agreed that this contract shall not be in effect until such performance and payment bonds are furnished and approved by the City of North Richland Hills. No exceptions to this provision allowed.

Unless otherwise approved in writing by the City of North Richland Hills, the surety company underwriting the bonds shall be acceptable according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States.

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and current copy of their power of attorney.

20. INTERLOCAL AGREEMENT

Successful bidder agrees to extend prices and terms to all entities who have entered into or will enter into joint purchasing interlocal cooperation agreements with the City of North Richland Hills.

☐ Yes, we agree

☐ No, we do not agree

21. ELECTRONIC PROCUREMENT

The City of North Richland Hills has adopted policies and procedures complying with Local Government Code Section 252.0415, Section 271.906 and Section 2155.062. The City of North Richland Hills may receive submittals in electronic form in response to procurement requests. However, a bid that is submitted non-electronically by the due date and time will be accepted and then entered electronically by Purchasing after the bid opening.

22. COMPLIANCE WITH SB 89:

Vendor agrees per HB 89 of the 85th Texas Legislative Session, and in accordance with Chapter 2270 of the Texas Government Code, vendor has not and shall not boycott Israel at any time while providing products or services to the City of North Richland Hills.

☐ Yes, we agree

☐ No, we do not agree

23. COMPLIANCE WITH SB 252:

Vendor agrees per SB 252 of the 85th Texas Legislative Session, and in accordance with Chapter 2252 of the Texas Government Code, vendor shall not do business with Iran, Sudan or a foreign terrorist organization while providing products or services to the City of North Richland Hills.

☐ Yes, we agree

☐ No, we do not agree *

* By selecting no, vendor certifies that it is affirmatively excluded from the federal sanctions regime by the United States government and is not subject to the contract prohibition under Section 2252.154 of the Texas Government Code. Vendor shall provide sufficient documentation to the City of such exclusion prior to award of any contract for goods or services.

24. ETHICS AND COMPLIANCE POLICY

The City's Ethics and Compliance Policy can be found at The City of North Richland Hills Purchasing Division webpage - Or you may request a copy from the Purchasing Division. Acknowledgment - The City of North Richland Hills' Internal Ethics and Compliance Policy has been made available to me. I understand the expectations of ethical behavior and compliance with the law, and agree to adhere to the City's ethics policies.

<https://www.nrhtx.com/DocumentCenter/View/389/Code-of-Ethics---PDF?bidId>

☐ I agree

☐ I do not agree

25. COMPLIANCE WITH CHAPTER 2274

Pursuant to Chapter 2274, Texas Government Code, Prohibition on Contracts with Companies Boycotting Certain Energy Companies, as enacted by S.B. 13, 87th Legislature, the City of North Richland Hills is prohibited from using public funds to contract with a for-profit Company as defined by Government Code 809.01 who boycotts energy companies. If Seller has more than 10 employees and this Contract has a value of \$100,000 or more, by signing this agreement/contract, the Seller verifies that it does not discriminate against energy companies and will not discriminate during the term of the Contract. By submitting a bid response, Seller certifies compliance with these requirements.

26. COMPLIANCE WITH CHAPTER 2274

Pursuant to Chapter 2274, Texas Government Code, Prohibition on Contracts with Companies that Discriminate Against Firearm and Ammunition Industries, as enacted by S.B. 19, 87th Legislature, the City of North Richland Hills is prohibited from using public funds to contract with a for-profit Company as defined by Chapter 2274.001, who discriminates against firearm and ammunition industries. If Seller has at least 10 full-time employees and this Contract has a value of \$100,000 or more, by signing this agreement/contract, the Seller agrees that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the Agreement. By submitting a bid response, Seller certifies compliance with these requirements. This section does not apply if Seller is a sole-source provider.

27. DEPARTMENT OF TRANSPORTATION (TXDOT) RELATED BIDS

"The City of North Richland Hills, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated

against on the grounds of race, color, or national origin in consideration for an award.” Due care and diligence has been used in preparation of this information, and it is believed to be substantially correct. However, the responsibility for determining the full extent of the exposure and the verification of all information presented herein shall rest solely with the bidder. The City of North Richland Hills and its representatives will not be responsible for any errors or omissions in these specifications, nor for the failure on the part of the proposer to determine the full extent of the exposures.

MINIMUM INSURANCE REQUIREMENTS

Contractors performing work on City property or public right-of-way for the City of North Richland Hills shall provide the City a certificate of insurance evidencing the coverages and coverage provisions identified herein. Contractors shall provide the City evidence that all subcontractors performing work on the project have the same types and amounts of coverages as required herein or that the subcontractors are included under the contractor's policy. The City, at its own discretion, may require a certified copy of the policy.

All insurance companies and coverages must be authorized by the Texas Department of Insurance to transact business in the State of Texas and must be acceptable to the City of North Richland Hills.

The following guidelines are designed to show the most common minimum insurance requirements for standard contracts and agreements with the City. Non-standard agreements may require additional coverage and/or higher limits. Coverage Amounts required for non-standard agreements to be determined by the department and the City Manager.

General Contracts for Services:

Service work, and general maintenance agreements, etc.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Payment and Maintenance Bond (if applicable)

See Exhibit A for insurance language to include in general contracts for services

Professional Services:

Consultants or other professionals including: accountants, attorneys, architects, engineers, medical professionals, medical services, etc.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Professional Liability or equivalent Errors & Omissions (appropriate to Contractor's profession)

See Exhibit B for insurance language to include in professional services contracts

Construction:

Building contractors for construction projects.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Professional Liability (if applicable for design function)

- ☐ Builder's Risk (required for new or existing property under construction)
- ☐ Payment and Maintenance Bond (if applicable)

See Exhibit C for insurance language to include in construction contracts

Information Technology/Network Access Services:

For the purchasing and installation of technology-related software and equipment or contracting services that support, maintain or interact with the CITY'S technology systems.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Professional Liability (if applicable)
- ☐ Cyber Liability

See Exhibit D for insurance language to include in IT/network access services agreements

Standard Minimum Required Insurance Coverage

Insurance Type	Limit	Provision
Commercial General Liability	\$1,000,000 Each Occurrence \$2,000,000 Aggregate	City to be listed as additional insured and provided 30-day notice of cancellation or material change in coverage
	For Construction Projects: \$2,000,000 Each Occurrence \$4,000,000 Aggregate	
Automobile Liability	\$1,000,000 Combined Single Limit	
Workers' Compensation	Texas Statutory Requirements	Waiver of subrogation in favor of City
Employer's Liability	\$500,000 injury - each accident \$500,000 disease - each employee \$500,000 disease - policy limit	
Professional Liability (or equivalent Errors & Omissions coverage appropriate to the Contractor's profession)	\$1,000,000 Each Occurrence	
Builder's Risk (required for new or existing property under construction)	100% Value	
Cyber Liability	\$1,000,000 Each Occurrence	
Payment/Maintenance Bonds	In accordance with Chapter 2253 of the Texas Government Code	

EXHIBIT A

GENERAL CONTRACTS FOR SERVICES

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

A. Workers' Compensation and Employer's Liability Insurance:

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

B. Commercial General Liability:

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

C. Automobile Liability:

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY 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 submitted on a form approved by the Texas Department of Insurance.

Payment and Maintenance Bonds (if applicable): CONTRACTOR shall procure Payment and Maintenance Bonds as applicable and in accordance with Chapter 2253 of the Texas Government Code.

EXHIBIT B

PROFESSIONAL SERVICES

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

A. Workers' Compensation and Employer's Liability Insurance:

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

B. Commercial General Liability:

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

C. Automobile Liability:

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

D. Professional Liability (Errors and Omissions)

CONTRACTOR shall maintain Professional Liability (or equivalent) errors and omissions insurance appropriate to the CONTRACTOR'S profession, describe type of services, with a limit no less than \$1,000,000 per occurrence or claim.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY 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 submitted on a form approved by the Texas Department of Insurance.

EXHIBIT C

CONSTRUCTION

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

A. Workers' Compensation and Employer's Liability Insurance:

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

B. Commercial General Liability:

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$2,000,000 per occurrence and \$4,000,000 aggregate.

C. Automobile Liability:

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

D. Professional Liability (if contract involves design work)

CONTRACTOR shall maintain Professional Liability (or equivalent) errors and omissions insurance appropriate to the CONTRACTOR'S profession, with a limit no less than \$1,000,000 per occurrence or claim

E. Builder's Risk

CONTRACTOR shall maintain Builder's Risk Insurance providing All-Risk (Special Perils) coverage in an amount equal to one hundred percent (100%) of the completed value of the project in question and no coinsurance penalty provisions. The policy shall list the CITY as loss payee as their interests may appear.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY 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 submitted on a form approved by the Texas Department of Insurance.

Payment and Maintenance Bonds (if applicable): CONTRACTOR shall procure Payment and Maintenance Bonds as applicable and in accordance with Chapter 2253 of the Texas Government Code.

EXHIBIT D

INFORMATION TECHNOLOGY/NETWORK ACCESS SERVICES

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

A. Workers' Compensation and Employer's Liability Insurance:

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

B. Commercial General Liability:

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

C. Automobile Liability:

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

D. Professional Liability (Errors and Omissions)

If appropriate for CONTRACTOR'S work, CONTRACTOR shall maintain Professional Liability (or equivalent) errors and omissions insurance appropriate to the CONTRACTOR'S profession, with a limit no less than \$1,000,000 per occurrence or claim.

E. Cyber Liability

CONTRACTOR shall maintain cyber liability (or equivalent) insurance. Such insurance shall provide limits of no less than \$1,000,000 per occurrence. Coverage shall be sufficiently broad to respond to the duties and obligations as undertaken by the CONTRACTOR.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY 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 submitted on a form approved by the Texas Department of Insurance.

Other Insurance Requirements - To Be Included As Applicable

CONTRACTORS who serve or distribute liquor:

Liquor Legal Liability - CONTRACTOR shall maintain Liquor Legal Liability coverage covering the selling, serving, or furnishing of any alcoholic beverage performed by CONTRACTOR, or on its behalf. Such insurance shall provide limits of no less than \$1,000,000.00 per occurrence.

CONTRACTORS who hold long-term leases:

Property Insurance – LESSEE shall maintain Property Insurance against all risks of loss to any improvements or betterments, at full replacement cost with no coinsurance penalty provision. The CITY shall be added as a Loss Payee to the policy as interests may appear.

CONTRACTOR's whose work involves chemicals or otherwise has a pollution exposure:

Contractors' Pollution Liability (or equivalent) – CONTRACTOR shall maintain Contractors' Pollution Liability with limits no less than \$1,000,000.00 per occurrence or claim and \$2,000,000 policy aggregate.

CONTRACTORS who take possession of City or public vehicles (e.g., parking lots operators, auto repair shops):

Garage Keepers Liability (or equivalent) – CONTRACTOR shall maintain Garage Keepers Liability or equivalent coverage for applicable property while in the CONTRACTOR'S care, custody or control. Coverage must include Comprehensive and Collision coverage. Such insurance shall provide limits equal to no less than the total value of CITY or public property in the CONTRACTOR'S care, custody and control at any one time.

CONTRACTORS who own and operate unmanned aircraft (drones):

UAS Liability (or equivalent) - CONTRACTOR shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damage to property which may arise from or in connection with the ownership, maintenance or use of Unmanned Aerial Systems (Drones). Coverage must include limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

A PURCHASE ORDER WILL NOT BE ISSUED WITHOUT EVIDENCE OF INSURANCE.

NON-COLLUSION AFFIDAVIT OF BIDDER

State of _____ County of _____

_____ verifies that:
(Name)

- (1) He/She is owner, partner, officer, representative, or agent of
_____, has submitted the attached
bid: (Company Name)
- (2) He/She is fully informed in respect to the preparation, contents and circumstances in
regard to attached bid;
- (3) Neither said bidder nor any of its officers, partners, agents or employees has in any way
colluded, conspired or agreed, directly or indirectly with any other bidder, firm or person
to submit a collusive or sham bid in connection with attached bid and the price or prices
quoted herein are fair and proper.

SIGNATURE

PRINTED NAME

Subscribed and sworn to before me this
_____ Day of _____ 20__.

NOTARY PUBLIC in and for

_____ County, Texas.

My commission expires: _____

THIS FORM MUST BE COMPLETED, NOTARIZED AND SUBMITTED WITH BID

BID CERTIFICATION

The Undersigned, in submitting this bid, represents and certifies:

- a. He/she is fully informed regarding the preparation, contents and circumstances of the attached bid;
- b. He/she proposes to furnish all equipment/service at the prices quoted herein and bid is in strict accordance with the conditions and specifications stated herein;
- c. There will be at no time a misunderstanding as to the intent of the specifications or conditions to be overcome or pleaded after the bids are opened;
- d. He/she is an equal opportunity employer, and will not discriminate with regard to race, color, national origin, age or sex in the performance of this contract.
- e. The undersigned hereby certifies that he/she has read, understands and agrees that acceptance by the City of North Richland Hills of the bidder's offer by issuance of a purchase order will create a binding contract. Further, he/she agrees to fully comply with documentary forms herewith made a part of this specific procurement.

COMPANY: _____

ADDRESS: _____

CITY, STATE & ZIP: _____

TELEPHONE: _____

FAX _____

EMAIL: _____

SIGNATURE: _____

PRINTED NAME: _____

DATE: _____

COMPLIANCE WITH HOUSE BILL 1295

In 2015, the Texas Legislature adopted [House Bill 1295](#), which added section 2252.908 of the Government Code. The law states that a governmental entity may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity at the time the business entity submits the signed contract to the governmental entity.

The law applies only to a contract of a governmental entity that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

The Texas Ethics Commission has adopted rules necessary to implement the law, prescribed the disclosure of interested parties form, and posted a copy of the form on the commission's website.

Filing Process:

The commission has made available on its website a new filing application that must be used to file Form 1295. A business entity must:

- 1) Use the application to enter the required information on Form 1295,
- 2) Print a copy of the completed form, which will include a certification of filing that will contain a unique certification number.
- 3) Contract Number should be the Bid/RFP Number and Bid Title.
- 4) Sign the printed copy of the form (an authorized agent of the business entity must sign),
- 5) Either include your personal information or have the form notarized,
- 6) File the completed Form 1295 with the certification of filing with the governmental body with which the business entity is entering into the contract.

The governmental entity must notify the commission, using the commission's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract. The commission will post the completed Form 1295 to its website within seven business days after receiving notice from the governmental entity.

Information regarding how to use the filing application may be found at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm.

FOR DISADVANTAGED BUSINESS ENTERPRISES ONLY

Disadvantaged Business Enterprises (DBE) are encouraged to participate in the City of North Richland Hills bid process. Representatives from DBE Companies should identify themselves as such and submit a copy of their Certification.

The City of North Richland Hills recognizes the certifications of both the State of Texas Building and Procurement Commission HUB Program and the North Central Texas Regional Certification Agency. All companies seeking information concerning DBE certification are urged to contact:

**Texas Building and Procurement Commission
Statewide HUB Program**

1711 San Jacinto Blvd., Austin TX 78701-1416

P O Box 13186, Austin, TX 78711-3186

(512) 463-5872

<http://www.window.state.tx.us/procurement/prog/hub/hub-certification/>

North Central Texas

Regional Certification Agency

624 Six Flags Drive, Suite 216

Arlington, Texas 76011

(817) 640-0606

<http://www.nctrca.org/certification.html>

If your company is already certified, attach a copy of your certification to this form and return as part of your packet.

Company Names: _____

Representative: _____

Address: _____

City, State, Zip: _____

Telephone No. _____ **Fax No.** _____

Email address: _____

INDICATE ALL THAT APPLY:

_____ **Minority-Owned Business Enterprise**
_____ **Women-Owned Business Enterprise**
_____ **Disadvantaged Business Enterprise**

CONFLICT OF INTEREST QUESTIONNAIRE

Pursuant to Chapter 176 of the Texas Local Government Code, a person, or agent of a person, who contracts or seeks to contract for the sale or purchase of property, goods, or services with the City of North Richland Hills must file a completed conflict of interest questionnaire. The conflict of interest questionnaire must be filed with the City Secretary of the City of North Richland Hills no later than the seventh business day after the person or agent begins contract discussions or negotiations with the City of North Richland Hills or submits to the City of North Richland Hills an application, response to a request for proposal or bid, correspondence, or another writing related to a potential agreement with the City of North Richland Hills. An updated conflict of interest questionnaire must be filed in accordance with Chapter 176 of the Local Government Code. An offense under Chapter 176 is a Class C misdemeanor.

The Conflict of Interest Questionnaire is included as part of this document and can be found at:

<https://www.ethics.state.tx.us/data/forms/conflict/CIQ.pdf>

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session. This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code. A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.	OFFICE USE ONLY Date Received
1 Name of vendor who has a business relationship with local governmental entity.	
2 ☐ Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)	
3 Name of local government officer about whom the information is being disclosed. _____ Name of Officer	
4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary. A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor? ☐ Yes ☐ No B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity? ☐ Yes ☐ No	
5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.	
6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).	
7 _____ Signature of vendor doing business with the governmental entity _____ Date 	

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

- (a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

- (2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;

or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

- (a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

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

- (1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

- (2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CONTRACT CHANGES GRID

The Contractor has the obligation to review all documents that make up the contract documents in their entirety and include any objections or requests for modifications to the Terms and Conditions, or any of the Contract Documents, in the Contract Changes Grid included with the Notice to Bidders. No changes or modifications will be made to the contract documents unless such changes are set forth in the Contract Changes Grid, submitted to the City along with the Contractor's proposal, and agreed to by the City.

CONTRACT CHANGES GRID

Proposed Contractor/Bidder _____ ("Contractor" or "Bidder"), submits the following modifications to the City's Standard _____ ("Agreement") requesting changes to such provisions be accepted by the City and incorporated into the Agreement. Contractor understands and acknowledges that the City is under no obligation to accept the modification(s) proposed by Contractor; however, the City agrees to negotiate in good faith in consideration of Contractor's request, subject to legal requirements, City policies and advice of the City Attorney.

Section / Page	Term, Condition or Specification	Exception/Proposed Modification	Disposition (For City of NRH Use Only)
			City Response: ____ Accepted ____ Not Accepted ____ Modified

CONFIDENTIALITY OF PROPRIETARY INFORMATION

During the evaluation process of this RFB, to the extent permitted by law, the City of North Richland Hills will maintain all contents of the Proposers' responses and discussions related to the Proposers' proposals as confidential. The City will treat all proposals as confidential until negotiations are completed, the successful Proposer has been selected, and a contract has been awarded. During the evaluation process, the City intends to disseminate information submitted by all Proposers to selected staff, any consultants employed by the City, and the evaluation committee, as the City deems appropriate in its sole discretion. Such staff, consultants, and committee members shall maintain the Proposers' information as confidential to the extent permitted by law. All materials submitted in response to this RFP shall become the property of the City of North Richland Hills and will not be returned. After a Proposer is selected and the contract is awarded, all submissions shall be subject to release in accordance with Texas Government Code Chapter 552, the Texas Public Information Act (the "Act").

If a Proposer does not desire proprietary information in the proposal to be disclosed, it is required to identify all proprietary information in the proposal prior to submission of the proposal to the City. The identification shall be done by individually marking each page with the words "Proprietary Information" on which such proprietary information is found. If the Proposer fails to identify such information as proprietary, the Proposer agrees by submission of its proposal that those sections shall be deemed non-proprietary and made available to the public upon request as authorized by law upon completion of the RFP process and award of contract.

Proposers are advised that the City, to the extent permitted by law, will protect the confidentiality of their proposals. Proposers shall consider the implications of the Act, particularly after the RFP process has ceased and a contract has been awarded. If a public information request is made for a Proposer's response following award of a contract, proprietary information submitted in an RFP process may only be withheld from public disclosure pursuant to Section 552.1101 of the Act. A determination as to whether Section 552.1101 applies will not be decided by the City of North Richland Hills, but by the Office of the Attorney General of the State of Texas. In the event a request for public information is made, the City will notify the Proposer, and the Proposer is required to request an opinion as to the confidentiality and proprietary nature of the information from the Attorney General pursuant to Section 552.305 of the Act. The City is not authorized to make the request on the Proposer's behalf.

SPECIFICATIONS

The Contractor shall refer to the following for additional project specifications and relevant details:

1. MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD) CONTRACT
2. MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD) SIGNED/SEALED PLANS

SECTION II

BIDDING DOCUMENTS

NOTICE TO BIDDERS

UPLOADED BIDS on forms prepared by the Engineer will be received by the office of the Purchasing Manager of the City of North Richland Hills until **2:00 p.m. on Tuesday, June 23, 2026** for furnishing all labor, material, equipment and the performance of all work required for:

**MAIN STREET SMITHFIELD
PAVING, WATER, SEWER, STORM, ILLUMINATION, AND LANDSCAPE
IMPROVEMENTS
(SMITHFIELD RD TO DAVIS BLVD)**

COMPLETED BID FORMS DOCUMENTS MUST BE SUBMITTED ELECTRONICALLY VIA: www.publicpurchase.com at which time and place the bids will be publicly opened, read aloud and retained by the Public Works Department for tabulation, checking and evaluation. The “as read” bid results will be posted on www.publicpurchase.com

COMPLETED BID FORMS shall be accompanied by a Bid Guaranty consisting of either a cashier’s check or a Bid Bond on the form included or similar form of Surety Company (FACSIMILES WILL NOT BE CONSIDERED RESPONSIVE) made payable to The City of North Richland Hills, and in the amount of five percent (5%) of the total amount of the largest amount bid as a guarantee that if the bid is accepted, the bidder will execute the Contract and furnish the required Bonds, within the time-frame indicated in the Bid Form, to the City of North Richland Hills.

BIDDERS should carefully examine the plans, specifications and other documents; visit the site of the work; fully inform themselves as to all conditions and matters that can in any way affect the work or the costs thereof. Should a bidder find discrepancies or omissions from the plans, specifications or any other documents or should he/she be in doubt as to the meaning, he/she should at once notify the Purchasing Manager and obtain clarification prior to submitting any bid.

PLANS AND SPECIFICATIONS can be downloaded from **Public Purchase** (see below).

A NON-MANDATORY PRE-BID CONFERENCE will be held at **10:00 a.m. on Tuesday, June 02, 2026**, at **Community Room, 4301 City Point Dr, North Richland Hills, TX 76180**.

PUBLIC PURCHASE: Bidders are encouraged to register with the City of North Richland Hills Purchasing Manager, Camille Alford, via email at purchasing@nrhtx.com. All Bidders who have registered with Public Purchase (<http://www.publicpurchase.com>) will receive automatic email notifications pertaining to this Bid, such as addendums and other related information released subsequent to the initial release of plans, specifications, bid forms, and contract documents. **It is the sole responsibility of the Bidder to register as a planholder with the City of North Richland Hills. Questions pertaining to this project should be submitted via Public Purchase where the bid is advertised.**

Minimum wage rates to all laborers and mechanics on the project must not be less than as provided in the Contract Documents and Wage Provisions must particularly comply with all other applicable wage laws of the State of Texas.

The right is reserved, as the interest of the City of North Richland Hills may require, to reject any and all bids, to waive any informality in the bids received, and to select a bid best suited to the City of North Richland Hills' best interest.

In case of ambiguity or lack of clearness in stating bid prices, the City of North Richland Hills reserves the right to adopt the most advantageous construction thereof, or to reject any or all bids. No bid may be withdrawn within sixty (60) days after the date on which bids are opened.

SUMMARY OF WORK: Main Street will be reconstructed from Smithfield Road to Davis Boulevard including concrete pavement, concrete sidewalk, street furniture, lighting, trees, drainage, water, and sewer improvements. A concrete sidewalk/trail will be constructed along Davis Boulevard from Main Street to Odell Street.

CITY OF NORTH RICHLAND HILLS

Camille Alford
Purchasing Manager

ADVERTISEMENT DATES:

- **May 22, 2026**
- **May 29, 2026**

SPECIAL INSTRUCTIONS TO BIDDERS

1. BID SECURITY:

A certified check or cashier's check or acceptable bidder's bond made payable to the City of North Richland Hills, Texas, in an amount of five percent (5%) of the bid submitted must accompany each bid as a guarantee that if awarded the contract, the bidder will promptly enter into a contract and execute such bonds as are required.

2. QUALIFICATION OF BIDDERS:

No pre-qualification of bidders is required. However, in consideration of the bids, the City of North Richland Hills may require bidders to furnish a written experience record and a financial statement or the most recent audited financial statement of the firm. The City of North Richland Hills reserves the right to use these items of data to influence a decision as to the award of the contract. Bidders need not submit a statement of financial condition unless requested to do so by the City of North Richland Hills. Contractors are required to submit the Experience and Current Workload page shown on page II-9, showing that the following items will be met:

- At a minimum, the general contractor shall show minimum 3 projects in similar size and scope completed within the last 10 years and provide reference contact information.

3. CONFLICT OF INTEREST QUESTIONNAIRE:

Bidders are required to complete the Conflict of Interest Questionnaire and to submit this completed form along with their bid form documents.

4. WAGE RATES:

Attention is called to the fact that not less than the prevailing wage rates as hereinafter set forth in the Special Provisions of these Contract Documents, which are made a part hereof, must be paid on this project.

5. PRE-BID CONFERENCE:

A non-mandatory pre-bid conference will be held at 10:00 A.M. Central Standard Time Tuesday, June 02, 2026, at Community Room, 4301 City Point Dr, North Richland Hills, TX 76180.

6. BONDS:

A performance bond and a payment bond, each in the amount of not less than one hundred percent (100%) of the contract price, conditioned upon the faithful performance of the contract and upon payment of all persons supplying labor or furnishing materials, will be required on this project. Additionally, a two (2) year maintenance bond, in the amount of not less than twenty percent (20%) of the final contract price, will be required on this project.

7. POWER OF ATTORNEY:

Attorneys-in-Fact who sign bid bonds or contract bonds must file with each bond a certified and current copy of their power of attorney.

8. STANDARD SPECIFICATIONS:

All work required by this project shall be in accordance with the "Public Works Design Manual" adopted by the City of North Richland Hills and the "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition (November 2017), except as modified in the Contract Documents. Where a conflict exists between the "Public Works Design Manual" and the "Public Works Construction Standards - North Central Texas", the "Public Works Design Manual" shall govern. Copies of both of these standards are included in the Contract Documents by reference and are made a part thereof. Omission of any section from this project's Contract Documents does not mean that such section is not applicable to this project.

9. UNIT PRICE CONTRACT:

The contract for this project is a "Unit Price" Contract. As such, the City of North Richland Hills reserves the right to add and/or delete quantities to specific pay items. The City of North Richland Hills may further delete an entire unit price pay item if the City of North Richland Hills desires. The City of North Richland Hills reserves the right to increase or decrease the amount of work to be done by any amount not to be exceeded by twenty-five percent (25%) of the original contract amount. In the event the increase pertains to items not originally bid, the Contractor shall submit a bid in writing to the City of North Richland Hills for approval.

It is further agreed that lump sum prices may be increased to cover additional work ordered by the City of North Richland Hills but not shown on the plans or required by the specifications, in accordance with the provisions of the general conditions; similarly, lump sum prices may be decreased to cover deletion of work so ordered.

The City of North Richland Hills reserves the right to reject the Contractor's bid on such extra work and secure such work to be done other than by said Contractor.

10. MEASUREMENT AND PAYMENT:

The basis of payment for the pay items noted in the proceeding pages shall be full compensation for furnishing all labor, materials, equipment and incidentals required to complete the work as specified and as shown in the project plans/drawings. Any item of work not specifically listed for payment but required by the project documents shall be considered an incidental item of the project and no specific payment will be made.

11. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

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

12. CONDITIONS OF WORK / OBLIGATION OF BIDDER:

Each bidder must inform himself/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation(s) to furnish all material, labor, equipment and incidentals necessary to carry out the provisions of this contract. Insofar as possible, the Contractor, in carrying out his/her work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor or City of North Richland Hills public employees.

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

13. ADDENDA AND INTERPRETATIONS:

Bidders wanting further information, interpretation or clarification of the Contract Documents must make their request in writing to Camille Alford, Purchasing Manager by **12:00pm (noon) CST on Friday, June 12, 2026**. Answers to all such requests will be made a part of the Contract Documents. No other explanation or interpretation will be considered official or binding.

Should a bidder find discrepancies in, or omission from the Contract Documents, or should he/she be in doubt as to their meaning, he/she should at once notify Camille Alford, Purchasing Manager in order that a written addendum may be sent to all bidders. Any addenda issued will be mailed or be delivered to each

prospective bidder. The bid form as submitted by the bidder must be so constructed as to include any addenda issued by the City prior to 24 hours of the opening bids, with the appropriate recognition of addenda so noted in the bid form.

No interpretation of the meaning of plans, specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretation shall be in writing, addressed to Camille Alford, Purchasing Manager or directly through Public Purchase and to be given consideration, must be received by **12:00PM (noon) on Friday, June 12, 2026**. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications and plans which, if issued, will be published on Public Purchase, not later than three (3) days prior to the date fixed for opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from any obligation under his/her bid submitted. All addenda shall become part of the Contract Documents.

14. LAWS AND REGULATIONS:

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

15. SUBMITTALS:

Prior to any construction commencing on this project the Contractor shall submit the required submittals to the City Engineer and have his approval for all such submittals as required in the Technical Specifications.

FINANCIAL STATEMENT

Condition of Bidder at close of Business month, _____, 20__

	ASSETS	LIABILITIES
1. Cash on Hand	\$ _____	\$ _____
Cash in Bank	\$ _____	\$ _____
Cash Elsewhere	\$ _____	\$ _____
2. Accounts receivable from completed contracts (exclusive of claims not approved for payment)	\$ _____	\$ _____
3. Accounts receivable from other sources than above	\$ _____	\$ _____
4. Amounts earned on uncompleted contracts (not included in Item 3) (Contract price on completed portion of uncompleted contracts less total cost of completed portion)	\$ _____	\$ _____
5. Deposits for bids on other guarantees		\$ _____
6. Notes Receivable Past Due	\$ _____	
Due 90 days	\$ _____	
Due Later	\$ _____	
7. Interest Earned	\$ _____	
8. Real Estate, Business Property, present value	\$ _____	
Other property, present value	\$ _____	\$ _____
9. Stocks and Bonds, Listed on Exchange	\$ _____	\$ _____
Unlisted	\$ _____	\$ _____
10. Equipment, Machinery, Fixtures	\$ _____	\$ _____
Less Depreciation	\$ _____	\$ _____
11. Other Assets	\$ _____	
TOTAL ASSETS	\$ _____	\$ _____

LIABILITIES AND NET WORTH

	ASSETS	LIABILITIES
1. Notes Payable to Banks Regular	\$ _____	
(For Certified Checks)	\$ _____	
Equipment Obligations	\$ _____	
Others	\$ _____	\$ _____
2. Accounts Payable Current	\$ _____	
Past Due	\$ _____	
3. Real Estate Mortgages	\$ _____	\$ _____
4. Other Liabilities		\$ _____
5. Reserves	\$ _____	
6. Capital Stock Paid Up		
Common	\$ _____	
Preferred	\$ _____	
7. Surplus	\$ _____	
TOTAL LIABILITIES	\$ _____	\$ _____

EXPERIENCE RECORD

List of Projects your Organization has successfully completed:

Amount of Contract Award	Type of Work	Date Accepted	Name and Address of Owner

List of Projects your Organization is now engaged in completing:

Amount of Contract Award	Type of Work	Anticipated Date of Completion	Name and Address of Owner

List of Surety Bonds in Force on above Uncompleted Work:

Date of Contract Award	Type of Bond	Amount of Bond ¹	Name and Address of Surety

1. List every type of bond separately. If one project has more than one type of bond, list each and every bond for that project on a separate line.

EQUIPMENT SCHEDULE

List of Equipment owned by bidder that is in serviceable condition and available for use:

Portions of work Bidder proposes to sublet if Awarded the Contract including amount and type:

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BID FORM
FOR
**MAIN STREET SMITHFIELD PAVING, WATER,
SEWER, STORM, ILLUMINATION, AND
LANDSCAPE IMPROVEMENTS (SMITHFIELD RD
TO DAVIS BLVD)**
FOR THE
CITY OF NORTH RICHLAND HILLS, TEXAS

**(THIS BID FORM MUST BE COMPLETED IN ITS ENTIRETY, SUBMITTED IN ITS
ENTIRETY AND NOT REMOVED FROM THE CONTRACT DOCUMENTS)**

Bid Opening Date: 2:00PM (CST), Tuesday, June 23, 2026

TO: City of North Richland Hills
4301 City Point Drive
North Richland Hills, Texas 76180

FOR: MAIN STREET SMITHFIELD PAVING, WATER, SEWER,
STORM, ILLUMINATION, AND LANDSCAPE IMPROVEMENTS
(SMITHFIELD RD TO DAVIS BLVD)

Pursuant to the foregoing "Notice to Bidders", the undersigned bidder, having thoroughly examined the Contract Documents, the site of the project and understanding the amount of work to be done and the prevailing conditions, hereby proposes to fully complete all of the work and requirements as provided in the plans and Contract Documents and binds himself/herself upon acceptance of this bid form to execute a contract and furnish such bonds as required and proposes to complete the work within the time stated and for the following prices:

BID SCHEDULE

Total Amount Bid: Base Bid:

Section I – General and Removal	\$ _____
Section II – Paving	\$ _____
Section III – Storm Sewer	\$ _____
Section IV – Pavement Marking and Signing	\$ _____
Section V – Water and Sewer	\$ _____
Section VI – Erosion Control	\$ _____
Section VII – Landscape, Hardscape & Irrigation	\$ _____
Section VIII – Electrical	\$ _____
Section IX – Contingency	\$ <u>80,000</u>

\$ _____
(Total Amount Bid, Numerical Value)

Total Amount Bid: Bid Alternate #1*:

Paving	\$ _____
	\$ _____

(Total Amount Bid Alternate #1, Numerical Value)

Total Amount Bid: Bid Alternate #2*:

Water Improvements	\$ _____
	\$ _____

(Total Amount Bid Alternate #2, Numerical Value)

***- The Owner reserves the right to delete any bid items or portions thereof. It is the intent of the City to evaluate the Alternate Bid and at the cities sole discretion choose to accept or reject the Alternate Bid with no effect on the Base Bid.**

The undersigned bidder acknowledges receipt of the following Addenda: **(If none is received, then write NONE across the blanks.)**

Addendum No. 1 - Date Received _____

Addendum No. 2 - Date Received _____

Addendum No. 3 - Date Received _____

Addendum No. 4 - Date Received _____

The undersigned bidder agrees to execute and file with the Owner a contract and bonds on the forms provided within ten (10) days after written notification of award of the contract to him and to begin the work to be performed under the contract within ten (10) days after written authorization to begin the work (Work Order) and to complete the work in full within **365 Consecutive Calendar Days** after the date specified in the "Notice to Proceed". See contract for additional schedule / time requirements.

Enclosed with this bid form is a certified check or cashier's check or bid bond payable to the City of North Richland Hills in the amount of five percent (5%) of the total bid, which is to become the property of the City of North Richland Hills, or the attached Bidder's Bond is to be forfeited in the event the contract and bond are not executed within the time set forth, as liquidated damages for delay and additional work caused thereby.

Respectfully Submitted,

Signed: _____

Company: _____

Address: _____

SEAL
(If Bidder is a Corporation)

Telephone: _____

Fax: _____

Submitted by: _____ an individual
A partnership
A corporation

Doing Business As: _____

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BASE BID						
UNIT I - GENERAL ITEMS & REMOVALS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
100	TXDOT 502	MOBILIZATION per unit	1	LS	\$	\$
101	TXDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING per unit	12	MO	\$	\$
102	City Detail	PROJECT SIGN per unit	2	EA	\$	\$
200	NCTCOG 203.1	GENERAL SITE PREPARATION per unit	1	LS	\$	\$
201	NCTCOG 203.1	REMOVE ASPHALT & BASE (12") per unit	6,675	SY	\$	\$
202	NCTCOG 203.1	REMOVE CONCRETE PAVEMENT per unit	836	SY	\$	\$
203	NCTCOG 203.1	REMOVE CONCRETE CURB & GUTTER per unit	2,499	LF	\$	\$
204	NCTCOG 203.1	REMOVE CONCRETE SIDEWALK AND RAMPS per unit	253	SY	\$	\$
205	NCTCOG 701.2	REMOVE INLET per unit	2	EA	\$	\$
206	NCTCOG 203.1	REMOVE TREE per unit	39	EA	\$	\$
207	NCTCOG 203.1	REMOVE AND RELOCATE MAILBOX per unit	7	EA	\$	\$
208	NCTCOG 203.1	REMOVE SIGN POST per unit	16	EA	\$	\$
209	NCTCOG 203.1	REMOVE MASONRY SIGN per unit	2	EA	\$	\$
210	NCTCOG 203.1	REMOVE & SALVAGE PAVERS per unit	25	SY	\$	\$
211	NCTCOG 203.1	REMOVE SIGN & SALVAGE per unit	4	EA	\$	\$
212	NCTCOG 203.1	REMOVE CONCRETE WHEEL STOP per unit	7	EA	\$	\$
213	NCTCOG 203.1	REMOVE BOLLARDS per unit	2	EA	\$	\$
214	NCTCOG 203.1	REMOVE & RELOCATE SOLAR POWERED FLASHING BEACON per unit	1	EA	\$	\$
215	NCTCOG 203.1	REMOVE RCP per unit	82	LF	\$	\$
216	NCTCOG 203.1	REMOVE MISC STEEL STRUCTURE per unit	1	EA	\$	\$
217	NCTCOG 203.1	REMOVE FENCE per unit	997	LF	\$	\$
218	NCTCOG 203.1	REMOVE HEADWALL per unit	1	EA	\$	\$
219	NCTCOG 203.1	REMOVE CONCRETE RIPRAP per unit	10	SY	\$	\$
SUBTOTAL - SECTION I - GENERAL ITEMS & REMOVALS					\$	

BID FORM

Project Name: Main Street Paving, Water, Sewer, Storm, Illumination, and Landscape Improvements
Project Limits: Smithfield Road to Davis Boulevard

UNIT II - PAVING IMPROVEMENTS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
300	TXDOT 110	EXCAVATION (ROADWAY) per unit	1,743	CY	\$	\$
301	TXDOT 110	EXCAVATION (CHANNEL) per unit	35	CY	\$	\$
302	TXDOT 132	EMBANKMENT per unit	774	CY	\$	\$
303	TXDOT 260	8" LIME STABILIZED SUBGRADE per unit	7,276	SY	\$	\$
304	TXDOT 260	HYDRATED LIME (42 LBS/SY) per unit	153	TON	\$	\$
305	TXDOT 360	7" REINFORCED CONCRETE PAVEMENT W/ CURB per unit	5,145	SY	\$	\$
306	TXDOT 360	7" REINFORCED CONCRETE PAVEMENT W/ CURB (ENHANCED) (STAMPED & STAINED) per unit	729	SY	\$	\$
307	TXDOT 340	HMAC TYPE "D" SURFACE COURSE (ASPHALT TRANSITION) per unit	97	SY	\$	\$
308	TXDOT 340	HMAC TYPE "B" BASE COURSE (ASPHALT TRANSITION) per unit	97	SY	\$	\$
309	TXDOT 340	HMAC TYPE "D" SURFACE COURSE (ASPHALT PAVEMENT) per unit	416	SY	\$	\$
310	TXDOT 340	HMAC TYPE "B" BASE COURSE (ASPHALT PAVEMENT) per unit	416	SY	\$	\$
311	TXDOT 423	CAST-IN-PLACE CONCRETE RETAINING WALL per unit	400	LF	\$	\$
312	TXDOT 530	DRIVEWAY (CONCRETE) (6" THICK) per unit	586	SY	\$	\$
313	TXDOT 531	4" CONCRETE SIDEWALK (BROOM FINISH) per unit	4,509	SY	\$	\$
314	TXDOT 531	CONCRETE SIDEWALK PAVERS (INC. CONCRETE BASE) per unit	278	SY	\$	\$
315	TXDOT 531	CURB RAMP (TY I) per unit	2	EA	\$	\$
316	TXDOT 531	CURB RAMP (TY V) per unit	3	EA	\$	\$
317	TXDOT 531	CURB RAMP (TY VII) per unit	8	EA	\$	\$
318	TXDOT 360	6" CONCRETE CURB & GUTTER per unit	181	LF	\$	\$
319	NCTCOG 502.6	ADJUST WATER VALVE per unit	10	EA	\$	\$
320	NCTCOG 502.10	ADJUST MANHOLE TO GRADE per unit	4	EA	\$	\$
321	TXDOT 624	ADJUST TRAFFIC GROUND BOX per unit	2	EA	\$	\$
322	TXDOT 360	CONCRETE STREET HEADER per unit	69	LF	\$	\$
323	TXDOT 360	SIDEWALK SPANNING FLUME per unit	2	EA	\$	\$
324	TXDOT 360	PERMANENT ASPHALT REPAIR PER FIG 15P-1 DETAIL per unit	37	SY	\$	\$
325	TXDOT 361	TREE PROTECTION W/ 6' CHAIN LINK FENCE per unit	50	LF	\$	\$
326	TXDOT 531	TRUNCATED DOMES per unit	250	SF	\$	\$
327	TXDOT 360	SIDEWALK CURB per unit	688	LF	\$	\$
328	NCTCOG 203.1	REMOVE & RELOCATE CHAIN LINK FENCE IN PLACE per unit	24	LF	\$	\$
SUBTOTAL - UNIT II - PAVING IMPROVEMENTS					\$	

BID FORM

Project Name: Main Street Paving, Water, Sewer, Storm, Illumination, and Landscape Improvements
Project Limits: Smithfield Road to Davis Boulevard

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UNIT III - STORM SEWER IMPROVEMENTS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
400	TXDOT 464	18" RCP CLASS III per unit	151	LF	\$	\$
401	TXDOT 464	24" RCP CLASS III per unit	350	LF	\$	\$
402	TXDOT 464	30" RCP CLASS III per unit	297	LF	\$	\$
403	TXDOT 464	36" RCP CLASS III per unit	36	LF	\$	\$
404	TXDOT 465	5' STANDARD CURB INLET per unit	4	EA	\$	\$
405	TXDOT 465	10' STANDARD CURB INLET per unit	5	EA	\$	\$
406	TXDOT 402	TRENCH EXCAVATION PROTECTION per unit	834	LF	\$	\$
407	TXDOT 466	TXDOT CH-FW-0 (2:1) per unit	1	EA	\$	\$
408	TXDOT 465	4'X4' JUNCTION BOX per unit	1	EA	\$	\$
409	TXDOT 465	6'X6' JUNCTION BOX per unit	1	EA	\$	\$
410	ITEM 420	CONCRETE FLUME per unit	64	SY	\$	\$
411	TXDOT 432	STONE RIPRAP (12") (24" THICK) (GROUTED) (W/ FILTER FABRIC) per unit	71	SY	\$	\$
SUBTOTAL - UNIT III - STORM SEWER IMPROVEMENTS					\$	
UNIT IV - PAVEMENT MARKING AND SIGNING						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
500	TXDOT 644	INSTALL SMALL SIGN AND NEW POST ASSEMBLY per unit	13	EA	\$	\$
501	TXDOT 672	REFLECTIVE PAVEMENT MARKER TYPE Y per unit	662	EA	\$	\$
502	TXDOT 672	REFLECTIVE PAVEMENT MARKER TYPE II-A-A per unit	170	EA	\$	\$
503	TXDOT 666	REFLECTIVE PAVEMENT MARKING (W) 6" (SOLID) per unit	315	LF	\$	\$
504	TXDOT 666	REFLECTIVE PAVEMENT MARKING (W) 12" (SOLID) per unit	609	LF	\$	\$
505	TXDOT 666	REFLECTIVE PAVEMENT MARKING (W) (ARROW) per unit	4	EA	\$	\$
506	TXDOT 666	REFLECTIVE PAVEMENT MARKING (W) (WORD) per unit	3	EA	\$	\$
507	TXDOT 666	REFLECTIVE PAVEMENT MARKING (W) 24" (SOLID) per unit	75	LF	\$	\$
SUBTOTAL - SECTION IV - PAVING MARKING AND SIGNING					\$	

BID FORM

Project Name: Main Street Paving, Water, Sewer, Storm, Illumination, and Landscape Improvements
Project Limits: Smithfield Road to Davis Boulevard

UNIT V - WATER AND SEWER IMPROVEMENTS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
600	NCTCOG 701.2	ABANDON WATER LINE per unit	1,043	LF	\$	\$
601	NCTCOG 701.2	REMOVE WATER LINE per unit	341	LF	\$	\$
602	NCTCOG 701.2	REMOVE GATE VALVE (SALVAGE) per unit	1	EA	\$	\$
603	NCTCOG 501.14	8" AWWA C900 PVC DR18 WATER PIPE (OPEN CUT) per unit	1,850	LF	\$	\$
604	NCTCOG 502.6	8" RESILIENT SEATED GATE VALVE W/ BOX per unit	13	EA	\$	\$
605	NCTCOG 502.3	FIRE HYDRANT ASSEMBLY (INSTALL) per unit	5	EA	\$	\$
606	NCTCOG 502.10	INSTALL 1" WATER METER & SERVICE CONNECTION per unit	15	EA	\$	\$
607	NCTCOG 502.10	CONNECT TO EXISTING WATERLINE per unit	4	EA	\$	\$
608	NCTCOG 701.2	REMOVE/ABANDON EX 6" SANITARY SEWER per unit	355	LF	\$	\$
609	NCTCOG 501.17	8" SANI SEWER PVC SDR 35 (TRENCH) per unit	580	LF	\$	\$
610	NCTCOG 502.10	MANHOLE (4' DIAMETER) per unit	2	EA	\$	\$
611	NCTCOG 502.10	CONNECT TO EXISTING MH per unit	2	EA	\$	\$
612	NCTCOG 502.10	INSTALL SEWER SERVICE per unit	5	EA	\$	\$
613	TXDOT 401	CLSM ENCASEMENT per unit	110	LF	\$	\$
614	TXDOT 351	TEMPORARY ASPHALT TRENCH REPAIR per unit	2,430	LF	\$	\$
615	TXDOT 402	TRENCH EXCAVATION PROTECTION per unit	2,430	LF	\$	\$
616	NCTCOG 502.10	INSTALL 2" WATER METER & SERVICE CONNECTION per unit	1	EA	\$	\$
SUBTOTAL - UNIT V - WATER AND SEWER IMPROVEMENTS					\$	
UNIT VI - EROSION CONTROL						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
700	TXDOT 160	4" TOPSOIL per unit	4,084	SY	\$	\$
701	TXDOT 162	SODDING (BERMUDA) per unit	4,084	SY	\$	\$
702	TXDOT 506	SILT FENCE (INSTALL/MAINTAIN/REMOVE) per unit	5,068	LF	\$	\$
703	TXDOT 506	INLET PROTECTION (INSTALL/MAINTAIN/REMOVE) per unit	15	EA	\$	\$
704	NCTCOG 202	SWPPP PLAN AND EROSION CONTROL ITEMS per unit	1	LS	\$	\$
SUBTOTAL - UNIT VI - EROSION CONTROL					\$	

BID FORM

Project Name: Main Street Paving, Water, Sewer, Storm, Illumination, and Landscape Improvements
Project Limits: Smithfield Road to Davis Boulevard

UNIT VII - LANDSCAPE, HARDSCAPE & IRRIGATION						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
800	12 93 00	BENCH per unit	14	EA	\$	\$
801	12 93 00	TRASH RECEPTACLE per unit	6	EA	\$	\$
802	12 93 00	TREE GRATE per unit	23	EA	\$	\$
803	12 93 00	BOLLARD per unit	20	EA	\$	\$
804	N/A	DECOMPOSED GRANITE per unit	121	SY	\$	\$
805	12 93 00	STEEL EDGING per unit	641	LF	\$	\$
806	N/A	CLUSTER MAILBOX per unit	0	EA	\$	\$
807	N/A	4" DUAL WALL PERFERATED PIPE FOR TREE GRATES per unit	115	LF	\$	\$
808	N/A	4" DUAL WALL SOLID PIPE FOR TREE GRATES per unit	1,103	LF	\$	\$
900	32 93 00	LARGE CANOPY TREE (3" CALIPER) per unit	36	EA	\$	\$
901	32 93 00	ORNAMENTAL TREE (45 GALLON) per unit	3	EA	\$	\$
902	32 93 00	5 GALLON SHRUB per unit	666	EA	\$	\$
903	32 93 00	3 GALLON SHRUB per unit	123	EA	\$	\$
904	32 93 00	SOD per unit	666	SF	\$	\$
905	32 93 00	BED PREP per unit	3,960	SF	\$	\$
1000	32 84 00	METER, BACKFLOW & FLOW SENSOR per unit	1	LS	\$	\$
1001	32 84 00	CONTROLLER per unit	1	LS	\$	\$
1002	32 84 00	MAIN LINE per unit	1,340	LF	\$	\$
1003	32 84 00	SLEEVE PRICING per unit	3,730	LF	\$	\$
1004	32 84 00	SPRAY IRRIGATION per unit	665	SF	\$	\$
1005	32 84 00	BUBBLERS per unit	46	EA	\$	\$
1006	32 84 00	DRIP IRRIGATION per unit	2,260	SF	\$	\$
SUBTOTAL - UNIT VII - LANDSCAPE, HARDSCAPE & IRRIGATION					\$	

BID FORM

Project Name: Main Street Paving, Water, Sewer, Storm, Illumination, and Landscape Improvements
Project Limits: Smithfield Road to Davis Boulevard

UNIT VIII - ELECTRICAL							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid	
1100	NCTCOG 203.1	DEMOLITION OF EXISTING STREET LIGHT per unit	4	EA	\$	\$	
1101	TXDOT 610	200A SERVICE PEDESTAL per unit	4	EA	\$	\$	
1102	TXDOT 624	GROUND BOXES (TRAFFIC RATED) W/ APRON per unit	61	EA	\$	\$	
1103	TXDOT 624	IN-GRADE RECEPTACLE BOX per unit	45	EA	\$	\$	
1104	TXDOT 628	GFCI PEDESTAL per unit	8	EA	\$	\$	
1105	TXDOT 610	72" X 42" STREET LIGHT FOUNDATION per unit	62	EA	\$	\$	
1106	TXDOT 618	3" SCH. 80 PVC - TRENCH per unit	3,515	LF	\$	\$	
1107	TXDOT 618	2" SCH. 80 PVC - TRENCH per unit	3,375	LF	\$	\$	
1108	TXDOT 618	1-1/4" SCH. 80 PVC - TRENCH per unit	1,350	LF	\$	\$	
1109	TXDOT 618	2" RIGID RISER per unit	60	LF	\$	\$	
1110	TXDOT 618	3" RIGID RISER per unit	120	LF	\$	\$	
1111	TXDOT 620	#4 XHHW per unit	2,435	LF	\$	\$	
1112	TXDOT 620	#6 XHHW per unit	7,025	LF	\$	\$	
1113	TXDOT 620	#10 XHHW per unit	4,050	LF	\$	\$	
1114	TXDOT 260501	ARC FLASH CALCULATIONS per unit	1	LS	\$	\$	
SUBTOTAL - UNIT VIII - ELECTRICAL					\$		
UNIT VI - CONTINGENCY							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid	
1400	PROJECT MANUAL	PROJECT CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00	
1401	PROJECT MANUAL	UTILITY CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00	
1402	PROJECT MANUAL	PAVEMENT CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00	
1403	PROJECT MANUAL	LANDSCAPE CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00	
SUBTOTAL - UNIT VI - CONTINGENCY					\$	80,000.00	
TOTAL - BASE BID					\$		
BID ALTERNATE #1							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid	
1200	TXDOT 247	8" FLEX BASE SUBRADE per unit	88	SY	\$	\$	
1201	TXDOT 110	EXCAVATION (ROADWAY) per unit	20	CY	\$	\$	
SUBTOTAL - BID ALTERNATE #1					\$		
BID ALTERNATE #2							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid	
1300	NCTCOG 501.14	8" AWWA C900 PVC DR18 WATER PIPE (BY BORE) per unit	50	LF	\$	\$	
SUBTOTAL - BID ALTERNATE #2					\$		
TOTAL - ALT BID					\$		

BID FORM

Project Name: Main Street Paving, Water, Sewer, Storm, Illumination, and Landscape Improvements
Project Limits: Smithfield Road to Davis Boulevard

SECTION III

CONTRACTUAL DOCUMENTS

STANDARD FORM OF CONSTRUCTION AGREEMENT

THE STATE OF TEXAS §
 §
COUNTY OF TARRANT §

THIS AGREEMENT is entered into this the ____ day of _____, 20____, by and between the CITY OF NORTH RICHLAND HILLLS, a municipal corporation, of the County of Tarrant and State of Texas, hereinafter called "OWNER" and _____ of the City of _____, County of _____ and State of _____ hereinafter called "CONTRACTOR."

OWNER and CONTRACTOR in consideration of the mutual covenants contained in this Agreement, agree as follows:

ARTICLE 1. WORK.

CONTRACTOR covenants and agrees to perform the Work in every detail, in a good and first-class workmanlike manner as specified and indicated in the Contract Documents, of which are incorporated in this Agreement in their entirety as if they were herein set out at length written word for word. The CONTRACTOR shall furnish all labor, materials, tools and equipment required to perform and complete the Work in strict accordance with these Contract Documents. The Work is described as follows:

MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD)

ARTICLE 2. CONTRACT PRICE.

OWNER agrees to pay CONTRACTOR for completion of the Work in accordance with the Contract Documents, the price or prices shown in the bidder's proposal, which total the following amount:

_____ DOLLARS AND _____ CENTS (\$ _____)
("Contract Price").

ARTICLE 3. CONTRACT TIME / TERMINATION / LIQUIDATED DAMAGES.

Unless otherwise stated in this agreement, **time shall be considered of the essence.**

- a. When **time is of** the essence, the CONTRACTOR shall be liable for failure to deliver or delay in delivery occasioned by and including without limitation strikes, lock-outs, inability of obtaining material or shopping space, breakdowns, delays of carriers or suppliers, and preexisting governmental acts and regulations of the Federal and State governments or any subdivision thereof, unless such governmental acts and regulations affecting delivery could not be found, recognized, or discovered by due diligence on the part of the CONTRACTOR prior to submission of his/her and City Council's acceptance thereof.
- b. When **time is not of** the essence, this agreement shall be inoperative during such period of time that aforesaid delivery or acceptance may be rendered impossible by reason of fire, strike, Acts of God, or government regulation. Provided, however, to the extent that the CONTRACTOR has any commercially reasonable alternative method of performing this contract by purchase on the market or otherwise, he/she shall not be freed of his/her obligation hereunder by this clause, even though the goods intended for this contract were destroyed or their delivery delayed because of any event described above.
- c. **As time is of the essence on this contract**, CONTRACTOR agrees to commence work under this contract within ten (10) days from the date specified in the "Notice to Proceed" and complete each phase of construction within the durations specified in the following table. The durations specified are consecutive calendar days and are subject to such extensions of time as are indicated in the Special Provisions. Each subsequent phase after Phase 1 (Phase 2, 3, & 4) shall start immediately following the previous phase. There shall be no stopping of work or delay of work between phases.

Traffic Control Phase	Duration (Calendar Days)	Anticipated Start Timeframe
<u>Phase 1</u> <i>Site Prep, Erosion Control, & Installation of underground utilities (storm, sewer, water) along Main Street.</i>	100 Days	Within 10 days from date on "Notice to Proceed"
<u>Phase 2</u> <i>Installation of paving and street light improvements along Main Street.</i>	160 Days	Immediately after Phase 1 is complete
<u>Phase 3</u> <i>Installation of Davis Blvd Sidewalk and Retaining Wall</i>	80 Days	Immediately after Phase 2 is Complete
<u>Phase 4</u> <i>Installation of Landscape Improvements & Final Closeout</i>	25 Days	Immediately after Phase 3 is Complete
<u>Final Acceptance</u>	Within 365 days from date on "Notice to Proceed"	

Any modifications to the durations provided for each phase of construction must be agreed upon in writing by the CONTRACTOR and the OWNER. Additionally, CONTRACTOR agrees to totally complete work within **365** consecutive calendar days after the date specified in the "Notice to Proceed," subject to such extensions of time as are indicated in the Special Provisions.

- d. Milestones included in this contract are as follows:
- 1) **Completion of Traffic Control Phase 1** as described in the Project Manual within 100 calendar days and starting within 10 days from the date on the "Notice to Proceed" (subject to such extensions of time as are indicated in the Special Provisions). For purposes of this section, to consider completed, all construction activities included in project phasing must:
 - a. be in place;
 - b. be functional;
 - c. all temporary and permanent water and sewer connections and appurtenances shall be operational as determined by the OWNER;
 - d. all storm drain pipes, inlets, and structures within Phase 1 must be installed as determined by the OWNER;
 - e. outfall storm drain connection must be complete as determined by the OWNER;
 - f. all temporary surfaces must be smooth and traversable by property owners;
 - g. all proposed pavement within Phase 1 shall be paved and traversable, AND;

- h. all erosion control devices shall be inspected, repaired, and/or modified as needed.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 1 to the OWNER's satisfaction.

- 2) **Completion of Traffic Control Phase 2** as described in the Project Manual within 160 calendar days starting from the completion of Traffic Control Phase 1 (subject to such extensions of time as are indicated in the Special Provisions).
- a. be in place;
 - b. be functional;
 - c. all temporary and permanent water and sewer connections and appurtenances shall be operational as determined by the OWNER;
 - d. all storm inlets, and structures within Phase 2 must be completed and operational as determined by the OWNER;
 - e. all temporary surfaces must be smooth and traversable by property owners;
 - f. all proposed pavement and hardscape features within Phase 2 shall be paved and traversable as determined by the OWNER;
 - g. all lighting enhancements shall be installed, wired, and in operation as determined by the OWNER;
 - h. all proposed striping, markings, and signs shall be installed, AND:
 - i. all erosion control devices shall be inspected, repaired, and/or modified as needed.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 2 to the OWNER's satisfaction.

- 3) **Completion of Traffic Control Phase 3** as described in the Project Manual within 80 calendar days starting from the completion of Traffic Control Phase 2 (subject to such extensions of time as are indicated in the Special Provisions).
- a. be in place;
 - b. be functional;
 - c. all storm drain pipes, inlets, and structures within Phase 3 must be completed and operational as determined by the OWNER;
 - d. all proposed pavement within Phase 3 shall be paved and traversable;
 - e. all erosion control and traffic control devices shall be removed and the site is cleaned.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 3 to the OWNER's satisfaction.

- 4) **Completion of Traffic Control Phase 4** as described in the Project Manual within 25 calendar days starting from the completion of Traffic Control Phase 3 (subject to such extensions of time as are indicated in the Special Provisions).
- a. be in place;
 - b. be functional;
 - c. all landscaping features shall be installed;
 - d. all irrigation shall be installed and operational as determined by the owner, AND;
 - e. all erosion control and traffic control devices shall be removed and the site is cleaned.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 4 to the OWNER's satisfaction.

Calendar Days is defined as any day of the week or month; no days being excepted, such as, Saturdays, Sundays, holidays and inclement weather days. Counting of contract time will only be stopped when the Owner issues a written notice stating this fact, or when the project is noted as substantially complete by written notice from the Owner. OWNER shall determine when such action is necessary.

Extensions of time due to weather delays shall be determined in accordance with the following formula:

$E = R - P$ where R is greater than or equal to P, and

E = Extra Precipitation Days

P = Average Precipitation Days

R = Total Precipitation Days

Average Precipitation Days (P) is defined as a day of rain, sleet, hail, snow or any combination thereof, and shall be based upon the average precipitation for each month of the year as defined in the Local Climatological Data summaries issued by the National Climatic Data Center in Asheville, North Carolina, and for this contract shall be as follows:

Average Precipitation

Month	Jan	Feb	Mar	Apr	May	June
Number of Days	6	6	7	7	8	6
Month	July	Aug	Sept	Oct	Nov	Dec
Number of Days	4	4	6	6	6	6

Partial months shall be prorated uniformly for the entire month and the sum of all the months used will be rounded to the nearest whole number. This number shall be P.

Total Precipitation Days (R) is defined as a day of rain, sleet, hail, snow or any combination thereof, if determined by the Owner's Project Representative that the Contractor's construction cannot progress substantially due to precipitation and thus be put in the Daily Inspection Logs as a precipitation day. The sum of all precipitation days shall be R.

The total number of Extra Precipitation Days (E) shall be granted to the Contractor as extension of time due to weather delays, and no additional time due to drying time for saturated soil will be allowed. This contract time is both multi-tiered and cumulative.

e. **Liquidated Damages.** The CONTRACTOR further agrees to pay the following as liquidated damages:

- (1) \$1,000 per Calendar Day for any unfinished work beyond **365** consecutive calendar days after the "Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER
- (2) It is understood between the parties hereto that these sums shall be treated as liquidated damages and not as a penalty, and the OWNER may withhold from the CONTRACTOR's compensation such sums as liquidated damages.

The parties consider the CONTRACTOR's failure to complete performance of the entire contract within the 365th calendar day after the "Phase I Notice to Proceed" date a substantial breach of this agreement, and the amount of liquidated damages set forth herein is a reasonable and fair estimate of just compensation for CONTRACTOR's failure to timely perform the contract.

If there is any conflict between any provision of this Article 3, and any other

Provision in this agreement, or in any attachment hereto or any other Contract Document, this Article 3 shall control.

ARTICLE 4. PARTIAL PAYMENT.

OWNER shall make payments to the CONTRACTOR in the following manner. On or about the first of each month, the OWNER, or the OWNER's Authorized Representative, will make accurate estimates of the value, based on contract prices, of the work done and materials incorporated in the work and of materials suitably stored at the site during the preceding calendar month. The CONTRACTOR shall furnish to the OWNER, or the OWNER's Representative, such detailed information as the OWNER may request to aid OWNER as a guide in the preparation of the monthly estimate.

Within the following thirty (30) days, OWNER shall make partial payments to the CONTRACTOR for work performed during the preceding calendar month as estimated by the OWNER or OWNER's Representative. Ten percent (10%) of each estimate shall be retained by the OWNER until final completion and acceptance of all work covered by the Contract for contracts less than four hundred thousand dollars (\$ 400,000). Five percent (5%) of each estimate shall be retained by the OWNER until final completion and acceptance of all work covered by the Contract for contracts greater than four hundred thousand dollars (\$ 400,000). Upon completion and acceptance of all work in compliance with the Contract, the OWNER shall, within thirty (30) days, pay the CONTRACTOR the balance due under the terms and conditions of the Contract.

It is understood that the monthly estimates shall be approximate only, and all monthly estimates and partial payments shall be subject to correction in the estimate rendered following the discovery of an error in any previous estimate, and such estimate shall not in any respect be taken as an admission of the OWNER of the amount of work done or of its quality or sufficiency nor as an acceptance of the work or the release of the CONTRACTOR of any of its responsibility under the Contract.

ARTICLE 5. DISCRIMINATION.

The CONTRACTOR agrees, in connection with the performance of work under this contract as follows:

- a. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, creed, color, sex, religion, national origin or ancestry. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff, termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.
- b. The CONTRACTOR agrees to include this non-discrimination clause in any subcontracts connected with the performance of this agreement.
- c. In the event of the CONTRACTOR's non-compliance with the above non-discrimination clause, the contract may be canceled or terminated by the OWNER. The CONTRACTOR may be declared by the OWNER to be ineligible for future contracts with the OWNER, until satisfactory proof of intent to comply shall be made by the CONTRACTOR.
- d. The OWNER shall be provided a list of subcontractors who are to be paid \$10,000 or more. The CONTRACTOR must ensure that such subcontractors meet the requirements as outlined in Title VI of the Civil Rights Act of 1964 (42 USC 2000d et seq), execute required assurances and provide the OWNER a copy of the signed assurance of all such subcontractors prior to final payment. In the event of a claim of \$10,000 or more against the CONTRACTOR by a subcontractor under this section, no further payment shall be processed unless and until each required subcontractor assurance is provided the OWNER.

ARTICLE 6. ENTIRE CONTRACT.

This Contract and Agreement contains the entire understanding and agreement of the parties upon the subject matter hereof. There is no agreement, oral or otherwise, which is not set forth in writing as part of this Agreement or the Contract Documents.

ARTICLE 7. MODIFICATION.

This contract cannot be modified except by a writing signed by both parties.

ARTICLE 8. VARIABLES IN COST.

The parties hereto assume and understand that the variables in the CONTRACTOR's cost of performance may fluctuate; consequently, the parties

hereto agree that any fluctuations in the CONTRACTOR's costs will in no way alter the CONTRACTOR's obligations under this contract nor excuse nonperformance or delay on his/her part.

ARTICLE 10. VENUE.

This contract shall be governed by the laws of the State of Texas. Venue for any court proceedings shall be in Tarrant County, Texas.

ARTICLE 11. CONTRACT DOCUMENTS.

Documents Listed. The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR for the performance of and payment for the Work, consist of the following:

- (1) This Agreement
- (2) Addendum(s)
- (3) "Notice to Bidders" advertisement
- (4) Bidder's Proposal
- (5) Special Instruction to Bidders
- (6) Performance, Payment and Maintenance Bonds
- (7) Certification of Insurance
- (8) Notice to Proceed
- (9) Technical Specifications
- (10) City of North Richland Hills' Public Works Design Manual
- (11) Special Provisions
- (12) General Provisions
- (13) Project Construction Plans/Drawings
- (14) Special Material and/or Equipment Specifications
- (15) Special Material and/or Equipment Drawings
- (16) "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition, Adopted November 2017
- (17) TxDOT Standard Specifications for Construction and Maintenance of Highways, Street, and Bridges (TxDOT Specifications)
- (18) North Central Texas Council of Government references

ARTICLE 11. DEFAULT

OWNER may declare CONTRACTOR in default of this Contract in the event Contractor fails to comply with the terms and conditions set forth in this Contract or any of the Contract Documents.

ARTICLE 12. SUBCONTRACTORS

Any subcontractor who furnishes labor or materials to fulfill an obligation to CONTRACTOR under this Contract or who performs all or part of the work required by this Contract, must comply with all notice and filing requirements of Texas Property Code, Chapter 53 in order to perfect a mechanic's, contractor's or materialman's lien. If a subcontractor complies with Chapter 53 of the Texas Property Code, Owner shall be authorized to withhold payment from the CONTRACTOR for payment of the claim. Owner shall release any such payment to the CONTRACTOR upon written notice and sufficient documentation to Owner from subcontractor that the claim has been paid or otherwise settled.

IN TESTIMONY WHEREOF, the CITY OF NORTH RICHLAND HILLS has caused this instrument to be signed in its corporate name, and on its behalf by the Mayor or City Manager, duly authorized to execute this instrument by action of the City Council and _____ a corporation, partnership, individual
(Name of Contractor) ("X" out the inappropriate wording)
acting by and through its duly authorized officials, thereby binding themselves for the faithful and full performance of the terms and provisions of this Agreement.

CITY OF NORTH RICHLAND HILLS:

By: _____
Paulette Hartman
City Manager
Date: _____

ATTEST:

By: _____

Alicia Richardson
City Secretary/Chief Governance Officer

CONTRACTOR:

By: _____
Name: _____
Title: _____
Date: _____

ATTEST:

By: _____

Name: _____
Title: _____

APPROVED TO FORM AND LEGALITY:

By: _____

Bradley A. Anderle, City Attorney

Bond No. _____

PERFORMANCE BOND

STATE OF TEXAS §
COUNTY OF TARRANT § **KNOW ALL MEN BY THESE PRESENTS:**

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____, County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") in the penal sum _____ DOLLARS AND _____ CENTS (\$XXX,XXX.00) [not less than 100% of the approximate total amount of the contract as evidenced in the bid proposal] in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the Owner, dated the ____ day of _____, 20__, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of:

MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD)

Dated as of _____, 20__

NOW, THEREFORE, the condition of this obligation is such, that if the said Principal fully and faithfully executes the work and performance of the Contract in accordance with the plans, specifications and Contract Documents, including any extensions thereof which may be granted with our without notice to Surety, during the original term thereof, and during the life of any guaranty required under the Contract, and according to the true intent and meaning of said Contract and the plans and specifications hereto annexed, if the Principal shall repair and/or replace all defects due to faulty materials or workmanship that appear within a period of two years from the date of final completion and final acceptance of the work by owner; and if the Principal shall fully indemnify and save harmless the Owner from all costs and damages which Owner may suffer by reason of failure to so perform herein and shall fully reimburse and repay Owner all outlay and expense which the Owner may incur in making good any default or deficiency, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said contractor shall fail to do so, it is agreed that the Owner may do said work and supply such materials and charge the same against said contractor and Surety on this obligation.

In the event that the Principal is declared in default under the said Contract by Owner, the Surety will within fifteen (15) days of Owner's declaration of such default take all action necessary to take over the project from Contractor and assume completion of said Contract. The Surety shall become entitled to the payment of the balance of the Contract Price upon the Surety's faithful performance of its obligations under this bond.

The Surety agrees to pay to Owner, upon demand, all loss and expense, including reasonable attorney's fees, incurred by Owner by reason of or on account of any breach of this obligation by the Surety.

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

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Texas Government Code, Chapter 2253, as amended, and Article 7.19-1 of the Insurance Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

Surety, for value received, stipulates and agrees that the Bond shall automatically be increased by the amount of any Change Order or supplemental agreement with increases the Contract price with or without notice to the Surety, but in no event shall a Change Order or supplemental agreement which reduces the Contract price decrease the penal sum of this Bond. And further that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

Surety agrees that this Bond provides for the repairs and/or replacement of all defects due to faulty materials and workmanship that appear within a period of two (2) years from the date of completion and acceptance of the improvement by the Owner.

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

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the ____ day of _____, 20__.

(Company Name of Principal)

(Company Name of Surety)

(Signature)

(Signature)

(Printed Name)

(Printed Name)

(Title)

(Title)

(Address Line 1)

(Address Line 1)

(Address Line 2)

(Address Line 2)

(City, State and Zip Code)

(City, State and Zip Code)

(Witness)

(Witness)

The name and address of the Resident Agent of Surety is:

(Name)

(Address Line 1)

(Address Line 2)

(City, State and Zip Code)

(Telephone Number)

(Fax Number)

Bond No. _____

PAYMENT BOND

STATE OF TEXAS §
§ **KNOW ALL MEN BY THESE PRESENTS:**
COUNTY OF TARRANT §

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____, County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached Contract, in the penal sum DOLLARS AND CENTS (\$XXX,XXX.00) [not less than 100% of the approximate total amount of the Contract as evidenced in the bid proposal] in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the Owner, dated the _____ day of _____, 20____, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of:

MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD)

Dated as of _____, 20____

NOW, THEREFORE, the condition of this obligation is such, that the Bond guarantees the full and proper protection of all claimants supplying labor and material in the prosecution of the work provided for in said Contract and for the use of each claimant, and that conversely should the Principal faithfully perform said Contract and in all respects duly and faithfully observe and perform all and singular the covenants, conditions, and agreements in and by said Contract, agreed to by the Principal, and according to the true intent and meaning of said Contract and the claims and specifications hereto annexed, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modification to Surety being hereby waived, then this obligation shall be void; otherwise, to remain in full force and effect. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Texas Government Code, Chapter 2253, as amended, and Article 7.19-1 of the Insurance Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

Surety, for value received, stipulates and agrees that the Bond shall automatically be increased by the amount of any Change Order or supplemental agreement with increases to the Contract price with or without notice to the Surety and that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

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

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the ____ day of _____, 20__.

(Company Name of Principal)

(Company Name of Surety)

(Signature)

(Signature)

(Printed Name)

(Printed Name)

(Title)

(Title)

(Address Line 1)

(Address Line 1)

(Address Line 2)

(Address Line 2)

(City, State and Zip Code)

(City, State and Zip Code)

(Witness)

(Witness)

The name and address of the Resident Agent of Surety is:

(Name)

(Address Line 1)

(Address Line 2)

(City, State and Zip Code)

(Telephone Number)

(Fax Number)

Bond No. _____

MAINTENANCE BOND

STATE OF TEXAS
COUNTY OF TARRANT

§
§ **KNOW ALL MEN BY THESE PRESENTS:**
§

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____, County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") in the penal sum of DOLLARS AND /100 CENTS (\$_____) in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the Owner, dated the _____ day of _____, 20____, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of:

MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD)

Dated as of _____, 20____

The maintenance under this Bond contemplates the complete restoration of the work to a functional use if that should be necessary. It is the intended purpose of this bond to require the correction of all defective conditions resulting from materials furnished or work and labor performed by the Contractor under the Contract; and in case the Contractor or Surety shall fail or refuse to commence and actively pursue such corrections within ten (10) days after written notification has been furnished to them by the Owner, it is agreed that the Owner may do the work and supply such materials and the Contractor and Surety shall be liable for the payment of all costs thereby incurred, jointly and severally.

It is further understood and agreed that the obligation under this bond shall be a continuing one against the Contractor and Surety, and that successive recoveries may be had hereon for successive breaches until the full amount shall have been exhausted. It is further understood that the obligation to maintain the work shall continue throughout the maintenance period, and the same shall not be changed, diminished, or in any manner affected from any cause during that time.

NOW, THEREFORE, the condition of this obligation is such, that the Bond guarantees the full and proper maintenance and repair of the work herein contracted to be done and performed for a period of two (2) years from the date of acceptance and Principal will do all necessary backfilling that may arise on account of sunken conditions in ditches, or otherwise, and do and perform all necessary work and repair any defective condition growing out of or arising from the improper laying or construction of same, or on account of any breaking of same caused by said Contractor in construction of same, or account of any defect arising in any of said work laid or constructed by said Contractor or on account of improper excavation or backfilling, it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by said Contractor, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said Contractor shall fail to do so, it is agreed that the Owner may do said work and supply such materials and charge the same against said Contractor and Surety on this obligation. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

The Owner shall be entitled to its reasonable attorneys' fees and costs in any legal proceeding to enforce the Owner's rights under this bond.

PROVIDED, HOWEVER, that said Surety, for value received, stipulates and agrees that the Bond shall automatically be increased by the amount of any Change Order or supplemental agreement with increases the Contract price with or without notice to the Surety and that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

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

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the ____ day of _____, 20__.

(Company Name of Principal)

(Company Name of Surety)

(Signature)

(Signature)

(Printed Name)

(Printed Name)

(Title)

(Title)

(Address Line 1)

(Address Line 1)

(Address Line 2)

(Address Line 2)

(City, State and Zip Code)

(City, State and Zip Code)

(Witness)

(Witness)

The name and address of the Resident Agent of Surety is:

(Name)

(Address Line 1)

(Address Line 2)

(City, State and Zip Code)

(Telephone Number)

(Fax Number)

NOTE: Date of Maintenance Bond must not be prior to date of Contract.
 Power of Attorney must be attached.
 Amount and Term of Maintenance Bond shall be as stated in the
 "Special Conditions".

CONTRACTOR'S RELEASE TO CITY

TO: CITY OF NORTH RICHLAND HILLS

RE: **MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD)**

This is to certify that _____, by acceptance
(NAME OF CONTRACTOR)
of this final payment, hereby releases the OWNER, the City of North Richland Hills, from all claims and all liabilities of the City of North Richland Hills for all things done or furnished in connection with work on this project and further releases the City of North Richland Hills from any and all liabilities arising from any act of the OWNER or his/her agent arising in connection with this project. This release in no way operates to release the CONTRACTOR or his/her Surety from any obligations under this contract or the bond tendered pursuant thereto.

(NAME OF CORPORATION)

(AUTHORIZED AGENT)

CORPORATION ACKNOWLEDGMENT

STATE OF TEXAS §
 §
COUNTY OF _____ §

BEFORE ME, the undersigned authority in and for Tarrant County, Texas, on this day personally appeared _____ known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he/she is the _____ of the said _____, a corporation, and that he/she is authorized by said corporation to execute the foregoing instrument as the act of such corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

CONTRACTOR'S RELEASE TO CITY *(Continued)*

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

(Notary Public in and for the State of Texas)

(Type or Print Notary's Name)

My Commission Expires: _____

CONTRACTOR'S AFFIDAVIT OF FINAL PAYMENT

STATE OF TEXAS §

§

COUNTY OF TARRANT §

BEFORE ME, the undersigned authority, on this day personally appeared _____, (hereinafter referred to as "Affiant"), who, _____
(NAME)

after being by me duly sworn, deposes and says that he/she is the _____ (TITLE)
_____ of _____ (a
(NAME OF COMPANY)

corporation, partnership, trade name) of _____ County, State of
(~~"X" OUT THE INCORRECT~~)

Texas (hereinafter referred to as "Contractor"), which said Contractor was awarded the contract dated the _____ day of _____, 2020, for the construction of the **MAIN STREET SMITHFIELD (SMITHFIELD RD TO DAVIS BLVD)** (hereinafter referred to as the "Work"), for a total consideration of and XX/100 Dollars (\$ XXX,XXX.00) to be paid to the said Contractor (the "Contract"), and that Affiant has full power of authority to make this affidavit.

That THE CITY OF NORTH RICHLAND HILLS, (hereinafter referred to as "Owner"), has approved the final estimate on said Work, and that the said Contractor has fully satisfied and paid any and all claims that may be covered by Texas Government Code, Chapter 2253, as amended, or any other applicable statutes or charter provisions, and that all just bills for labor and materials have been paid and discharged by said Contractor insofar as they pertain to the Work in question.

That in addition to any funds which may have been previously paid by the Owner, the Contractor hereby accepts the amount of and ____/100 Dollars (\$_____) as **FULL AND FINAL PAYMENT** under the aforementioned Contract resulting in a total revised contract amount Of and ____/100 Dollars (\$ _____), and hereby waives and releases any right Affiant and/or the Contractor may have to pursue claims of any nature against the Owner arising out of or in any manner connected with the performance of the Work and/or the Contract, including but not limited to claims of third parties that supplied material and/or labor for the Work for or through the Contractor (hereinafter referred to as "Subcontractors"), as well as claims for delay, additional compensation or for recovery of liquidated damages which may have been withheld by the Owner. The Contractor shall defend, hold harmless and indemnify the Owner from any such claims of such Subcontractors. The Contractor further releases the Owner from any claim or liability arising from any act of negligence of the Owner related to or connected with the Contract. This affidavit is given pursuant to the final payment provisions of the Contract, and shall not be deemed to alter or modify the terms and provisions of said Contract.

This affidavit is made in compliance with the law and in compliance especially with Chapter 2253 of the Texas Government Code, as amended, and that the undersigned, upon his/her oath, states that the facts indicated in the above instrument of writing are true and correct and that he/she is not incapacitated an any way from making this affidavit.

WITNESS my hand this the ____ day of _____, 20____.

(Affiant)

(Printed Name)

SUBSCRIBED AND SWORN TO BEFORE ME, this the ____ day of _____, 20 ____.

(Notary Public in and for the State of Texas)

(Type or Print Notary's Name)

My Commission Expires: _____

SECTION IV

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

For this contract, the Site Protection & Preparation (Division 200), Roadway Construction (Division 300), Roadway Maintenance & Rehabilitation (Division 400), Underground Construction & Appurtenances (Division 500), Conduit and Appurtenance Rehabilitation (Division 600), Structures (Division 700) and Miscellaneous Construction & Materials (Division 800) of the "Public Works Construction Standards – North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Latest Edition, with all amendments thereto, shall govern and shall constitute as the Technical Specifications except as herein amended, modified or supplemented. Omission of any section from the Project's Contract Documents does not mean that such section is not applicable to this Project. The NCTCOG Technical Specifications will be referred to as the Technical Specifications (TS) and will not be physically bound with the other contract documents. Copies may be obtained from the North Central Texas Council of Governments.

EXPLANATION OF BID ITEMS

In this section, NCTCOG Items refer to "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Latest Edition. TxDOT Standard Specification Item refers to Texas Department of Transportation's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" Latest Edition.

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

12.1.00 GENERAL

12.1.01 DESCRIPTION

This section covers the requirements for submittal data for equipment and material items to be furnished on this project.

12.2.00 MATERIAL

12.2.01 GENERAL EXECUTION

The CONTRACTOR shall submit to the Engineer, with such promptness as to cause no delay in his/her own work or in that of any other CONTRACTOR, five (5) copies of all shop drawings, manufacturer's catalog sheets, brochures, performance charts, diagrams, schedules and other standard descriptive data required for the work. The Engineer shall review these submittals with reasonable promptness, making any necessary corrections. If the submittals

indicate variances from the requirements of the contract, the CONTRACTOR shall make specific mention of such variation in his/her letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment. Otherwise, the CONTRACTOR shall not be relieved of the responsibility of executing the work in compliance with the contract even though the submittals have been reviewed.

12.2.02 FORM OF SUBMITTALS

The submittals shall be numbered consecutively and shall present the following data as applicable:

- A. Name of project
- B. Date of submittal
- C. References to applicable section(s) of the specifications
- D. Applicable standards
- E. Identification of revisions on re-submittals
- F. Kinds of materials and finishes
- G. All working and erection dimensions and clearances
- H. All arrangement and section views
- I. Connections between functional parts

The Engineer may decline to consider any submittal that does not contain complete data on the work and full information on related matters.

12.2.03 SUBMITTAL PROCEDURE

The procedure for review of submittals shall be as follows:

- A. **The CONTRACTOR shall submit three (3) copies of the submittal to the Engineer for his/her approval.** The submittal shall be accompanied by a letter of transmittal containing the following:
 - 1. Name of the project
 - 2. Name of the CONTRACTOR
 - 3. Name of the submittal
 - 4. References to applicable section(s) of the specifications
 - 5. Other pertinent information as indicated in Section 12.2.02: "Form of Submittals"
- B. When the submittal is satisfactory to the Engineer, all three (3) copies will be stamped and/or marked "Approved" or "Approved as Noted", be dated, receive the signature of the Engineer and two (2) copies will be returned to the CONTRACTOR by separate letter.

- C. Should a submittal be unsatisfactory to the Engineer, he/she will stamp and/or mark thereon "Revise and Resubmit" or "Rejected" and will send two (2) copies to the CONTRACTOR with necessary corrections and changes indicated. The CONTRACTOR must make such corrections and/or changes and submit at least three (3) copies of the re-submittal for approval to the Engineer. The CONTRACTOR shall review and resubmit as required by the Engineer until his/her approval is obtained.
- D. The CONTRACTOR shall allow sufficient time for preliminary review, corrections, resubmission and final review of all submittals. The CONTRACTOR shall allow not less than fourteen (14) days for each review. Submittals critical to the progress of the project, when requested in writing by the CONTRACTOR, will be given priority review.

12.2.04 LIST OF REQUIRED SUBMITTALS

The following list of submittals is provided for the Contractor's convenience and represents minimum requirements for this project. This list is not intended to be all-inclusive. The Contractor remains responsible for providing all submittals, shop drawings, certifications, and data required by the Technical Specifications, even if not explicitly listed herein. The City Engineer reserves the right to require additional submittals as deemed necessary to ensure compliance with the Contract Documents.

- A. List of all subcontractors
- B. Project Construction Schedule
- C. Pipe manufacturer certification that the pipe meets specifications.
- D. Proposed Concrete Mix Designs, including the documentation of all proposed concrete admixtures.
- E. Stormwater Pollution Prevention Plan
- F. Construction signing and traffic control plan. Contractor may use the provided traffic control plans for intersection signing. Contractor to provide construction signing and traffic control plan for portions of roadway where detailed traffic control has not been provided. Construction signing and traffic control plan must be in accordance with TMUTCD and be signed by a licensed professional engineering in the state of Texas.
- G. Trench Safety Plan

I. Proposed Concrete Placement Machine Information (slip-form required)

J. Plant Material Submittals (location and photograph).

K. Irrigation Submittal

12.3.00 CONSTRUCTION

N/A

12.4.00 MEASUREMENT AND PAYMENT

Any and all Work called for in the Contract Documents or which is required for the proper construction of items called for in the Contract Documents is to be performed by CONTRACTOR unless specifically noted otherwise. The cost of all work for which there is no separate pay item in the proposal shall be included in the price for a related pay item such that work called for or required by the Contract Documents will be constructed for the Contract Price.

The following descriptions are intended to clarify the nature of the work required for this project, the provisions of the standard technical specifications shall apply, except as otherwise noted herein.

BID ITEM N/A: CONSTRUCTION STAKING

The provisions of Item 105.4 of the COG Specifications are hereby revised to state that Construction Stakes shall be provided by the CONTRACTOR. There shall be no separate pay provided for Construction Staking. Construction Staking shall be considered subsidiary to Mobilization.

BID ITEM 100: MOBILIZATION

The work under this item shall include establishment of facilities on the project site and the movement of personnel, construction equipment and supplies to the project site or to the vicinity of the project site in order to enable the CONTRACTOR to begin work on the contract. The cost of all bonds and insurance for the project will also be considered part of this specification. Construction Staking is also considered subsidiary to Mobilization.

Mobilization will be measured as a lump sum item as the work progresses. Partial payments for mobilization shall be paid for at the Total Unit Price as shown in the bid proposal with the regular monthly estimates as follows: The adjusted contract amount for construction items as used below is defined as the total contract amount less the lump sum for Mobilization.

- a. When 1% and less than 5% of the adjusted contract amount for construction items is completed, 50% of the mobilization lump sum bid will be paid.
- b. When 5% and less than 10% of the adjusted contract amount for construction items is completed, 75% of the mobilization lump sum bid will be paid. Previous payments under this section will be deducted from this amount.
- c. When 10% or more of the adjusted contract amount for construction items is completed, 95% of the mobilization lump sum bid will be paid. Previous payments under this section will be deducted from this amount.
- d. Payment for the remainder of the lump sum bid for "Mobilization" will be made on the final estimate.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications.

BID ITEM 101: BARRICADES, SIGNS, AND TRAFFIC HANDLING

This item shall include the furnishing and installing traffic control devices in accordance with the Traffic Control Plan in the Plans. Traffic control shall comply with the Texas Manual of Uniform Traffic Control Devices, Item 502 of the TxDOT Specifications, and City Specifications. All traffic control items required to implement the Traffic Control Plan shall be subsidiary to this item. This shall include, but is not limited to, barrels, barricades, panels, signs, removal of existing pavement markings, installation of and removal of temporary pavement markings, concrete traffic barrier, signal modifications, and temporary water/sewer connections.

The standard details shall be considered the minimum requirements necessary to construct the project. Additional measures may be needed to address local traffic control issues and additional sequencing not covered.

Prior to construction, the CONTRACTOR will be required to submit a detailed construction sequencing and temporary traffic control plan to address all portions of roadway traffic control not covered by the construction plans. The CONTRACTOR shall also submit a signal modification plan.

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 on a monthly basis.

The CONTRACTOR shall follow the sequence of construction provided in these plans. Any deviations from the plans must be submitted in writing to the CITY for approval. Proper notification must be given to all affected property owners at least 48 hours in advance of all construction operations. No street shall be closed except upon written authority from the OWNER.

Access to adjacent properties must be maintained except for short periods of time when construction actually blocks the driveway. The CONTRACTOR shall place gravel or take other means to insure all-weather access to properties after working hours and during weekends and holidays. All driveways shall be constructed in 2 phases. See Traffic Control Plan. This item shall also include providing temporary all-weather access to local residences and temporary mailboxes at each driveway location if needed.

All signal modifications shall be performed in accordance with the approved submittal and shall be subsidiary to this item.

The amount bid for this item shall be 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.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. The monthly unit price shall include, but not be limited to all labor, equipment, and materials necessary to implement, maintain, move and remove traffic control devices during all phases of construction.

BID ITEM 102: PROJECT SIGN

The provisions of Item 107.20 of the NCTCOG Specifications and City Specifications shall govern for the erection of project signs.

The CONTRACTOR shall install two (2) Project Signs on Main Street. The exact locations shall be approved by the OWNER prior to installation.

These signs shall be in accordance with Figure 2M (R 07-01-2009) of the City of North Richland Hills' Public Works Design Manual. These signs shall be installed within 15 calendar days from the date the OWNER awards the contract and shall remain in place during the entire construction period. These Signs shall be

removed within 15 calendar days after the OWNER's acceptance of the project improvements. The CONTRACTOR shall maintain the signs for the duration of the construction. The Project Signs shall be measured and paid for at the bid price "per each".

Sign Data:

Project Name: Main Street Improvements

Project - \$: To Be Determined After Contract Award

Projected Completion: To Be Determined After Contract Award

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each project sign furnished.

BID ITEM 200: GENERAL SITE PREPARATION

General Site Preparation shall be in accordance with 203.1 of the NCTCOG Specifications. This pay item will include removal and legal disposal of all surface and subsurface obstructions encountered within the right-of-way, regardless of whether they are shown on the plans, excluding only those items specifically listed as separate removal pay items.

In addition, the work will consist of trimming, if required, removal of above ground foliage and tree formations, and complete removal of all root systems below grade. Any backfill necessary after stump removal is subsidiary to this bid item.

Pavements and sidewalks shall be patched if necessary to allow for vehicular and pedestrian traffic. All excavated areas shall be backfilled and compacted to prevent additional damage to pavement or other structures. Any damage to yard areas shall be restored at no additional pay, including planters and landscape edging and irrigation systems.

Irrigation systems that extend into the ROW shall be capped at the property line prior to pavement removal, leaving the system operable on the resident's property. Systems shall be restored to working order within the ROW once the paving work is complete. This Item includes all safety measures and additional traffic control as needed to complete work associated with site preparation beyond what is shown in the traffic control plan.

All trees and plant materials shall be properly disposed of offsite. Only trees, landscaping and plantings located within the right-of-way and designated for removal on the plans shall be removed. All other trees and landscaping shall be protected from damage as shown in the plan details.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all

labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price of Lump Sum.

BID ITEMS 201 to 204: REMOVAL ITEMS

Pavement removal covered by this specification shall be only where designated on the Construction Plans or upon specific direction from the Owner's Project Representative.

The CONTRACTOR shall make every effort to remove pavement along existing joints. The CONTRACTOR shall saw cut at no extra cost full-depth at the existing joint or along straight, neat lines to remove the area of pavement specified in the Construction Plans. If the adjacent pavement is damaged during the removal process, the CONTRACTOR shall be responsible to saw cut the damaged portion of the pavement until a clean edge is achieved at no cost to the OWNER. The CONTRACTOR will not be compensated for the additional pavement removal or replacement if the damage was caused by the CONTRACTOR during the removal process. If the pavement is in poor condition prior to the CONTRACTOR beginning the removal process, the CONTRACTOR shall coordinate with the Owner's Project Representative to determine the limits of the concrete removal. In this case, the CONTRACTOR shall be compensated for the removal and replacement of the additional pavement; however, the CONTRACTOR will only be paid for the original length saw cut detailed in the construction plans.

The CONTRACTOR shall exercise appropriate care not to damage other improvements in the process, and the CONTRACTOR shall be responsible for correction of any such damage caused during the removal process. All material removed shall become the property of the CONTRACTOR and be disposed in accordance with local, state and federal guidelines unless otherwise shown on plans. Item 203.1 of the NCTCOG Specifications shall govern the removal of existing concrete and asphalt.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing,

grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price of Lump Sum. Removal of any concrete or asphalt shall include the cost of saw cutting.

BID ITEM 205: REMOVAL ITEMS (STRUCTURES)

Remove existing storm inlets, sewer manholes, cleanouts, and sidewalk bollard in accordance with NCTCOG Specification 701.2 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Refer to the Unit Price Bid Form.

BID ITEM 206: TREE REMOVAL

Install tree protection fencing in accordance with NCTCOG Specification 201.1 and the Plans. All tree protection shall be installed, maintained, and removed following construction activities.

All trees shown to be replaced shall be replaced in kind to species of tree prior to construction. Trees that are selected for replacement shall be approved by the OWNER prior to planting.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Refer to the Unit Price Bid Form.

BID ITEM 207: REMOVE & RELOCATE MAILBOX

This item shall be used for the remove, salvage, and relocate of existing standard pole (or non-masonry) mailboxes. Contractor is responsible for coordinating with

postal office for mailbox identification and access. Standard pole (or non-masonry) mailboxes are to be relocated in locations specified or as directed by the City and as per USPS guidelines. Damaged mailboxes will be replaced at the Contractor's expense. Mailboxes shall be replaced in kind.

Temporary mailboxes are required and considered subsidiary to this item and no additional pay will be made to remove, adjust and re-install. Any damage to the mailbox or its support is required to be fixed to provide a mailbox and/or support equal to or better than the original mailbox and/or support, at no additional cost to the City.

The Contractor shall get the property owner's signature on the City provided form after mailbox replacement is complete. Signed forms shall be returned to the City prior to final acceptance and payment is issued. This shall be considered subsidiary to this pay item.

MEASUREMENT AND PAYMENT: Payment for this item shall be made on the basis of price bid per each and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete this work. Work shall be in accordance with TxDOT Item 560 "Mailbox Assemblies".

BID ITEMS 208 to 219: REMOVAL ITEMS (MISC)

Remove sign post and masonry sign

Remove and salvage pavers and sign

Remove concrete wheel stop and bollards

Remove and relocate solar powered flashing beacon

Remove RCP and miscellaneous steel structure

Remove fence, headwall, and concrete riprap

in accordance with NCTCOG Specification 203.1 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Refer to the Unit Price Bid Form.

BID ITEMS 300 & 301: EXCAVATION

Excavation shall consist of all the required excavation within the project limits as shown on the Plans, the removal, proper utilization or disposal of all excavated material, and the shaping and finishing of all earthwork in conformity with the lines and grades as shown on the Plans or as established by the OWNER. Any usable material from excavation shall be compacted in the areas of the project limits needing fill, and the required compaction testing of this excess material shall be included in this bid item and be completed in accordance with City standards. Excavation (Roadway) and Excavation (Channel) shall comply with TxDOT Specification 110.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Unclassified Street Excavation shall be measured and paid for by the cubic yard for excavation from its original position, and shall include all materials excavated without regard to the materials encountered. There shall be no compensation for any quantities in addition to what is provided in the Bid documents unless the lines and grades are changed by the Engineer.

EARTHWORK CONSIDERATIONS: This item is 'unclassified' and shall include the removal, handling, and disposal of all materials encountered, including rock, buried debris, or stable/unstable soil, with no additional compensation for material type. Moisture conditioning, compaction, and final grading are subsidiary.

BID ITEM 302: EMBANKMENT

Embank materials in accordance with TxDOT Specification 132. This item shall consist of the work, labor, and materials necessary for furnishing and placing embankment, including the bermed areas.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing,

grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment shall be on a cubic yard basis.

EARTHWORK CONSIDERATIONS: This item is 'unclassified' and shall include the removal, handling, and disposal of all materials encountered, including rock, buried debris, or stable/unstable soil, with no additional compensation for material type. Moisture conditioning, compaction, and final grading are subsidiary.

BID ITEM 303: 8" LIME STABILIZED SUBGRADE

This item provides for the treating of the subgrade by pulverizing, addition of lime in slurry form, mixing and compacting the mixed material to the required density in conformity with the typical section, lines and grades as shown in the Plans or as established by the Owner's Project Representative. The Contractor will not be required to expose the secondary subgrade except in unstable areas. Lime subgrade stabilization shall be furnished in accordance with TxDOT Specification 260.

Once the final subgrade elevations are achieved during construction and all utilities are in place, the subgrade shall be sampled to determine the required lime application rate at a cost subsidiary to this bid item. Any offsite fill brought in for use on the project is subject to geotechnical evaluation to determine lime application rate at a cost subsidiary to this bid item.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each square yard of subgrade thickness as specified in the construction plans from a point 12" behind the backs of the proposed curbs or edges of proposed HMAC transition pavement

BID ITEM 304: HYDRATED LIME (42LB/SY)

Hydrated lime for subgrade stabilization shall be furnished in accordance with TxDOT Specification 260.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order

from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Lime will be measured by the ton and paid for at the price bid per ton after its incorporation into the subgrade. The actual amount of lime ordered by the Owner's Project Representative for stabilization and incorporation into the project will be paid for at the price bid per ton. Quantities were computed based on 42 pounds per square yard for an 8-inch depth. This should result in a minimum of 8% hydrated lime used to modify the subgrade soils.

BID ITEM 305: 7" REINFORCED CONCRETE PAVING W/ CURB

Reinforced concrete paving shall be constructed with 3,600 psi Class "C" Portland Cement Concrete and shall be furnished and placed in accordance with the details provided in the Plans and TxDOT Specification Item 360. Admixtures shall otherwise adhere to the applicable provisions of TxDOT Specification Item 360. Fly ash will not be approved as an admixture. Reinforcement shall be in accordance with the Plans and City Standard Details. This item shall include all necessary materials, labor, tools and incidentals required to construct 7" thick reinforced concrete paving on Main Street in conformance with the lines and grades shown on the Plans.

CONCRETE QUALITY AND WORKMANSHIP

The finished concrete pavement construction under these specifications is expected to meet certain quality standards for surface of the concrete including the durability, texture, riding surface and appearance.

For this project, the main lane pavement shall be slip-form machine placed concrete with a broom finish in accordance with the specifications below. The contractor shall complete the first 12 concrete panels in the presence of the City Inspector. The quality of the broom finish shall be acceptable to the City Inspector prior to proceeding with additional panels.

The surface must be durable, firm, dense and well bonded to the aggregate to maintain an appearance and texture that is satisfactory to the Owner. Concrete pavement having a poor surface that has spalled (exposed aggregate) due to poor quality paste, high water-cement ratio, over-vibration, improper curing, extreme weather or any other reason, or does not have a satisfactory riding surface shall be removed and replaced at the Contractor's expense. It is extremely important

that the pavement have a good riding surface, free from undulations and rough joints. The City Engineer shall determine the acceptability of the pavement.

Broom Finish

If the surface texture is to be a broom finish, it shall be applied when the water sheen has practically disappeared. The broom shall be drawn from the center to the edge of the pavement with adjacent strokes slightly overlapping in the direction of vehicular travel. The broom operation shall be so executed that the corrugation produced in the surface shall be uniform in appearance and not more than 1/16-inch in depth. Brooming shall be completed before the concrete is in such condition that the surface will be torn or unduly roughened by the operation. The surface thus finished shall be free from rough and porous areas, irregularities, and depressions resulting from improper handling of the broom. Brooms shall be the quality, size, and construction and shall be operated to produce a surface finish meeting the approval of the Owner. Subject to the approval of the Owner, the Contractor may be permitted to substitute mechanical brooming in lieu of the manual brooming as herein described.

Hand Finishing

Hand finishing of concrete pavement will be permitted in areas where it is not practical or possible to construct with finishing machines. These areas include, but are not limited to, intersections, left turn lanes, crossovers, transition areas and where the pavement width is not uniform. In hand finished areas, the concrete shall be struck off with an approved strike-off screed to such elevation that when consolidated and finished the surface of the pavement shall conform to the required section and grade. The strike template shall be moved forward with a combined transverse and longitudinal motion in the direction the work is progressing, maintaining a slight excess of material in front of the cutting edge. The concrete shall then be tamped with an approved tamping template to compact the concrete thoroughly and eliminate surface voids and the surface screeded to required section. After completion of a strike-off, consolidation and transverse screeding; a hand-operated longitudinal float shall be operated to test and level the surface to the required grade.

Workmen shall operate the float from approved bridges riding on the forms and spanning the pavement. The longitudinal float shall be held in contact with the surface and parallel to the centerline and operated with short longitudinal strokes while being passed from one side of the pavement to the other. If contact with the pavement is not made at all points, additional concrete shall be placed, if required, and-screeded, and the float shall be used to produce a satisfactory surface. Care shall be exercised to keep the ends of the float from digging into the surface of the pavement. After a section has been smoothed

so that the float maintains contact with the surface at all points in being passed from one side to the other, the bridges may be moved forward half the length of the float and the operation repeated. Other operations and surface tests shall be as required for machine finishing.

Edging at Forms and Joints

After the final finish, but before the concrete has taken its initial set, the edges of the pavement along each side of each slab, and on each side of transverse expansion joints, formed joints, transverse construction joints, and emergency construction joints shall be worked with an approved tool and rounded to the radius required by the plans. A well-defined and continuous radius shall be produced and a smooth, dense, mortar finish obtained. The surface of the slab shall not be unduly disturbed by tilting of the tool during use.

At all joints, any tool marks appearing on the slab adjacent to the joints shall be eliminated by brooming the surface. In doing this, the rounding of the edge shall not be disturbed. All concrete on top of the joint filler shall be completely removed.

All joints shall be tested with a straightedge before the concrete has set, and correction shall be made if one side of the joint is higher than the other or if they are higher or lower than the adjacent slabs.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and Payment for this item shall be at the contract unit price per square yard, complete in place and include all concrete, monolithic curb, reinforcing steel, required joint work, expansion material, approved elastomeric joint seal material, and other incidentals. Measurement and payment by the square yard for concrete pavement shall be made to the gutter line. Payment shall be based on Plan dimensions and no separate payment shall be provided for monolithic curb or extra thickness of concrete pavement placed. Contractor shall verify subgrade elevations prior to paving. Any concrete placed in excess of plan thickness to compensate for low subgrade shall be at the Contractor's sole expense.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 306: 7" REINFORCED CONCRETE PAVING W/ CURB (ENHANCED) (STAMPED & STAINED)

Stamped and stained concrete shall be furnished and placed in accordance with Bid Item 305. Concrete to be mixed with integral color and stamped with pattern approved by Owner.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and Payment for this item shall be at the contract unit price per square yard, complete in place and include all concrete, monolithic curb, reinforcing steel, required joint work, expansion material, approved elastomeric joint seal material, and other incidentals. Measurement and payment by the square yard for concrete pavement shall be made to the gutter line. Payment shall be based on Plan dimensions and no separate payment shall be provided for monolithic curb or extra thickness of concrete pavement placed. Contractor shall verify subgrade elevations prior to paving. Any concrete placed in excess of plan thickness to compensate for low subgrade shall be at the Contractor's sole expense.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEMS 307 to 310: HMAC TYPE "D" & TYPE "B" (PAVEMENT & TRANSITION)

This item involves the construction of a base course, level-up course, surface course, or any combination thereof, as specified in TxDOT Item 340. Asphaltic concrete shall meet the requirements for Type "D" or "B" of TxDOT Specification 340. A prime coat shall be applied to the prepared subgrade before placing the first lift. Prime coat is considered subsidiary to the asphalt item.

Asphalt Transition & Pavement shall consist of minimum 2" of TY D Asphalt on 4" TY B Asphalt prior to pavement terminus detail as shown in plans. The asphalt transition is to be placed over lime treated subgrade in accordance with Bid Item 303.

This asphalt transition item includes the construction of thickened concrete pavement at pavement terminus detail as shown in plans. The installation of concrete pavement is to conform to requirements shown in Bid Item 29.

This work includes constructing courses composed of a compacted mixture of aggregate and asphalt cement, mixed hot in a mixing plant, in accordance with the plans and specified requirements.

MATERIALS: Materials must meet project specifications before mixing, including aggregate and asphalt cement. Additional test requirements may apply to ensure the quality of materials or the paving mixture, as indicated on the plans.

CONSTRUCTION: Begin by laying the base course, ensuring proper compaction and adherence to the specified dimensions. Follow with the level-up course and surface course, as required, maintaining uniform thickness and compaction throughout. Ensure each layer is mixed according to the specified temperature and properly compacted to achieve the desired density.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by the square yard for each completed course. Payment covers all materials, labor, and procedures necessary for construction, including mixing, spreading, compaction, and finishing. Any additional testing requirements will be addressed as specified in the plans.

The OWNER reserves the right to delete any or all of these items from the Contract if not needed.

BID ITEM 311: CAST-IN-PLACE CONCRETE RETAINING WALL (FORMLINED WITH INTEGRAL COLOR)

This item involves furnishing materials, constructing, and installing retaining walls as specified in TxDOT Item 423. This work includes constructing cast-in-place

concrete retaining walls with formlined surfaces and integral color, as shown on the plans.

MATERIALS: Concrete for retaining walls must conform to the following classes unless otherwise specified: Reinforced Class "C," Nonreinforced Class "A," or Precast Class "H."

CONSTRUCTION: Construct the retaining walls according to the plans, ensuring proper alignment and structural integrity. Use formwork to create the specified surface texture and apply integral color as required. Ensure all concrete mixing, placing, and curing processes meet the specified standards.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by the linear foot of completed wall. Payment covers all materials, labor, and procedures necessary for construction, including formwork, reinforcement, coloring, and finishing. Any additional requirements specified in the plans will be addressed accordingly.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 312: CONCRETE 6" DRIVEWAY

Construct 6" Concrete Driveway in accordance with TxDOT Specification 530 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item

unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per square yard.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 313: 4" CONCRETE SIDEWALK (BROOM FINISH)

Four inch (4") thick reinforced concrete sidewalk, including reinforcing steel, shall be constructed in accordance with the width and details shown on the Plans and TxDOT Specification Items 360 and 531. Reinforced concrete paving shall be constructed in accordance with TxDOT Specification Items 360 and 531 with the appropriate strength. One (1") inch thick layer of cushion sand under the sidewalk is subsidiary to the unit price of the sidewalk.

Sidewalk widths vary and shall be installed per the Plans. Expansion joint material and elastomeric filler shall be placed along the full length of the sidewalk between the back of curb and sidewalk (for areas where sidewalk is adjacent to back of curb), and shall be included in the unit price for the sidewalk. Sidewalks located adjacent to the back of curb shall have a sidewalk lug installed per Figure 11P-3 on the Plans. This is subsidiary to sidewalk installation.

The Contractor shall be responsible to ensure all sidewalk construction is in accordance with the Americans with Disabilities Act (ADA) and Texas Accessibility Standards (TAS). Any portions of sidewalks which are constructed and do not meet the requirements of ADA and TAS will be required to be removed and replaced at the Contractor's Expense.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per square yard including excavation, concrete, reinforcing steel, cushion sand, joint sealer, expansion joint material and elastomeric filler complete in place.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 314: CONCRETE SIDEWALK PAVERS (INC. CONCRETE BASE)

This item consists of constructing a sidewalk using enhanced concrete pavers set in a 1–1½ inch leveling course, on top of a 4" concrete base in accordance with Section 32 14 00 and details in the plans. Work includes subgrade preparation, pouring of concrete base and concrete headers, spreading and screeding the leveling course, setting pavers in the pattern shown on the plans, cutting units as needed for fit, and installing edge restraints.

Pavers shall be mixed from several pallets to achieve a uniform color and texture, and shall be vibrated into the base using a low-amplitude plate vibrator. Expansion and control joints shall be provided with sealant and compressible backer rod where indicated. Joints shall be filled with polymeric sand immediately after compaction, and excess sand shall be removed. All materials shall comply with applicable ASTM standards, and herbicide shall be applied to the leveling course to inhibit weeds..

The Contractor shall be responsible to ensure all sidewalk construction is in accordance with the Americans with Disabilities Act (ADA) and Texas Accessibility Standards (TAS). Any portions of sidewalks which are constructed and do not meet the requirements of ADA and TAS will be required to be removed and replaced at the Contractor's Expense.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment shall be per square yard of installed sidewalk, including all labor, materials, and procedures necessary for a complete and uniform installation.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEMS 315 to 317 CURB RAMPS

This item shall govern the installation of Curb Ramps in accordance with the details provided in the Plans and TxDOT Specification Item 531.

Concrete for curb ramps shall be constructed with 3,000 psi Class "A" Portland Cement Concrete with 5 sacks of cement per cubic yard, with a maximum slump of 5 inches. Rebar shall be #3 bars spaced at 18" o.c.e.w. Concrete shall meet the requirements of Item 303.

The Contractor shall be responsible to ensure all barrier free ramp construction is in accordance with the Americans with Disabilities Act (ADA) and Texas Accessibility Standards (TAS). Any portions of the barrier free ramp which are constructed and do not meet the requirements of ADA and TAS will be required to be removed and replaced at the Contractor's Expense.

Per Texas Accessibility Standards Technical Memorandum TM 08-01 Issues: June 30, 2008, "The ONLY surface texture TDLR is currently aware of that meets the intent of both the Texas Accessibility Standards and the currently enforceable federal Americans with Disabilities Act Accessibility Guidelines are detectable warnings (aka truncated domes) meeting the technical specifications of TAS 4.29.2." Truncated dome surface shall be provided by using precast detectable warning plates or approved equal in a color approved by the City representative. Truncated dome pavers will not be allowed.

"In accordance with Administrative Rules 68.102 and TAS 2.2, the Department is allowing the detectable warning surface to be a minimum of 24" in depth (in the direction of pedestrian travel) in lieu of the full depth of the curb ramp. The deviation from this particular technical requirement does not require a variance. The truncated domes must still extend the full width of the curb ramp (or landing as applicable at parallel curb ramps) and comply with TAS 4.29.2."

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be on a "per-each" basis furnished and installed and shall include all concrete, reinforcement, formwork, truncated domes, monolithic curb, labor, materials, and incidentals necessary to complete the work per provided details.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 318: 6" CONCRETE CURB & GUTTER

This item involves constructing Portland cement concrete pavement with monolithic curbs on a prepared subgrade or subbase, as specified in TxDOT 360. The work includes constructing curb and gutter sections according to the typical sections shown on the plans, following the lines and grades established by the Engineer.

MATERIALS: Prepare a paving construction plan that includes the concrete mix design, construction methods, and equipment details for mixing, placing, finishing, curing, and lighting.

CONSTRUCTION: Submit the construction plan for approval before starting pavement operations. The plan should detail the location, sequence, and methods for constructing leaveouts as shown on the plans or required by the Contractor's operations. Any revisions to the plan must be approved by the Engineer.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by the linear foot of completed curb and gutter. Payment includes all materials, labor, and procedures necessary for construction, including the approved construction plan, equipment, and any miscellaneous materials required.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 319: ADJUST WATER VALVE

This item involves adjusting water valves as specified in NCTCOG 502.6. gate valves ranging from 3 inches to 48 inches must conform to AWWA Standards C500 for Metal-Seated Gate Valves, with any specified changes or alternatives.

MATERIALS: Materials must comply with NSF Standard 61 for Drinking Water System Components. Smaller valves should be supported with concrete as detailed in the plan's appurtenance sheets.

CONSTRUCTION: Adjust water valves according to the specifications and ensure compliance with design data and tests as shown in the plans and contract documents.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by each valve adjusted. Payment includes all materials, labor, and procedures necessary to adjust the water valve according to the specified standards and requirements.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 320: ADJUST MANHOLE TO GRADE

This item involves adjusting manholes to the required grade as specified in NCTCOG 502.1. Manholes must be fabricated in various configurations to meet the specific needs of water, wastewater, or stormwater systems. Adjustments are made using risers to align access covers and frames to the final grade.

MATERIALS: Adjustment risers may be concrete, polyethylene, metal, rubber, or other materials approved by the OWNER. They must meet impact and loading requirements of the AASHTO Standard Specification for Highway Bridges. The CONTRACTOR must verify dimensions of existing frames and covers to ensure proper fit before fabricating adjustment components.

CONSTRUCTION: Installed grade adjustment risers and assemblies must fit within existing castings without interference, remain immobile, and provide a watertight seal. Manhole lids must have full bearing on the inner rings.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order

from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by each manhole adjusted. Payment includes all materials, labor, and procedures necessary to adjust the manhole to the specified grade, ensuring a proper fit and watertight seal.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 321: ADJUST TRAFFIC GROUND BOX

This item involves constructing, furnishing, and installing ground boxes of various types and sizes as specified in TxDOT Item 624. The work includes installing ground boxes complete with lids, as shown on the plans, using new materials.

MATERIALS: Materials must conform to the plans, with precast concrete ground boxes, cast-in-place boxes, and aprons meeting Item 421, "Portland Cement Concrete," and Item 440, "Reinforcing Steel." Precast polymer concrete ground boxes should be made from reinforced polymer concrete with borosilicate glass fiber, catalyzed polyester resin, and aggregate. Ground boxes must withstand a 6800-kilogram load applied over a 250mm x 250mm area.

CONSTRUCTION: Install ground boxes according to plan details, ensuring proper alignment and stability. Provide a concrete apron if specified.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by each complete ground box installed. Payment includes all materials, labor, excavation, backfilling, construction, installation, concrete aprons, reinforcing steel, and any necessary tools and equipment.

BID ITEM 322: CONCRETE STREET HEADER

This item governs the construction of portland cement concrete street headers in accordance with TxDOT Item 360 "Concrete Pavement." The work includes constructing concrete headers on a prepared subgrade or subbase, conforming to the specified lines, grades, and typical sections in the project plans.

The contractor must submit a detailed paving construction plan for approval, which includes the mix design, construction methods, and equipment descriptions. All materials used must comply with pertinent items such as Item 421 "Portland Cement Concrete" and Item 440 "Reinforcing Steel." Equipment must be maintained in good condition and approved by the Engineer before construction begins.

Concrete should be placed using forms or a slipform paver, ensuring minimal segregation and rehandling. The curing process requires a minimum of 72 hours using membrane curing as specified.

Payment for this item will be at the contract unit price per linear feet. This price includes the cost of materials, labor, equipment, and any incidentals necessary to complete the work according to the specifications. All work must comply with the requirements outlined in TxDOT Item 360 to ensure the quality and durability of the concrete pavement.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 323: SIDEWALK SPANNING FLUME

This item involves the construction of a sidewalk spanning flume in accordance with TxDOT Item 360 "Concrete Pavement." The work includes building the flume on a prepared subgrade or subbase, following the specified lines, grades, and typical sections in the project plans.

The contractor is required to submit a paving construction plan for approval, detailing the mix design, construction methods, and equipment to be used. All materials must meet the requirements of relevant items such as Item 421 "Portland Cement Concrete" and Item 440 "Reinforcing Steel." Before commencing construction, all equipment must be maintained in good condition and approved by the Engineer.

Concrete placement should be executed using forms or a slipform paver to minimize segregation and rehandling. The concrete must be cured for at least 72 hours using the specified membrane curing method.

Payment for this item will be at the contract unit price per unit. This price covers all materials, labor, equipment, and incidentals necessary to complete the work as specified. Compliance with TxDOT Item 360 is mandatory to ensure the quality and durability of the concrete structure.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 324: PERMANENT ASPHALT REPAIR FOR FIG 15P-1 DETAIL

This item involves the permanent repair of asphalt pavement as per the specifications outlined in TxDOT Item 360 "Concrete Pavement." The work requires constructing the repair on a prepared subgrade or subbase, adhering to the lines, grades, and details shown in Figure 15P-1 of the project plans.

The contractor must submit a detailed paving construction plan for approval, including the mix design, construction methods, and equipment descriptions. All materials must comply with relevant items such as Item 300 "Asphalts, Oils and Emulsions" and Item 421 "Portland Cement Concrete." Equipment must be in good condition and approved by the Engineer before starting construction.

Concrete placement should be executed using forms or a slipform paver to minimize segregation and rehandling. The concrete must be cured for at least 72 hours using membrane curing as specified.

Payment for this item will be at the contract unit price per square yard. This price includes all materials, labor, equipment, and incidentals necessary to complete the work according to the specifications. Compliance with TxDOT Item 360 ensures the repair's quality and durability.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item.

BID ITEM 325: TREE PROTECTION W/6' CHAIN LINK FENCE

This item involves the installation of a 6-foot chain link fence to protect trees during construction activities, adhering to the specifications outlined in TxDOT Item 361 "Full-Depth Repair of Existing Concrete Pavement." The work includes erecting the fence around designated trees to prevent damage from construction operations.

The contractor must ensure the fence is installed securely and maintained throughout the project duration. Materials used must conform to the pertinent requirements and be approved by the Engineer. The fence should be positioned according to the plans, providing an effective barrier to safeguard the trees.

Payment for this item will be at the contract unit price per linear foot of fencing. This price includes all materials, labor, equipment, and incidentals necessary to complete the work according to the specifications. Compliance with TxDOT Item 361 ensures the protection of the trees and prevents any damage during the construction process.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are

included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item.

BID ITEM 326: TRUNCATED DOMES

This item involves the installation of truncated domes on sidewalks as per TxDOT Item 531 "Sidewalks." The work includes constructing concrete sidewalks with truncated domes on an approved subgrade, foundation, or finished surface, following the lines, grades, and details established by the Engineer.

All materials must conform to pertinent items such as Item 360 "Concrete Pavement" and Item 421 "Portland Cement Concrete." The concrete used shall be Class "A" unless specified otherwise. Construction requires shaping the subgrade to the specified line, grade, and cross section, and placing reinforcing steel as shown on the plans.

Sidewalks with truncated domes will be constructed in sections, with premolded or board joints placed vertically between sections. The completed work must be cured for a minimum of 72 hours using approved methods.

Payment for this item will be at the contract unit price per square foot, which includes all materials, labor, equipment, and incidentals necessary to complete the work in compliance with the specifications.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item.

BID ITEM 327: SIDEWALK CURB

This item involves the construction of sidewalk curbs using portland cement concrete in accordance with TxDOT Item 360 "Concrete Pavement." The work includes constructing the curb on a prepared subgrade or subbase course, following the specified lines, grades, and details in the project plans.

The contractor must submit a paving construction plan for approval, detailing the mix design, construction methods, and equipment. All materials must comply with pertinent items such as Item 421 "Portland Cement Concrete" and Item 440

“Reinforcing Steel.” Equipment must be in good condition and approved by the Engineer.

Concrete placement should ensure minimal segregation and rehandling. Curb joints will be constructed as per specifications, ensuring alignment and grade. Curing must last at least 72 hours using approved methods.

Payment for this item will be at the contract unit price per linear foot. This price includes all materials, labor, equipment, and incidentals necessary to complete the work according to the specifications. Compliance with TxDOT Item 360 ensures the quality and durability of the sidewalk curb.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 328: REMOVE & RELOCATE CHAIN LINK FENCE IN PLACE

This item consists of the careful removal, relocation, and reinstallation of existing chain link fence at locations shown on the plans or as directed by the Engineer, in accordance with NCTCOG standard specifications.

MATERIALS: Existing chain link fence components, including fabric, posts, rails, fittings, and hardware, shall be salvaged and reused to the greatest extent practical. Any damaged or unusable materials shall be replaced with new materials of equal size, gauge, coating, and quality, conforming to applicable standards.

CONSTRUCTION: The existing fence shall be carefully dismantled to prevent damage to reusable materials. Fence posts shall be removed, and post holes backfilled and compacted as required. The fence shall be relocated and reinstalled in the new alignment, to the same height and configuration as existing, unless otherwise shown on the plans. New post holes shall be excavated, posts set plumb and aligned and embedded in concrete. Chain link fabric shall be stretched and securely fastened to posts and rails. The completed fence shall be straight,

uniform, and free of defects. All disturbed areas shall be restored to original or better conditions.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement shall be by the linear foot of fence removed and relocated. Payment shall be full compensation for removal, salvage, relocation, reinstallation, replacement materials, concrete, labor, equipment, tools, site restoration, and all incidentals necessary to complete the work in accordance with the specifications.

BID ITEMS 400 to 403: REINFORCED CONCRETE PIPE CLASS III (VARIOUS SIZES)

This item involves furnishing and installing reinforced concrete pipe (RCP) in accordance with TxDOT Item 464 "Reinforced Concrete Pipe." The RCP will be used for various applications such as culverts and storm drains, conforming to ASTM C 76 standards for Circular Pipe Class III.

SIZES AND SPECIFICATIONS:

18" RCP Class III
24" RCP Class III
30" RCP Class III
36" RCP Class III

Each pipe will be machine-made or cast, ensuring uniform placement and compaction of concrete. The installation will follow the specified design, including proper alignment, grade, and jointing methods using materials such as mortar, rubber gaskets, or pre-formed flexible joint sealants.

CONSTRUCTION:

Excavation and Bedding: Excavate, shape, bed, and backfill according to Item 400. Ensure proper bedding and alignment.

Laying Pipe: Install pipes starting from the outlet end, ensuring alignment and tight joints.

Jointing: Use appropriate methods for sealing joints to ensure watertightness.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order

from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item will be at the contract unit price per linear foot. This price includes all materials, labor, excavation, backfill, and incidentals necessary to complete the work. Excavation, shaping, bedding, and backfill will be compensated under Item 400. Any protection methods for excavations greater than 5 feet deep will be paid under Item 402 or Item 403.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEMS 404 & 405: STANDARD STORM INLETS (5' AND 10')

This item involves the construction of standard storm inlets, both 5-foot and 10-foot, in accordance with City Standard Details and TxDOT Specification 465.

SPECIFICATIONS:

5' Storm Inlet

10' Storm Inlet

All inlets must be cast-in-place using Class "C" concrete, with a minimum of 5 sacks per cubic yard cement content and a compressive strength of 3,000 psi at 28 days. The depth of inlets shall be adjusted according to plan elevations at no additional cost.

CONSTRUCTION: The construction of the storm inlets requires high-quality materials. Class "C" concrete is used, ensuring a minimum of 5 sacks per cubic yard and achieving a compressive strength of 3,000 psi when tested at 28 days. Reinforcing steel is incorporated to provide additional structural integrity. Proper formwork is essential to ensure the inlets are cast in place accurately. The construction process includes excavation, backfill, and the installation of ring and lid components.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for standard storm inlets will be on a "per each" basis. This includes all materials, labor, excavation, backfill, formwork, concrete, reinforcing steel, ring and lid, and any incidental tasks such as existing curb removal and replacement.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 406: TRENCH EXCAVATION PROTECTION

The provisions of Item 107.20.3 of the COG Specifications shall govern for "Trench Safety". A trench safety plan shall be submitted for approval as required under **"SHOP DRAWINGS, PRODUCT DATA AND SAMPLES"** of these technical specifications. All trenches must be backfilled at the end of the workday. No open trenches will be allowed outside of working hours. The cost of dewatering, if necessary, shall be incidental to this Bid Item.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear foot.

EARTHWORK CONSIDERATIONS: This item is 'unclassified' and shall include the removal, handling, and disposal of all materials encountered, including rock, buried debris, or stable/unstable soil, with no additional compensation for material type. Moisture conditioning, compaction, and final grading are subsidiary.

BID ITEM 407: TXDOT CH-FW-0 (2:1)

This item involves furnishing, constructing, and installing the TXDOT CH-FW-0 (2:1) headwalls and wingwalls for drainage structures as per TxDOT Specification 466.

MATERIALS: Materials must comply with Item 420, "Concrete Structures," Item 421, "Hydraulic Cement Concrete," and Item 440, "Reinforcing Steel." Use Class C concrete unless otherwise specified, ensuring durability and strength. For precast units, proper fabrication and marking are required, including lifting holes and identification details.

CONSTRUCTION: Construction includes excavation, shaping, bedding, and backfilling as per Item 400. Precast units must be accurately placed on stable foundations, and lifting holes should be filled and cured. Ensure proper connections to existing structures according to the plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment is made on a per each basis for the installation of headwalls and wingwalls. This includes the full scope of work, such as constructing, furnishing, transporting, and installing the units, as well as any necessary connections, excavation, backfilling, and associated labor and materials.

BID ITEMS 408 & 409: JUNCTION BOXES (VARIOUS SIZES)

This item covers the construction of 4'x4' and 6'x6' junction boxes, classified as manholes, in accordance with TxDOT Specification 465.

MATERIALS: Materials must comply with Items 420, 421, 440, 442, and 471, ensuring high-quality concrete and reinforcing steel. Class "A" concrete is specified unless stated otherwise. Mortar should consist of one part portland cement and two parts clean sand, with optional lime not exceeding 10% of the dry mix.

CONSTRUCTION: Construction involves completing the junction boxes to the specified dimensions, using either cast-in-place or precast methods. All concrete work follows Item 420, with forms required for concrete walls. Junction boxes must be constructed to the depth specified in the plans, and backfilled according to Item 400.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment is made on a per each basis for the junction boxes. This includes all materials, labor, excavation, backfill, concrete, reinforcing steel, and any necessary frames, grates, rings, and covers. The work includes all excavation and backfill, as well as any incidentals required to complete the construction.

BID ITEM 410: CONCRETE FLUME

This item involves constructing concrete flumes in accordance with TxDOT Item 420, "Concrete Structures."

Construct concrete flumes as specified in the plans, ensuring proper alignment and installation for effective water flow control.

MATERIALS: Conform to Item 421, "Hydraulic Cement Concrete," using the class specified in the plans. Provide reinforcing steel following Item 440 requirements. Use materials complying with DMS-6310, ensuring correct dimensions and specifications.

CONSTRUCTION: Before starting, obtain approval for construction methods. Ensure proper preparation of surfaces, placement of reinforcement, and handling of concrete. Maintain specified temperature limits during placement and ensure proper curing as outlined in the guidelines. For expansion joints, prevent bridging of concrete around joint materials and ensure joints conform to plan details.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by the square

yard of completed flume. Payment includes all materials, labor, excavation, formwork, reinforcement, concrete placement, finishing, and curing necessary to complete the work.

CONCRETE/PAVING CONSIDERATIONS: Includes all formwork, reinforcement, joints, dowels, finishing, curing, and subgrade preparation. Any concrete removed or damaged outside the designated limits shall be replaced at the contractor's expense.

BID ITEM 411: STONE RIPRAP (12") (THICK) (GROUTED) (W/ FILTER FABRIC)

The provisions of Item 803.3 of the COG Specifications shall govern for installation of stone riprap.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per square yard.

BID ITEM 500: INSTALL SMALL SIGN AND NEW POST ASSEMBLY

For locations shown on the Plans, install the proposed sign panel(s) and post. Sign posts shall be in accordance with TxDOT Specification 636 and 644 and TxDOT Details. Refer to the Plans for proposed sign locations.

Signage shall be installed in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), latest revision. The City of North Richland Hills reserves the salvage rights on surplus/replaced signage. New Street signs will be provided by the CONTRACTOR to be mounted and installed by the CONTRACTOR.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing,

grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This item shall be on the bases of price bid per each sign post installed. Any repairs necessary due to damage caused while installing signs and sign panels be subsidiary to this bid item.

BID ITEMS 501 to 507: PAVEMENT MARKINGS

Pavement markings shall be performed in accordance with TxDOT Standard Specifications and the Manufacturer recommendations. This item shall consist of the work, labor, materials, and equipment necessary to install pavement markings as shown on the Plans in accordance with the Texas Department of Transportation Items 666, 672 and 678. All work, labor, materials, and equipment required for surface preparation, installation of pavement markings, and pavement marking sealant shall be subsidiary to each pavement marking bid item placed. Each pavement marking shall be thermoplastic.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Refer to Bid Unit Price Form.

BID ITEM 600: ABANDON WATER LINE

Abandon existing water line in accordance with NCTCOG Specification 701.2 and the city detail shown in Plans (Figure 9W).

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear feet.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEMS 601 & 602: REMOVE WATER LINE AND GATE VALVE

Remove and salvage water line and gate valve in accordance with NCTCOG Specification 701.2 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 603: 8" AWWA C900 PVC DR18 WATER PIPE

Install water pipe in accordance with NCTCOG Specification 501.14 and the Plans. All mains installed by direct bury shall be laid with #14 AWG tracer wire with blue 30 mil HDPE coating. All mains installed by directional boring shall include #12 AWG copper clad steel wire.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear foot and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

BID ITEM 604: 8" RESILIENT SEATED GATE VALVE W/BOX

Install Resilient Seated Gate Valve w/Box in accordance with NCTCOG Specification 502.6 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 605: FIRE HYDRANT ASSEMBLY

Install Fire Hydrant Assembly in accordance with NCTCOG Specification 502.3 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 606: INSTALL 1" WATER METER AND SERVICE CONNECTION

Adjust water meter and install water service connections in accordance with NCTCOG Specification 502.10 and the Plans. Existing water meters are to be reused and reestablished at proposed meter boxes, as shown on the plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 607: CONNECTION TO EXISTING WATER LINE

Connect proposed water line to existing water line in accordance with NCTCOG Specification 502.10 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 608: REMOVE/ABANDON EX 6" SANITARY SEWER

Abandon existing sewer line in accordance with NCTCOG Specification 701.2 and the city detail (Figure 5S) shown in Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear feet.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 609: 8" SANI SEWER PVC SDR 35 (TRENCH)

Install sanitary pipe in accordance with NCTCOG Specification 501.17 and the Plans.

All ditchlines shall be mechanically tamped with the cost incidental to this bid item. Backfill shall be placed in 6"-8" loose lifts (12" maximum) and shall be compacted to 95% of the maximum dry density as defined by ASTM D698 (Standard Proctor) procedures under existing and proposed pavement, and to 90% Standard Proctor procedures elsewhere. Densities shall be taken every one (1) lift at staggered hundred feet increments.

The cost of cutting, plugging, and abandoning existing sanitary sewer lines is incidental to the unit cost of pipe. The ends of all abandoned lines shall be plugged with an adequate quantity of concrete to form a tight closure.

Install clay dams or trench dams as required downstream of all storm drain crossings, or when groundwater is detected during manhole installation. The dam shall be located upstream of the manhole, downstream from the storm drain crossing, and just upstream of sanitary sewer manholes located near street low points. Clay dams or trench dams shall be considered subsidiary to this item.

All sanitary sewer lines shall be installed with a trace wire.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear foot and shall include excavation, embedment, backfill, tracer wire, testing, materials, equipment, labor, tools and incidentals necessary to complete work.

BID ITEM 610: STANDARD SANITARY SEWER MANHOLE (4' DIAMETER)

Standard sanitary sewer manholes must be furnished and installed in accordance with Items 502.1 of the NCTCOG Specifications and Plans. This item includes the excavation, forming, reinforcing steel, concrete, and any other materials or labor necessary to install the manhole up to 5 feet deep and connect the pipes as detailed on the plans. This item includes the materials and labor required to grout the floor of the manhole so all sewage inside the manhole drains to the outflow pipe and the manhole does not retain sewage. The manhole shall be capable of supporting an HS20 direct vehicle load or greater. Where there is a conflict between the proposed manhole and an existing utility to be abandoned or removed the removal of the existing utility shall be considered subsidiary to the installation of the proposed manhole. The unit price bid includes all compensation due for this item.

Vacuum testing of manholes shall be done in accordance with NCTCOG Specification 502.1 and the Plans. Vacuum testing shall be considered subsidiary to this item.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each and shall include excavation, materials, backfill, manhole tie-ins and vacuum testing.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 611: CONNECTION TO EXISTING 8" MANHOLE

Connect proposed sanitary sewer line to existing manhole in accordance with NCTCOG Specification 502.10 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each and shall include all required excavation, removal, backfill, labor, materials, equipment, and appurtenances to make the connection.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 612: INSTALL SEWER SERVICE (SHORT AND LONG)

Install sanitary sewer services or adjust sanitary sewer service to connect to existing in accordance with NCTCOG Specification 502.10 and the Plans. Any damage to existing cleanouts shall be replaced at no additional pay.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEM 613: CLSM ENCASEMENT

Install Controlled Low Strength Material (CLSM) Encasement in accordance with TxDOT Specification 401 and the Plans. CLSM backfill shall be utilized in place of “pea gravel or #10 chat” and installed to the same limits as shown in city backfill details.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear foot.

BID ITEM 614: TEMPORARY ASPHALT TRENCH REPAIR

This item involves repairing localized failures of existing flexible pavement structures as specified in TxDOT Item 351.

This work addresses repairs of stabilized or unstabilized base sections surfaced with asphaltic concrete or asphalt surface treatment. Repairs are made to the specified depth, with a minimum repair dimension of three feet in both length and width.

MATERIALS: Materials must meet specified quality standards and include flexible base, stabilized base, asphaltic concrete pavement, surface treatments, and prime coats. Existing materials removed are not to be reused unless specified.

CONSTRUCTION: Begin by breaking or scarifying the existing pavement and excavating to specified dimensions, leaving neat vertical faces. Prepare the subgrade by filling any holes, ruts, or depressions with approved material, then wet, reshape, and compact it. Mix and place the base material in uniform layers, ensuring proper compaction. Cure the base material as approved, allowing traffic once the mixture hardens sufficiently. Finally, clean the base thoroughly and apply the specified surfacing material, such as asphaltic concrete pavement or surface treatment.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by the square yard of completed section for the specified depth. Payment covers all materials, labor, and procedures necessary for the repair, including scarifying, spreading, compaction, and surfacing. Silt-fencing protection, if required, will be paid under the relevant specification item.

BID ITEM 615: TRENCH EXCAVATION PROTECTION

This item involves providing excavation protection for trenches over five feet deep, as specified in TxDOT Item 402. Trench excavation protection is required for narrow excavations where the depth exceeds the width, and the width is not greater than 15 feet. This also applies when forms or structures reduce the excavation dimension to 15 feet or less.

CONSTRUCTION: Follow the provisions of Part 1926, Subpart P-Excavations, Trenching, and Shoring of OSHA's Standards and Interpretations for all trench excavation protection.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement is by the linear foot along the centerline of the trench where the depth exceeds five feet. Payment is made at the unit price bid per linear foot for "Trench Excavation Protection." This includes all excavation and backfill, shoring, sheeting, bracing, dewatering, diversion of water, jacking, jack removal, and all necessary labor, materials, tools, equipment, and incidentals. No payment is made for excavation protection required due to optional design choices.

EARTHWORK CONSIDERATIONS: This item is 'unclassified' and shall include the removal, handling, and disposal of all materials encountered, including rock, buried debris, or stable/unstable soil, with no additional compensation for material type. Moisture conditioning, compaction, and final grading are subsidiary.

BID ITEM 616: INSTALL 2" WATER METER AND SERVICE CONNECTION

Adjust water meter and install water service connections in accordance with NCTCOG Specification 502.10 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEMS 700 & 701: FURNISHING AND PLACING TOPSOIL AND BLOCK SODDING

Topsoil and Sod shall be installed per TxDOT Specification Items 160 and 162. The type of sod placed shall match the type of grass in the adjacent lawn area. A 4-inch layer of topsoil, furnished in accordance with Item 162, shall be placed on all areas to be sodded. Suitable on-site topsoil may be utilized, or topsoil shall be imported to achieve 4-inches. Fertilizer shall be furnished in accordance with Item 166 and applied at time of initial sodding only. Fertilizer shall be considered subsidiary to Block Sod placement. Watering during construction will be considered subsidiary to block sodding and will be done in accordance with Item 168. Watering shall be done until accepted by the owner and the City.

The topsoil shall be uniformly distributed on the designated area(s) and it shall be a minimum of 4 inches (75 mm) deep after firming. Spreading shall be performed in such a manner that sod installation can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation

of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed for turfgrass sod installation.

After the topsoil has been spread and the final grade approved, it shall be cleared of all grade stakes, surface trash or other objects that would hinder installation and/or maintenance of turfgrass sod and other plantings. Paved areas over which hauling operations are conducted shall be kept clean and any soil which may be brought upon the surfacing shall be promptly removed. The wheels of all vehicles shall be kept clean to avoid tracking soil on the surfacing of roads, walks or other paved areas.

The first row of turfgrass sod shall be laid in a straight line, with subsequent rows placed parallel to and tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the pieces are not stretched or overlapped and that all joints are butted tightly to prevent voids that would cause air drying of the roots.

The installation contractor shall water the turfgrass sod immediately after transplanting to prevent drying. As sodding is completed in any one section, the entire area shall be lightly rolled. It shall then be thoroughly watered to a depth sufficient to ensure the underside of the new sod pad and soil immediately below the pad are thoroughly wet. The general contractor shall be responsible for having adequate water available at the site prior to and during installation.

The general contractor shall supply adequate water to the site. The single-most important factor in the successful rooting of newly installed turfgrass sod is adequate, regular watering. Watering should begin immediately after installation. The amount of water required will vary depending upon season, weather, temperature, wind, slope and turfgrass variety. The general contractor shall designate the party responsible to ensure adequate water supply and application.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Topsoil shall be measured per cubic yard. Block sodding shall be measured and paid per square yard of block sod installed. Both items include all labor, equipment and materials necessary to complete the work including preparation of topsoil, watering, fertilizing and

maintenance until accepted by the property owner and the City. The cost of fertilizer and watering is incidental to the unit price of sodding.

BID ITEMS 702 & 703: SILT FENCE AND INLET PROTECTION

This item involves the installation, maintenance, and removal of silt fences and inlet protection in accordance with TxDOT Item 506.

MATERIALS: Materials for silt fences include net-reinforced woven geotextile fabric, wood or steel posts, and galvanized wire for reinforcement. Inlet protection materials must meet specific requirements as detailed in the plans.

CONSTRUCTION METHODS: Implement control measures before starting construction. Install silt fences near the downstream perimeter of disturbed areas and inlet protection at specified locations. Maintain these devices to ensure functionality, repairing or replacing as necessary. Remove sediment and debris regularly and dispose of them according to regulations. Upon completion, remove all devices and stabilize disturbed areas.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Silt Fence is measured by the linear foot and Inlet Protection by each unit. Payment is made at the unit price bid for "Silt Fence (Install/Maintain/Remove)" and "Inlet Protection (Install/Maintain/Remove)." This includes all materials, labor, installation, maintenance, removal, and any incidentals necessary to complete the work.

BID ITEMS 800 to 805: SITE FURNISHINGS

This item involves the installation of various site furnishings as specified in Section 12 93 00. The work includes the installation of tree grates, lighted boards, benches, and trash receptacles. These items are to be integrated into the site as per the plans and specifications.

MATERIALS: All site furnishings must be obtained from the manufacturer specified or approved equal. Colors and specific materials should be confirmed with the owner as indicated in the plans. Tree grates, tactile warning plates, lighted bollards, benches, and trash receptacles must adhere to the drawing materials schedule or be an approved equal.

CONSTRUCTION: Metal components should be fabricated to required shapes with smooth, consistent finishes. Weld connections must be continuous and polished to match adjoining surfaces. Installation must follow the manufacturer's instructions, ensuring that all furnishings are level, plumb, and securely anchored. Post settings should be cast in concrete footings, protected from splatter, and verified for alignment.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment will be made per each installed furnishing, covering all materials, labor, and procedures necessary for the complete installation, including any finishing and adjustments needed to meet the specified requirements.

BID ITEM 806: CLUSTER MAILBOX

~~This item involves the installation of a United States Postal Service (USPS) approved Cluster Box Unit (CBU) on a properly prepared reinforced concrete pad.~~

~~CONSTRUCTION: The work includes excavating and leveling the site to receive the concrete pad, placing and finishing the concrete to provide a stable, durable base, and anchoring the pad in accordance with the mailbox manufacturer's and USPS installation requirements. The CBU shall be installed plumb and level on the concrete pad, with anchors and fasteners as recommended by the manufacturer, ensuring stability and proper alignment. The location of the CBU shall be approved by the local USPS Growth Manager or designee prior to installation and shall provide safe, unobstructed access for mail carriers and customers, including compliance with ADA accessibility requirements. After installation, the USPS master access lock shall be installed by the local USPS representative.~~

~~MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed~~

~~areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment for this work shall be based on each complete cluster mailbox assembly installed with foundation, including all labor, materials, tools, and equipment necessary to provide a fully functional, USPS compliant mailbox unit.~~

BID ITEM 807 & 808: 4" DUAL WALL PERFERATED PIPE FOR TREE GRATES AND 4" DUAL WALL SOLID PIPE FOR TREE GRATES

These items involve the furnishing and installation of 4" dual wall drainage pipe for the tree grates and all incidentals.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per each.

INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

BID ITEMS 900 to 903: PLANTS

This item involves the installation and maintenance of trees, ornamental grasses, shrubs, and ground cover as specified in Section 32 93 00. The work includes planting a variety of vegetation to create a cohesive and aesthetically pleasing landscape.

MATERIALS: All plant materials must be nursery-grown and comply with ANSI Z60.1 standards. Trees and shrubs should have healthy root systems and be free of diseases and defects. Use container-grown trees with root balls measured from the top of the root ball beginning at the root flare. Topsoil should be reused from on-site sources, if suitable, and cleaned of debris. Compost must be well-composted, stable, and weed-free. Slow-release fertilizer should have a composition of 20% nitrogen, 10% phosphorus, and 10% potassium. Organic mulch should be made from ground or shredded bark. The planting soil mix should include 3 inches of loose compost tilled into 6 inches of topsoil for a total prepared soil depth of 9 inches.

CONSTRUCTION: Prepare planting beds by removing stones and debris. Grade beds to a smooth finish. Excavate pits for trees and plants with sloped sides and ensure the root flare is visible before planting. Set plants plumb and centered with the root ball slightly above the finish grade. Apply organic mulch around plants, keeping it away from trunks or stems. Prune only dead or broken branches.

MAINTENANCE: Maintain plantings by watering, weeding, fertilizing, and pruning as needed to establish healthy growth. Protect plants from damage during operations and replace any damaged plantings.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment are based on each type of plant installed and maintained, covering all materials, labor, and procedures necessary to establish a healthy landscape.

BID ITEM 904: SOD

This item involves the installation and maintenance of sod as specified in Section 32 92 00. The work includes laying sod over designated areas to establish a uniform and healthy lawn surface.

MATERIALS: Sod should be solid and placed as indicated on the drawings. Topsoil must be reused from on-site sources, cleaned of debris, and tested for suitability. Organic soil amendments like compost must be well-composted, stable, and free of weeds. Use a slow-release fertilizer with a composition of 20% nitrogen, 10% phosphorus, and 10% potassium.

CONSTRUCTION: Prepare the lawn area by grading and removing debris. Finish grading should result in a smooth surface. Moisten the soil before planting and restore any disturbed areas. Roll sod over the areas in staggered joints, using a manual roller after watering. Fill joints with fine sand and re-roll after the first week.

MAINTENANCE: Maintenance includes watering, fertilizing, weeding, mowing, and replanting as necessary. Ensure a smooth and uniformly grown lawn, mowing only when the grass is tall enough and removing no more than one-third of the grass height at a time.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment are based on the square yard of sod installed and maintained, covering all materials, labor, and procedures necessary to achieve a satisfactory turf.

BID ITEM 905: BED PREP

This item involves the furnishing, placement, and preparation of planting soil mix as specified in Section 32 93 00. The work includes preparing planting areas and placing a uniform, fertile soil medium suitable for trees, shrubs, ground covers, and ornamental grasses.

MATERIALS: Planting soil shall consist of a blend of topsoil, well-decomposed organic matter such as compost or peat moss, and sand as needed to improve drainage. Soil shall be free of subsoil, clay lumps, stones larger than one inch, roots, debris, and contaminants. Organic amendments must be stable, weed-free, and non-toxic. Fertilizer shall be slow-release, applied at rates indicated by soil tests or plans, and soil pH shall be adjusted to 6.0–7.5. Soluble salts shall not exceed 2.0 mmhos/cm.

CONSTRUCTION: Prepare planting areas by removing debris, weeds, and unsuitable materials. Scarify subgrade to a depth of six inches to reduce compaction and improve root growth. Blend planting soil thoroughly before placing and place in layers not exceeding six inches. Lightly firm each layer to remove air pockets without excessive compaction and grade the surface to a smooth, even finish sloped for proper drainage. Water soil after placement to settle and maintain uniform moisture. Protect prepared areas from erosion, compaction, and damage until all plantings are complete.

MAINTENANCE: Maintain planting soil by keeping it adequately moist, controlling erosion, and restoring any disturbed areas prior to planting. Ensure the soil remains loose, level, and free of debris to support healthy plant establishment.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to

complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment will be based on square foot of planting soil mix placed, including all labor, materials, amendments, placement, grading, and watering necessary to achieve a complete and satisfactory planting soil system.

BID ITEMS 1000 to 1006: PLANTING IRRIGATION

This item involves the installation of an automatic irrigation system, including piping, valves, sprinklers, specialties, controls, and wiring, as specified in Section 32 84 00. The work includes setting up a potable water irrigation system to ensure efficient distribution to planting areas.

MATERIALS: The system includes PVC pipes and fittings, with lateral piping downstream from control valves to sprinklers and drain valves. Use PVC ball valves for general duty and plastic automatic control valves with 24-V AC solenoids. Sprinklers should have plastic housing and corrosion-resistant parts. Quick-couplers should be factory-fabricated from bronze or brass.

CONSTRUCTION: Install pipes and wiring in sleeves under sidewalks and paving. Ensure proper cover over piping: 18 inches for main piping and sleeves, and 12 inches for lateral piping. Install piping free of sags and bends, ensuring parallel placement for servicing. Control valves should be placed in control-valve boxes, and sprinklers installed after flushing the system. Position sprinkler heads at least 2 inches from paved surfaces. Install control cables with proper separation from irrigation piping.

MAINTENANCE AND TESTING: Conduct leak tests and operational tests for the system, adjusting controllers and valves as necessary. Replace any damaged components and adjust sprinklers to be flush with the finish grade.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment are

based on the completed installation, covering all materials, labor, and procedures necessary for a fully operational irrigation system.

BID ITEM 1100: DEMOLITION OF EXISTING STREET LIGHT

Remove light pole in accordance with NCTCOG Specification 203.1 and the Plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Refer to the Unit Price Bid Form.

BID ITEM 1101: 200A SERVICE PEDESTAL

This item involves the installation of 200A service Pedestal , as specified in Technical specification 260501(Electrical Service).

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This item shall be measured on a per (EA) electrical service installed. The price is full compensation for all material, labor, equipment, tools and superintendence necessary to complete the work.

BID ITEM 1102: GROUND BOXES (TRAFFIC RATED) W/ APRON

This item involves the installation of Ground Boxes (Traffic Rated) w/ apron, as specified in Technical specification 344135(Ground Box).

MATERIALS: Refer to TxDOT item 624. All ground boxes used for lighting shall have "LIGHTING" and "DANGER-HIGH VOLTAGE" imprinted on the cover. All ground boxes used for signals shall have "SIGNALS" and "DANGER-HIGHVOLTAGE" imprinted on the cover.

INSTALLATION: Refer to TxDOT Item 624.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This item shall be measured on a per Each (EA) basis for each Ground Box, complete in place. All work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Ground Box," of the size and type specified. This price is full compensation for all material, labor, equipment, tools and superintendence necessary to complete the work, including installing the ground box and concrete apron.

BID ITEM 1103: IN-GRADE RECEPTACLE BOX

This item involves the installation In-Grade Receptacle Box, as specified in Technical specification 344135(Ground Box).Additional requirements are noted and shown in plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This item shall be measured on a per Each (EA) basis for each In-Grade Receptacle Box, complete in place. All work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "In-Grade Receptacle Box," of the size and type specified. This price is full compensation for all material, labor, equipment, tools and superintendence.

BID ITEM 1104: GFCI PEDESTAL

This item involves the installation of GFCI Pedestal, as specified in Technical specification 344135(Ground Box) & 260501 (Electrical Service). Additional requirements are noted and shown in plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This item shall be measured on a per Each (EA) basis for each GFCI Pedestal, complete in place. This price is full compensation for all material, labor, equipment, tools and superintendence.

BID ITEM 1105: 72" X 24" STREET LIGHT FOUNDATION

This item involves the construction of a reinforced concrete foundation for a street light pole, as specified in TxDOT Item 610. The work includes excavation, placement of reinforcement, installation of anchor bolts, concrete placement, and finishing to provide stable, durable support for street lighting.

MATERIALS:

Concrete shall be Class A, complying with TxDOT Item 421, with a minimum 28-day compressive strength of 3,000 psi. Reinforcing steel shall be deformed, Grade 60, and placed according to the plans, with minimum concrete cover of 3 inches. Anchor bolts and inserts shall conform to the sizes, spacing, and embedment requirements shown on the plans. Forms shall be constructed of sound, rigid materials capable of holding concrete in place without deflection. Water used for mixing or curing shall be potable.

CONSTRUCTION: Excavate to the dimensions and depth shown in the plans, ensuring a level and firm bearing surface. Construct forms to the required dimensions and verify alignment. Place reinforcing steel as detailed, maintaining proper spacing and cover. Set anchor bolts accurately using templates, ensuring vertical alignment. Place concrete in a continuous operation, consolidate with mechanical vibrators, and finish the top surface to a smooth, level grade. Cure concrete per TxDOT requirements to ensure proper strength development.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed

areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement and payment will be based on the number of complete street light foundations installed. Payment includes excavation, concrete, reinforcement, anchor bolts, formwork, and all labor, materials, tools, and equipment necessary to provide a complete foundation as specified.

BID ITEMS 1106 to 1110: CONDUITS (VARIOUS TYPES AND SIZES)

This item involves the installation of various types and sizes of conduits, as specified in Technical specification 270500(Conduit).

MATERIALS: All conduit underground for signals and street lighting shall be Schedule 80 gray PVC unless indicated otherwise. Conduit size shall be as shown in the plans. Conduit above ground shall be 2-inch rigid metal, unless otherwise directed by the City. Conduit size shall be as shown in the plans.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This Item shall be measured on a Linear Foot (LF) basis for each Conduit type and size, complete in place. The length is the straight-line distance between the ground boxes, foundations, or pads. The plan quantity will be determined through calculations and will be used for determining final quantity amounts for payment purposes. Payment shall be based on the linear footage shown in the Plan Quantities. No adjustment will be made for minor field variations unless a significant alignment change is ordered in writing by the Engineer. All work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Conduit," of the size and type specified. This price is full compensation for all material, labor, equipment, tools and superintendence necessary to complete the work. Flexible conduit will not be paid for directly but will be subsidiary to pertinent Items. Rigid metallic conduit elbows 1" and larger that are required to be installed on conduit systems will not be paid for directly but will be subsidiary to pertinent Items. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the Bid Form.

BID ITEMS 1111 to 1113: ELECTRIC CONDUCTORS (VARIOUS TYPES & SIZES)

This item involves the installation of Electric Conductors (various types & sizes), as specified in Technical specification 260500(Electric Conductor).

MATERIALS: Refer to TxDOT item 620.

INSTALLATION: Refer to TxDOT Item 620.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This Item shall be measured on a Linear Foot (LF) basis for each single conductor, complete in place. The length is the straight-line distance between the ground boxes, foundations, or pads. All work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "Electric Conductor." This price is full compensation for all material, labor, equipment, tools and superintendence necessary to complete the work. This is a plans quantity measurement Item. The quantity to be paid is the quantity shown in the Bid Form.

BID ITEM 1114: ARC FLASH CALCULATIONS

The provisions of Technical Specification 260501 (Electrical Service), shall apply except as modified or clarified below:

A. No Modifications

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. This item shall be measured on a Lump Sum (LS) basis. This price is full compensation for all material, labor, equipment, tools and superintendence.

BID ITEM 1400: PROJECT CONTINGENCY AS DIRECTED BY OWNER

Project Contingency is provided to be used at the discretion of the OWNER for any unforeseen items. Any work performed without prior authorization from the OWNER shall not be paid under this item. The CONTRACTOR shall include this amount within their bid and understand the intent is not to utilize this item. A maximum contingency amount of \$20,000 is provided for this item. At the completion of the work, funds not utilized in this item shall be removed from the Contract. This pay item can also be used to supplement other pay items that were overrun and deemed necessary for this project success.

MEASUREMENT AND PAYMENT: Payment for contingency work shall be made by the lump sum price agreed on in writing by the OWNER and the CONTRACTOR before said work is commenced. The Work is subject to all other conditions of the contract. The CONTRACTOR will only charge the fraction of the allowance that yields the agreed upon price which will be considered payment in full for all labor, materials, tools, equipment, and incidentals.

BID ITEM 1401: UTILITY CONTINGENCY AS DIRECTED BY OWNER

Utility Contingency is provided to be used at the discretion of the OWNER for unforeseen utility related items. Any work performed without prior authorization from the OWNER shall not be paid under this item. The CONTRACTOR shall include this amount within their bid and understand the intent is not to utilize this item. A maximum contingency amount of \$20,000 is provided for this item. At the completion of the work, funds not utilized in this item shall be removed from the Contract. This pay item can also be used to supplement other pay items that were overrun and deemed necessary for this project success.

MEASUREMENT AND PAYMENT: Payment for contingency work shall be made by the lump sum price agreed on in writing by the OWNER and the CONTRACTOR before said work is commenced. The Work is subject to all other conditions of the contract. The CONTRACTOR will only charge the fraction of the allowance that yields the agreed upon price which will be considered payment in full for all labor, materials, tools, equipment, and incidentals.

BID ITEM 1402: PAVEMENT CONTINGENCY AS DIRECTED BY OWNER

Pavement Contingency is provided to be used at the discretion of the OWNER for unforeseen utility related items. Any work performed without prior authorization from the OWNER shall not be paid under this item. The CONTRACTOR shall include this amount within their bid and understand the intent is not to utilize this item. A maximum contingency amount of \$20,000 is provided for this item. At the completion of the work, funds not utilized in this item shall be removed from the Contract. This pay item can also be used to supplement other pay items that were overrun and deemed necessary for this project success.

MEASUREMENT AND PAYMENT: Payment for contingency work shall be made by the lump sum price agreed on in writing by the OWNER and the CONTRACTOR before said work is commenced. The Work is subject to all other conditions of the contract. The CONTRACTOR will only charge the fraction of the allowance that yields the agreed upon price which will be considered payment in full for all labor, materials, tools, equipment, and incidentals.

BID ITEM 1403: LANDSCAPE CONTINGENCY AS DIRECTED BY OWNER

Landscape Contingency is provided to be used at the discretion of the OWNER for unforeseen utility related items. Any work performed without prior authorization from the OWNER shall not be paid under this item. The CONTRACTOR shall include this amount within their bid and understand the intent is not to utilize this item. A maximum contingency amount of \$20,000 is provided for this item. At the completion of the work, funds not utilized in this item shall be removed from the Contract. This pay item can also be used to supplement other pay items that were overrun and deemed necessary for this project success.

MEASUREMENT AND PAYMENT: Payment for contingency work shall be made by the lump sum price agreed on in writing by the OWNER and the CONTRACTOR before said work is commenced. The Work is subject to all other conditions of the contract. The CONTRACTOR will only charge the fraction of the allowance that yields the agreed upon price which will be considered payment in full for all labor, materials, tools, equipment, and incidentals.

ALTERNATE BID #1

BID ITEM 1200: 8" FLEX BASE SUBGRADE

This item involves the furnishing, placing, shaping, and compacting of an 8-inch flexible base course in accordance with TxDOT Item 247. The work consists of constructing a stable, uniform base on a prepared subgrade using approved flexible base materials.

MATERIALS: Flexible base material shall meet the requirements of TxDOT Item 247, Type A or Type B, unless otherwise specified. Materials shall consist of crushed stone, crushed gravel, crushed slag, caliche, or other approved aggregates, free of organic matter and other deleterious substances. Water used for moisture conditioning shall comply with Item 204, "Sprinkling."

CONSTRUCTION: The process includes preparing the subgrade, pulverizing existing materials, and applying lime either by "Dry Placing" or "Slurry Placing." Mixing and compaction follow, ensuring uniform density and moisture. The material must be compacted using either "Ordinary Compaction" or "Density Control" methods to achieve the specified density. Reworking may be required if the section does not meet standards.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Measurement shall be by the square yard for the specified thickness, as shown in the plans. Payment shall include full compensation for furnishing materials, hauling, placement, shaping, moisture conditioning, compaction, testing, and all labor, equipment, tools, and incidentals necessary to complete the work in accordance with the specifications.

EARTHWORK CONSIDERATIONS: This item is 'unclassified' and shall include the removal, handling, and disposal of all materials encountered, including rock, buried debris, or stable/unstable soil, with no additional compensation for material type. Moisture conditioning, compaction, and final grading are subsidiary.

BID ITEM 1201: EXCAVATION(ROADWAY)

Excavation shall consist of all the required excavation within the alternate bid item 300 as shown on the Plans, the removal, proper utilization or disposal of all excavated material, and the shaping and finishing of all earthwork in conformity with the lines and grades as shown on the Plans or as established by the OWNER. Any usable material from excavation shall be compacted in the areas of the project limits needing fill, and the required compaction testing of this excess material shall be included in this bid item and be completed in accordance with City standards. Excavation (Roadway) with TxDOT Specification 110.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Unclassified Street Excavation shall be measured and paid for by the cubic yard for excavation from its original position, and shall include all materials excavated without regard to the materials encountered. There shall be no compensation for any quantities in addition to

what is provided in the Bid documents unless the lines and grades are changed by the Engineer.

EARTHWORK CONSIDERATIONS: This item is 'unclassified' and shall include the removal, handling, and disposal of all materials encountered, including rock, buried debris, or stable/unstable soil, with no additional compensation for material type. Moisture conditioning, compaction, and final grading are subsidiary.

ALTERNATE BID #2

BID ITEM 1300: 8" AWWA C900 PVC DR18 WATER PIPE (BY BORE)

Install water pipe in accordance with NCTCOG Specification 501.14 and the Plans. All mains installed by directional boring shall include #12 AWG copper clad steel wire.

MEASUREMENT AND PAYMENT: Measurement and payment shall be strictly based on plan quantities unless authorized in advance by a written Change Order from the City Engineer. No additional compensation shall be allowed for varying field conditions, groundwater, or minor utility conflicts. This item shall include all labor, materials, equipment, tools, superintendence, and incidentals necessary to complete the work in accordance with the Plans and Specifications. All required testing, inspections, and certifications as per City and NCTCOG standards are included in this item without additional cost to the City. All site preparation, clearing, grubbing, disposal of surplus or unsuitable materials, and restoration of disturbed areas to original or better condition shall be considered subsidiary to this item unless specifically listed as a separate bid item. Payment for this item shall be at the contract unit price per linear foot and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

UTILITY INSTALLATION: Description includes all necessary trenching, shoring, bedding, backfilling, compaction, dewatering, and surface restoration. For bored items, this includes both the bore and receiving pits, and any necessary grout, casing, or location tracking.

SECTION V

SPECIAL PROVISIONS

SPECIAL PROVISIONS

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SPECIAL PROVISIONS

SP-1: GENERAL

For this contract, the General Provisions (Division 100) of the "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition, adopted in November 2017, with all amendments thereto, shall govern and shall constitute as the Special Provisions except as herein amended, modified or supplemented. Omission of any section from this Project's Contract Documents does not mean that such section is not applicable to this Project. The NCTCOG General Provisions will be referred to as the General Provisions (GP) and will not be physically bound with the other contract documents. Copies may be obtained from the North Central Texas Council of Governments.

The following Special Provisions shall take precedence over all other contract conditions, specifications and agreements.

SP-2: PROJECT DESCRIPTION

The work associated with this Project includes, but is not limited to, the following tasks:

1. Construction Staking
2. Traffic and Erosion Control
3. Roadway Grading
4. Concrete and Asphalt Paving
5. Driveway Reconstruction
6. Storm Drain Improvements
7. Water Improvements
8. City Utility Adjustments
9. Pavement Marking and Signage

SP-3: DEFINITIONS

Modify GP Item 101.1 Definitions as follows:

The word "City" or "OWNER" in these documents shall be understood as referring to:

The City of North Richland Hills, Texas
4301 City Point Drive
North Richland Hills, Texas 76180

The word "Engineer" in these documents shall be understood as referring to a professional engineer employed by the City of North Richland Hills.

The word "Inspector" in these documents shall be understood as referring to the technical construction inspector within the OWNER's Public Works Department.

The word "OWNER's Representative" in these documents shall be understood as referring to the OWNER's Director of Public Works, Public Works Technical Construction Inspector(s), Engineer of the OWNER, or such other Engineer or Supervisor as may be authorized by the OWNER to act in any particular position.

Any reference to "Special Conditions" or "Supplemental Special Conditions" shall be understood as referring to these Special Provisions.

SP-4: INFORMATION CONCERNING CONDITIONS

Add the following to GP Item 102.3. Examination of Plans, Specifications and Site of the Work:

Prospective bidders shall make a careful examination of the entire site of the project and shall make such explorations as may be necessary to determine the subsoil and water conditions to be encountered; improvements and obstructions which may be encountered, especially those to be protected; methods of providing ingress and egress to private as well as public property; methods of handling traffic during construction and maintenance of the entire project as well as any section thereof; protection of all existing structures both above and below ground; and how the plans fit the proposed project and especially if any discrepancies exist.

The accuracy of the information furnished by the Engineer or the plans and specifications as to underground structures and surface structures, foundation conditions, character of soil, position and quality of ground and subsoil water, etc., are not guaranteed by the OWNER.

Subsurface exploration, to ascertain the nature of the soils at the project site, including the amount of rock, if any, is to be the responsibility of any and all prospective bidders. Whether prospective bidders perform this subsurface exploration jointly or independently, it shall be left to the discretion of such prospective bidders. Subsurface exploration shall not be attempted without the approval of the Engineer.

SP-5: ADDENDA

Bidders wanting further information, interpretation or clarification of the Contract Documents must make their request in writing to the Engineer **at least seven (7) days prior to the Bid Opening**. Answers to all such requests will be made a part of the Contract Documents. No other explanation or interpretation will be considered official or binding.

Should a bidder find discrepancies in, or omission from the Contract Documents, or should he/she be in doubt as to their meaning, he/she should at once notify the Engineer in order that a written addendum may be sent to all bidders. Any addenda issued will be mailed or be delivered to each prospective bidder who has requested and received a bid packet. The bid proposal as submitted by the bidder must be so constructed as to include any addenda issued by the Engineer prior to 24 hours of the bid opening, with the appropriate recognition of addenda so noted in the bid proposal.

SP-6: PROPOSED GUARANTY

Modify GP Item 102.5. Proposal Guaranty to include:

The five percent (5%) proposal guaranty shall be five percent (5%) of the largest possible total for the bid submitted.

SP-7: FILING OF PROPOSAL

Add the following to GP Item 102.6. Filing of Proposals:

Bids, affidavits and proposed construction schedules must be submitted in sealed envelopes within the time limit for receiving proposals, as stated in the "NOTICE TO BIDDERS", which envelopes bear a legible notation, "PROPOSAL", and the name of the project. The original copy shall be filed with the City of North Richland Hills in the office of the City Secretary at City Hall.

SP-8: REJECTION OF PROPOSALS

Add the following reasons to GP Item 102.11. Rejection of Proposals:

- (7) Proposals that are incomplete insofar as the required signatures, proposal guaranty, or containing any material irregularities.

SP-9: DISQUALIFICATION OF BIDDERS

Add the following reason to GP Item 102.12. Disqualification of Bidders:

- (9) where more than one proposal for an individual firm, partnership, or corporation is filed under the same or different names and where such proposals are not identical in every respect.

SP-10: QUALIFICATION TO PERFORM

The OWNER may make such investigations as he/she deems necessary to determine the bidder's ability to perform the work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted fails to satisfy the OWNER that such bidder can properly carry out the obligations of the contract and to complete the work contemplated therein.

SP-11: AWARD OF CONTRACT

Add the following to GP Item 103.2. Award of Contract and Commencement of Work:

The award, if made, shall be on the basis of the lowest acceptable bid submitted by a qualified responsible bidder, as determined by the OWNER, within 60 days after the opening of proposals. In determining the lowest acceptable bid, the OWNER will consider all relative factors such as: efficiency of a single contractor in the project area, increase in public safety due to a single contractor's operations, length of construction, coordination of construction activities, previous experience the OWNER may have had with the bidder, effects on area traffic due to construction detours and efficient use of City funds. The right is reserved, as the interest of the OWNER may require, to reject any and all bids and to waive any formality in bids received. It is the intention of the OWNER to award a single contract for this work.

SP-12: BONDS - AMOUNT AND TERMS

In addition to GP Item 103.3. Surety Bonds, add the following:

With the execution and delivery of the contract, the CONTRACTOR shall furnish and file with the City in the amount herein required, the following surety bonds:

- (1) A good and sufficient Performance Bond in an amount equal to one hundred percent (100%) of the total awarded contract price, guaranteeing the full and faithful execution of the work and performance

of the contract and for the protection of the City against any improper execution of the work or the use of inferior materials.

- (2) A good and sufficient Payment Bond in an amount equal to one hundred percent (100%) of the total awarded contract price, guaranteeing payment for all labor, materials and equipment used in the construction of the project.
- (3) A good and sufficient Maintenance Bond in an amount equal to twenty percent (20%) of the final contract price, guaranteeing the maintenance in good condition of such project for a period of two (2) years from and after the time of its completion and acceptance by the City.

General conditions for bonds are as follows:

- 1. The surety on each bond must be a responsible surety company which is licensed and qualified to do business in the State of Texas (surplus lines carriers are not acceptable) and satisfactory to the City. No surety will be accepted who is in default or delinquent on any bond or who is interested in any litigation against the City. Should any surety on the contract be determined unsatisfactory at any time by the City, notice will be given to the CONTRACTOR to the effect, and the CONTRACTOR shall forthwith substitute a new Surety or Sureties satisfactory to the City. (Texas Lloyd's Plan carriers are not acceptable.) No payment will be made under the contract until the new Surety or Sureties, as required, have qualified and have been accepted by the City. The contract shall not be operative nor shall any payments be due until approval of the bonds has been made by the City.
- 2. The surety company should be listed in the current circular of the "Federal Register - Department of the Treasury - Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsurance Companies".
- 3. The surety shall/must have an underwriting limitation (as shown in the Federal Register) to cover 110% of the project cost. Exceptions to a requirement may be made in unusual circumstances, subject to approval by the Office of Risk Management and the City Attorney's Office.
- 4. All bonds shall be made on forms furnished by the City and shall conform to the requirements as set forth herein.
- 5. Each Bond shall be executed by the CONTRACTOR and the Surety. The name and residence of each individual party to the bond shall be

inserted in the body thereof, and each such party shall sign the bond with his/her usual signature on the line opposite the scroll seal, and if signed in the States of Main, Massachusetts, or New Hampshire, an adhesive seal shall be fixed opposite the signature.

6. If the principals are partners, their individual names will appear in the body of the bond or on proceeding pages to be included with said bond with the recital that they are partners composing a firm, naming it, and all the members of the firm shall execute the bond as individuals.
7. The signature of a witness shall appear in the appropriate place, attesting the signature of each individual party to the bond.
8. The principal or surety shall be a corporate surety; the name of the state in which incorporated shall be inserted in the appropriate place in the body of the bond or on proceeding pages to be included with said bond, and said instrument shall be executed and attested under the corporate seal, the fact shall be stated, in which case a scroll or adhesive seal shall appear following the corporate name.
9. The official character and authority of the person or persons executing the bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary according to the form attached hereto. In lieu of such certificate, records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.
10. The date of any bond must not be prior to the date of the contract in connection with which it is given.

SP-13: INSURANCE REQUIREMENTS

In addition to the provisions of GP Item 103.4. Insurance, add the following:

Workmen's Compensation Insurance: Statutory requirements as specified by the Workmen's Compensation Law of the State of Texas and adopted by the Texas Workers' Compensation Commission per Title 28, TAC §110.110.
Workers' Compensation Insurance Coverage:

A. Definitions:

- (1) Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission or a coverage agreement (TWCC-81, TWCC-82,

TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees (including those subject to a coverage agreement) providing services on a project for the duration of the project.

- (2) Building or construction - Has the meaning defined in the Texas Labor Code, §406.096(e)(1).
- (3) Contractor - A Person bidding for or awarded a building or construction project by a governmental entity.
- (4) Coverage - Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, §401.011(44).
- (5) Coverage Agreement - A written agreement on form TWCC-81, form TWCC-82, form TWCC-83, or form TWCC-84, filed with the Texas Workers' Compensation Commission which establishes a relationship between the parties for purposes of the Workers' Compensation Act, pursuant to the Texas Labor Code, Chapter 406, Subchapters F and G, as one of employer/employee and establishes who will be responsible for providing workers' compensation coverage for persons providing services on the project.
- (6) Duration of the project - Includes the time from the beginning of the work on the project until the work on the project has been completed and accepted by the governmental entity.
- (7) 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.

- (8) Project - Includes the provision of all services related to a building or construction contract for a governmental entity.
- 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 the 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 ten (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 Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

- 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 ten (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 (10) days after receipt of notice of breach from the governmental entity.

In accordance with statutory requirements, the CONTRACTOR shall:

- (1) provide coverage for its employees providing services on the project, for the duration of the project based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements;
- (2) provide a certificate of coverage showing workers' compensation coverage to the governmental entity prior to beginning work on the project;
- (3) provide the governmental entity, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the CONTRACTOR's current certificate of coverage ends during the duration of the project;
- (4) obtain from each person providing services on the project, and provide to the governmental entity:
 - (A) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

- (B) no later than seven (7) days after receipt by the contract, 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;
- (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 ten (10) days after contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project;
- (7) post a notice on each project site informing all persons providing services on the project that they are required to be covered, and stating how a person may verify current coverage and report failure to provide coverage. This notice does not satisfy other posting requirements imposed by the Act or other commission rules. This notice must be printed with a title in at least 30 point bold type and text in at least 19 point normal type, and shall be in both English and Spanish and any other language common to the worker population. The text for the notices shall be the following text in Figure 1 provided by the commission on the sample notice, without any additional words or changes:

Figure 1:

REQUIRED WORKERS' COMPENSATION COVERAGE

"The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling, or delivering equipment or materials, or providing labor or transportation or other service related to the project, regardless of the identity of their employer or status as an employee"

"Call the Texas Workers' Compensation Commission at (512) 440-3789 to receive information on the legal requirement for

coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."

In GP Item 103.4.1.2. Commercial General Liability, change the respective limits as follows:

Contractor's General Liability and Property Damage Insurance:

Bodily Injury (or Death) \$ 600,000 each occurrence

Property Damage \$ 600,000 each occurrence

SP-14: POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

In addition to the provisions of GP Item 103.4.5. Policy Endorsements and Special Conditions, add the following:

- (a) CONTRACTOR will not be issued a Work Order to commence work on this Contract until he/she has obtained all the insurance required under this section and such insurance has been approved by the OWNER or his representative.
- (b) CONTRACTOR shall procure and shall maintain during the life of this Contract, insurance coverage as herein specified, and in case of any work sublet, shall require any subcontractor in like manner to secure and maintain such minimum limits of insurance coverage, also.
- (c) The CONTRACTOR shall furnish the OWNER with certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of policies. Such certificates shall contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered except after thirty (30) days written notice has been received by the OWNER."

SP-15: ORDER OF WORK

Add the following to GP Item 103.6. Notice to Proceed and Commencement of Work:

The CONTRACTOR shall be fully responsible for proper coordination for the relocation of utilities (i.e. power poles, electrical lines, gas lines, telephone lines, television (TV) cable lines, buried cables, etc.) public and private unless otherwise noted on the plans/drawings.

SP-16: PRIORITY OF CONTRACT DOCUMENTS

Delete GP Item 105.1.1. Priority of Contract Documents and substitute the following:

In case of conflict between contract documents, priority of interpretation shall be in the following order:

- (1) This Agreement
- (2) Addendum(s)
- (3) "Notice to Bidders" advertisement
- (4) Bidder's Proposal
- (5) Special Instruction to Bidders
- (6) Performance, Payment and Maintenance Bonds
- (7) Certification of Insurance
- (8) Notice to Proceed
- (9) Technical Specifications
- (10) City of North Richland Hills' Public Works Design Manual
- (11) Special Provisions
- (12) General Provisions
- (13) Special Specifications
- (14) Project Construction Plans/Drawings
- (15) Special Material and/or Equipment Specifications
- (16) Special Material and/or Equipment Drawings
- (17) "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition, Adopted November 2017
- (18) TxDOT Standard Specifications for Construction and Maintenance of Highways, Street, and Bridges (TxDOT Specifications)
- (19) North Central Texas Council of Government references

SP-17: WARRANTY

In GP Item 105.2.2. Special Warranty, change all references from one year to two (2) years and add the following:

Notwithstanding any certificate which may have been given by the Engineer, if any materials, equipment or any workmanship which does not comply with the requirements of this contract shall be discovered within two (2) years after completion of construction of the project, and acceptance by the OWNER, the CONTRACTOR shall replace such defective materials or equipment, or remedy any such defective workmanship within ten (10) days after notice in writing of the existence thereof shall have been given by the OWNER or City Engineer. In the event of failure of the CONTRACTOR to replace any such defective materials or equipment or to remedy defective workmanship as herein

provided, the OWNER may replace such defective materials or equipment or remedy such workmanship as the case may be and in such event the CONTRACTOR shall pay to the OWNER the cost and expense thereof.

SP-18: LINES AND GRADES

Add the following to GP Item 105.4. Construction Stakes:

The CONTRACTOR is responsible to provide all construction staking under this contract.

All work under this contract shall be constructed in accordance with the lines and grades shown on the plans/drawings. The full responsibility for the holding to alignment and grade shall rest upon the CONTRACTOR.

The CONTRACTOR shall protect all property corner markers, and when any such markers or monuments are in danger of being disturbed, they shall be properly referenced and if disturbed shall be reset at the expense of the CONTRACTOR.

SP-19: INSPECTION AND TESTING

Add the following to GP Item 106.5. Samples and Tests of Materials:

The CONTRACTOR shall be responsible for paying for all testing and testing related items (acquiring specimens, proper specimen control, etc.) on this Project.

During the progress of the work, all materials, equipment and workmanship shall be subjected to such inspections and tests as will assure conformance with the contract requirements.

The CONTRACTOR shall furnish at his/her expense all necessary specimens and samples for testing.

Sampling and testing of all materials or construction methods shall be performed by a commercial laboratory, approved by the City Engineer, and permitted with the City of North Richland Hills' Public Works Department.

When the CONTRACTOR's materials, construction items or products incorporated in the project fail to satisfy the minimum requirements of the initial test and he/she has to bear the cost of any retesting, he/she shall be responsible for any and all cost associated with such retesting. If in this situation, the CONTRACTOR utilizes the same testing laboratory as the OWNER, the CONTRACTOR shall pay said testing laboratory in full or the

testing laboratory shall be able to gain recourse through the CONTRACTOR's Payment Bond.

In the event a conflict arises concerning the interpretation of A.S.T.M., A.C.I., A.W.W.A., etc., specifications/standards, the City Engineer shall make his/her determination of the interpretation and his/her determination shall be final.

SP-20: INDEMNIFICATION

The CONTRACTOR shall familiarize himself/herself with GP Item 107.3. Indemnification and GP Item 107.20.3.2. Indemnification. Additionally, the following shall be added to both Indemnification items:

This agreement, however, does not waive any governmental immunity available to the OWNER under Texas law and nor any defenses of the parties under Texas law. 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.

SP-21: SALES TAX

Add the following to GP Item 107.15. State and Local Sales and Use Taxes:

The OWNER qualifies for exemption from state and local sales and use taxes, pursuant to the provisions of Section 151.309 of the Texas Limited Sales, Excise and Use Tax Act, as amended. Therefore, the OWNER shall not be liable for, or pay the CONTRACTOR's cost of such sales and use taxes which would otherwise be payable in connection with the performance of this contract.

SP-22: TRAFFIC CONTROL

Add the following to GP Item 107.20.2. Protection of Persons and Property:

The CONTRACTOR shall not remove any regulatory sign, instructional sign, street name sign, or other sign which has been erected by the City. If it is determined that a sign must be removed to permit required construction, the CONTRACTOR shall contact the City to remove the sign. In the case of regulatory signs, the CONTRACTOR must replace the permanent sign with a temporary sign meeting the requirements of the above referenced manual and such temporary sign must be installed prior to the removal of the permanent sign. If the temporary sign is not installed correctly or if it does not meet the required specifications, the permanent sign shall be left in place until the temporary sign requirements are met. When construction work is completed to the extent that the permanent sign can be reinstalled, the CONTRACTOR

shall again contact the City to reinstall the permanent sign and shall leave his temporary sign in place until such installation is completed.

The CONTRACTOR shall prosecute his traffic control work in such a manner as to create a minimum of interruption to traffic and pedestrian facilities and to the flow of vehicular and pedestrian traffic within the project area.

Access to adjacent property shall be maintained at all times unless otherwise approved by the OWNER.

SP-23: TRENCH SAFETY

Add the following paragraph to GP Item 107.20.3. Trench Safety:

Per Chapter 756, Texas Health & Safety Code, it shall be the responsibility of the CONTRACTOR to provide and maintain a viable trench safety system at all times during construction activities. The CONTRACTOR is directed to become knowledgeable and familiar with the standards as set forth by the Occupational Safety and Health Administration for trench safety that will be in effect during the period of construction of the project and the CONTRACTOR is responsible for conforming to such regulations as prescribed by Occupational Safety and Health Administration standards.

SP-24: WORK-SITE AREA AND CLEAN-UP

Add the following to GP Item 107.22. Working Area:

During construction the CONTRACTOR shall at all times keep the job site free from waste, debris and rubbish, and shall maintain a daily routine of clean-up.

The working operations of the CONTRACTOR shall at all times be conducted so as to create a minimum of inconvenience to the OWNER or to the public. Stringing of pipe, stockpiling of materials, etc., will be allowed only where no inconvenience is caused and only in amounts that can be readily used by the CONTRACTOR.

All trees, stumps, slashings, brush or other debris to be removed from the site, shall be disposed of in a manner consistent with Local Ordinances and all State Regulations. Burning of trash, etc., will only be permitted where allowed by Local Ordinances and State Pollution Regulations.

All excavated earth in excess of that required for project embankments and/or backfilling shall be removed from the job site and disposed of in a satisfactory manner. Disposal of excess material into area creeks and drainageways will not be allowed.

Any trees or other landscape features scarred or damaged by the CONTRACTOR's operations shall be restored or replaced at the CONTRACTOR's expense. Trimming or pruning to facilitate the work will be permitted only by experienced workmen in an approved manner. Pruned limbs of one inch (1") diameter or larger, shall be thoroughly treated as soon as possible with a tree wound dressing.

The CONTRACTOR shall take all precautions required to prevent soil erosion during construction. If, in the opinion of the City Engineer, excessive erosion occurs, the CONTRACTOR shall take immediate measure to prevent further erosion and restore the disturbed surface with topsoil at completion of the work.

All property along and adjacent to the CONTRACTOR's operations including lawns, yards, shrubs, trees, etc., shall be preserved or restored after completion of the work, to a condition equal to or better than existed prior to start of work.

Upon completion of the work as a whole and prior to final acceptance, the CONTRACTOR shall clean and remove from the site all surplus and discarded materials, temporary structures and all debris. He/She shall leave the site in a neat and orderly condition with an appearance satisfactory to the City Engineer and OWNER. Method and location of disposal or surplus and waste materials shall be satisfactory to the City Engineer.

The CONTRACTOR shall then thoroughly clean all equipment and materials installed by him/her and shall present for final inspection materials and equipment in a clean, bright and new condition.

No extra payment will be made for any of this type of work required on the project.

SP-25: EXISTING STRUCTURES, FACILITIES AND IMPROVEMENTS

Add the following to GP Item 107.24. Existing Structures, Facilities and Appurtenances:

The CONTRACTOR's attention is directed to the necessity of taking adequate measures to protect all existing structures, facilities, improvements and utilities, including sprinkler systems, encountered.

The plans show the locations of most known surface and subsurface structures. However, the OWNER assumes no responsibility for failure to show any or all of these structures on the plans or in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work, or for increasing the pay quantities in any manner,

unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades, or requires the building of special works not provided for in the Contract Documents.

Any non-City utilities (cable, electric, gas, telephone, etc.) damaged by the CONTRACTOR shall be the responsibility of the CONTRACTOR for relocation and/or repair as well as the costs associated with the relocation and/or repair of utilities. Any City utilities (sanitary sewer main and water distribution main) damaged by the non-negligent acts of the CONTRACTOR will not be the responsibility of the CONTRACTOR for repair. Any delays associated with the relocation and/or repair of utilities shall not be basis for a claim for extra pay.

In the progress of the work, the CONTRACTOR may have to relocate certain existing utility service lines. All relocation, repairs and replacement work shall be done at the expense of the CONTRACTOR to the satisfaction of the OWNER, except those for which specific pay items appear in the Bid Proposal.

Any utilities damaged during construction work shall be immediately repaired at the CONTRACTOR's expense.

The CONTRACTOR shall at all times maintain streets and drives in a condition which will provide easy ingress and egress and upon completion of the work, repair all damages to roads and streets used during construction, to a condition at least as good as existed prior to the start of work.

SP-26: PROSECUTION OF CONSTRUCTION

Add the following to GP Item 108.2. Prosecution of the Work:

The CONTRACTOR will, unless otherwise approved by the City Engineer, prosecute the construction of this project during normal working hours as defined below:

- (a) Normal Work Day shall mean the normal eight (8) hour working day between the hours of 8:00am and 5:00pm
- (b) Normal Work Week shall mean the forty (40) hour work week encompassing the five (5) eight-hour days, Monday through Friday.

- (c) Holidays to be observed and to be included into the normal work week will be:

New Years Day	January 1 st
Martin Luther King Day	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4 th
Labor Day	First Monday in September
Thanksgiving Holiday	Fourth Thursday in November and the following Friday
Christmas Holiday	December 24 th & December 25 th

Any of the above dates falling on a Sunday shall be observed on the following Monday.

- (d) All work contemplated to be done which will not be in accordance with the normal hours will require prior approval from the City Engineer. The CONTRACTOR shall request permission by the City Engineer 72 hours in advance of the time he/she intends to work.

Work which is of necessity performed at times other than normal working hours will not require prior approval unless construction scheduling can be arranged to prevent such conflict of time requirements.

All work performed other than the normal working hours, whether scheduled or required, will in no way increase the cost to the OWNER for the performance of such work. The CONTRACTOR shall pay the OWNER for inspection services, city administrative fees, etc. when work has been approved to be performed on Weekends, Holidays and outside any normal working hours. These services shall be charged at the rate of \$75.00 per hour and shall include a four (4) hour minimum charge.

- (e) Calendar Days is defined as any day of the week or month; no days being excepted, such as, Saturdays, Sundays, holidays and inclement weather days. Counting of contract time will only be stopped when the Owner issues a written notice stating this fact, or when the project is noted as substantially complete by written notice from the Owner. The Owner shall determine when such action is necessary.

Extensions of time due to weather delays shall be determined in accordance with the following formula:

$E = R - P$ where P is greater than or equal to R, and

E = Extra Precipitation Days

P = Average Precipitation Days

R = Total Precipitation Days

Average Precipitation Days (P) is defined as a day of rain, sleet, hail, snow or any combination thereof, and shall be based upon the average precipitation for each month of the year as defined in the Local Climatological Data summaries issued by the National Climatic Data Center in Asheville, North Carolina, and for this contract shall be as follows:

Average Precipitation

Month No. of Days	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
	6	6	7	7	8	6	4	4	6	6	6	6

Partial months shall be prorated uniformly for the entire month and the sum of all the months used will be rounded to the nearest whole number. This number shall be P.

Total Precipitation Days (R) is defined as a day of rain, sleet, hail, snow or any combination thereof, if determined by the Owner's Project Representative that the Contractor's construction cannot progress substantially due to precipitation and thus be put in the Daily Inspection Logs as a precipitation day. The sum of all precipitation says shall be R.

The total number of Extra Precipitation Days (E) shall be granted to the Contractor as extension of time due to weather delays, and no additional time due to drying time for saturated soil will be allowed.

SP-27: LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE ON TIME

Delete the Table [Schedule 108.8.1.(a) Liquidated Damages] within GP Item 108.8.1. Liquidated Damages for Failure to Complete on Time and substitute the following:

The contract time for the entire project is based on the four project phases as shown in plans. The contract time for Phase I from the "Notice to Proceed" issuance date through completion of Phase 1 is 100 consecutive calendar days. The contract time for Phase 2 from the end of Phase 1 through final

completion of Phase 2 is 160 consecutive calendar days. The contract time for Phase 3 from the end of Phase 2 through final completion of Phase 3 is 80 consecutive calendar days. The contract time for Phase 4 from the end of Phase 3 through final completion of Phase 4 is 25 consecutive calendar days. For additional information, refer to Article 3 of the Standard Form of Construction Agreement.

Liquidated damages will be assessed at the rate of **\$1,000** per consecutive calendar day for any unfinished work beyond the 365th calendar day after the "Phase I Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER.

SP-28: OCCUPATIONAL SAFETY AND HEALTH ACT

All work performed under this contract shall meet the requirements of the Occupational Safety and Health Act. It is the responsibility of the CONTRACTOR to familiarize himself/herself with the latest provisions of regulations published by the Occupational Safety and Health Administration in the Federal Register and to perform all of his/her responsibilities thereunder.

The CONTRACTOR shall comply with the provisions of the Occupational Safety and Health Act and the standards and regulations issued thereunder and warrant that all work, materials and products furnished under this contract will conform to and comply with said standards and regulations which are in existence on the date of this contract. The CONTRACTOR further agrees to indemnify, defend, and hold harmless the OWNER for all damages suffered by the OWNER as a result of the CONTRACTOR's failure to comply with the Act and the Standards issued thereunder and for the failure of any material and/or equipment furnished under this contract to so comply.

The CONTRACTOR shall also comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., if not in conflict with those of the Occupational Safety and Health Act and shall maintain an accurate record of all cases of death, occupational disease and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment or work under the contract.

The CONTRACTOR alone shall be responsible for the safety, efficiency and adequacy of his/her equipment and employees and for any damage which may result from their failure or their improper construction, maintenance or operation.

SP-29: EASEMENTS/RIGHTS-OF-WAY

Without cost to the CONTRACTOR, the OWNER will provide the necessary easements or rights-of-way required for the project. However, the CONTRACTOR may desire additional temporary easements for the duration of the work for his/her construction, storage or access. All such temporary easements shall be obtained by the CONTRACTOR at no additional cost to the contract or the OWNER.

Unless specifically provided otherwise, the CONTRACTOR, as part of his/her work, shall clear all easements or rights-of-way of all obstructions to the work. On conclusion of his/her operations, he/she shall replace, repair or restore any improvements which may have been removed or damaged, as directed by the City Engineer.

SP-30: RIGHT OF ENTRY

The OWNER reserves the right to enter the property or location on which the works herein contracted for are to be constructed or installed, by such agent or agents as he/she may elect, for the purpose of inspecting the work, or for the purchase of constructing or installing such collateral work as said OWNER may desire.

SP-31: AUTHORITY AND DUTIES OF INSPECTOR

Inspectors, designated by and acting under the direction of the OWNER, shall have the authority to inspect all work done and all materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. He/She is authorized to call to the attention of the CONTRACTOR any failure of the work or materials to conform to the plans, specifications and contract documents. He/She shall have the authority to reject materials or suspend the work until any situation at issue can be referred to and decided by the OWNER.

The Inspector is not authorized to revoke, alter or waive any requirements of the plans and specifications. He/She shall in no case act as foreman or perform other duties for the CONTRACTOR, interfere with the management of the work by the latter. Any advice which the Inspector may give the CONTRACTOR shall otherwise not be construed as binding the City Engineer in any way, or releasing the CONTRACTOR from fulfilling all of the terms of the Contract.

If the CONTRACTOR refuses to suspend operations on verbal order of the Inspector, a written order will be presented to the CONTRACTOR by the Inspector giving the reason for suspension of work. After placing the order in the hand of the "man-in-charge", the Inspector shall immediately leave the job. Work performed during the absence of the Inspector will not be accepted nor paid for, and shall be removed and replaced.

Notwithstanding any other provision of this agreement or any other Contract Documents, the Inspector shall not be in any way responsible or liable for any act, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR's or subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the work.

SP-32: OWNER-ENGINEER RELATIONSHIP

The Engineer will be the OWNER's representative during construction. The duties, responsibilities and limitations of authority of the Engineer as the OWNER's Representative during construction are as set forth in the Contract Documents and shall not be extended or limited without written consent of the OWNER and Engineer. The Engineer will advise and consult with the OWNER, and all of OWNER's instructions to the CONTRACTOR shall be issued through the Engineer.

SP-33: PROFESSIONAL INSPECTION BY ENGINEER

The Engineer shall make periodic visits to the Site to familiarize himself/herself 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 Documents, 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 subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the work.

SP-34: COPIES OF PLANS AND SPECIFICATIONS FURNISHED

Four (4) sets of plans and specifications (not including the General Provisions) shall be furnished to the CONTRACTOR at no charge for construction purposes. Additional sets may be obtained from the Engineer at **\$ 50.00 per set**.

SP-35: VERIFICATION OF MEASUREMENTS

Before ordering any material or doing any work, the CONTRACTOR shall verify all measurements involved and shall be responsible for the correctness of these measurements. No extra charge or compensation will be allowed because of differences between actual dimensions and the dimensions shown on the drawings; any difference which may be found shall be called to the attention of the Engineer for consideration before proceeding with the work.

SP-36: PAY ITEMS - INCIDENTAL CONSTRUCTION

The CONTRACTOR shall be paid only for those items which are listed in the proposal or which are added to the job through a change order. All construction or removal considerations which are not listed as a separate pay item shall be considered as incidental construction. Cost for these items shall be considered in the most appropriate item listed in the schedule(s) of pay items.

SP-37: OMISSIONS

- (a) In the event that the specifications inadvertently omit some of the usual and customary work, auxiliary equipment or material required for the satisfactory installation and operation of all work, equipment or material, the CONTRACTOR shall provide these items as directed by the Engineer at his/her own expense. The CONTRACTOR will be assumed to be an experienced and qualified CONTRACTOR in this type of work, and to have studied the purpose of operation of the equipment and the results to be obtained, and is to furnish equipment suitable for the work to be done.
- (b) In the event that the specifications inadvertently fail to contain a specification for work to be done and material to be furnished, then the Standard Current Specification or Requirements of the A.W.W.A., A.S.T.M., A.S.C.E., A.S.E.E., A.S.M.E., N.B.F.U., N.E.C., N.E.M.A., O.S.H.A., NCTCOG "Standard Specifications for Public Works Construction" or TxDOT "Standard Specifications for Construction of Highways, Streets and Bridges" shall apply. Should the above specifications not apply, then the work done, equipment or material furnished shall be as directed by the Engineer.

SP-38: MINIMUM WAGE RATES

For the work required of this project, the CONTRACTOR and all sub-contractors shall pay his/her employees the prevailing wage rates in accordance with the Texas Government Code, Chapter 2258. The prevailing wage rates determined applicable for this project are the current prevailing wage rate schedules of the United States Department of Labor adopted in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a, et. seq.) and its subsequent amendments. These

prevailing wage rates can be obtained from the following web page: www.access.gpo.gov/davisbacon/tx.html (Tarrant County).

A CONTRACTOR or sub-contractor who does not pay his/her employees in accordance with these prevailing wages shall pay \$ 60.00 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 these prevailing wage rates to the CITY.

SP-39: LOSSES FROM NATURAL CAUSES

Unless otherwise specified, all loss or damage to the CONTRACTOR arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the CONTRACTOR at his/her own cost and expense.

SP-40: EXPLOSIVES, BLASTING, ETC.

Neither explosives nor blasting shall be allowed or used on this project.

SP-41: WORK WITH OWN FORCES

The CONTRACTOR shall perform with his own forces work of a value of not less than fifty percent (50%) of the contract amount.

SP-42: PROJECT NAME CONSTRUCTION SIGNS

The CONTRACTOR shall install two (2) Project Name Construction Signs on Main Street. One sign shall be at or near the intersection of Smithfield Rd and Main Street and one sign shall be at or near the intersection of Davis Blvd and Main Street. The exact locations shall be approved by the OWNER prior to installation.

These signs shall be in general accordance with Figure 2M (R 07-01-2009) of the City of North Richland Hills' Public Works Design Manual, but the sign verbiage must be approved by the OWNER prior to fabrication. These signs shall be installed within 15 calendar days from the date the OWNER awards the contract and shall remain in place during the entire construction period. These Signs shall be removed within 15 calendar days after the OWNER's acceptance of the project improvements.

Sign Data:

Project Name:

Main Street

Projected Completion:

To Be Determined After Contract Award

SP-43: WATER FOR CONSTRUCTION

The CONTRACTOR shall make the necessary arrangements for securing and transporting all water required in the construction, including water required for mixing of concrete, sprinkling, testing, flushing or jetting.

The CONTRACTOR may remit the City a deposit for a fire hydrant water meter; additionally, the CONTRACTOR will be billed for the water used on the construction of this contract and measured by such fire hydrant meter. Additionally, the cost of any temporary pipe line, metering or other equipment which may be necessary to make use of such fire hydrant water meter and water, shall be considered as incidental to the work and payment therefore shall be included in the various bid items of the proposal. If the CONTRACTOR chooses to use such fire hydrant water meter, he/she shall assume full responsibility for it and return it in the same or similar condition as received otherwise the CONTRACTOR will not be returned his/her deposit.

SP-44: OWNER'S RIGHT TO SUSPEND WORK AND ANNUL CONTRACT

Delete GP Item 108.9.(2) and replace it with the following:

- (2) failure of the CONTRACTOR to make the progress set out in the Progress Schedule;

SP-45: OWNERSHIP OF DRAWINGS

All drawings, specifications and copies thereof furnished by the Engineer shall not be reused on other work, and, with the exception of the signed contract sets, are to be returned to him on request, at the completion of the work. All models are the property of the OWNER.

SP-46: ADEQUACY OF DESIGN

It is understood that the OWNER believes it has employed competent engineers and designers. It is, therefore, agreed that the Engineer shall be responsible for the adequacy of the design, sufficiency of the Contract Documents, the safety of the structure and the practicability of the operations of the completed project; provided the CONTRACTOR has complied with the requirements of the Contract Documents, all approved modifications thereof, and additions and alterations thereto approved in writing by the OWNER. The burden of proof of such compliance shall be upon the CONTRACTOR to show that he/she has complied with the requirements of the Contract Documents, approved modifications thereof and all approved additions and alternations thereto.

SECTION VI

GEOTECHNICAL REPORT



**NRH RETAINING WALL
NORTH RICHLAND HILLS, TEXAS
APRIL 11, 2024**

GEOTECHNICAL ENGINEERING REPORT





April 11, 2024

Peloton Land Solutions - A Westwood Company
Attn: Paul Hodges, P.E.
11000 Frisco Street, Suite 400
Frisco, Texas 75033
Phone: 972-358-7526
Email: paul.hodges@pelotonland.com

**GEOTECHNICAL INVESTIGATION
GEOTEX ENGINEERING #G23-2232
NRH RETAINING WALL
NORTH RICHLAND HILLS, TEXAS**

Mr. Hodges,

As requested, Geotex Engineering, LLC has completed the Geotechnical Investigation for the above referenced project. This investigation was conducted in accordance with Proposal No. GP23-2232 dated August 3, 2023. The authorization to proceed on the retaining wall geotechnical analysis was received on March 21, 2024.

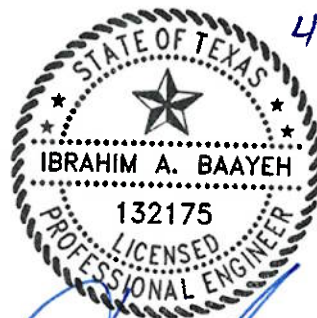
We appreciate the opportunity to provide professional geotechnical engineering services to you. We are available to discuss any questions which may arise regarding this report. Please do not hesitate to call when we can provide any additional services.

Sincerely,

Geotex Engineering, LLC

A handwritten signature in blue ink that reads "Hachem".

Hussein Hachem, P.E.
Geotechnical Engineer



4-11-2024

A handwritten signature in blue ink that appears to read "Ibrahim A. Baayeh".

Ibrahim A. Baayeh, P.E.
Director of Geotechnical Engineering

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APPENDIX B – GENERAL DESCRIPTION OF PROCEDURES

GEOTECHNICAL INVESTIGATION NRH RETAINING WALL NORTH RICHLAND HILLS, TEXAS

1.0 PROJECT DESCRIPTION

This report presents the results of the geotechnical investigation conducted for the proposed retaining wall along Davis Boulevard located in North Richland Hills, Texas. The retaining wall will begin about 180 feet south of the intersection of Odell Street and Davis Boulevard, and will extend south approximately 400 linear feet along the outer northbound lane side of Davis Boulevard.

At the time of this investigation, the site was generally covered with short to tall height grasses and sparse mature trees. Based upon visual site observation and available topographic maps from NCTCOG (dfwmaps.com), the site slopes downwards from the north (Approx. EL 674ft) towards the south (Approx. EL 668ft). We understand that maximum wall height is on the order of about 6 feet.

2.0 PURPOSE AND SCOPE

The purpose of this investigation was to:

- Identify the subsurface stratigraphy and groundwater conditions present at the site.
- Evaluate the physical and engineering properties of the subsurface soil and bedrock strata for use in geotechnical analyses.
- Provide geotechnical recommendations for use in the design and construction of the proposed structure.

The scope of this investigation consisted of:

- Drilling and sampling of a total of two (2) soil borings to depths of about 30 feet.
- Laboratory testing of selected soil and bedrock samples obtained during field investigation.
- Preparation of a Geotechnical Report that includes:
 - Evaluation of Potential Vertical Movement (PVM)
 - Recommendations for retaining walls.
 - Recommendations for earthwork.

3.0 FIELD AND LABORATORY INVESTIGATION

3.1 General

The borings were advanced utilizing truck-mounted drilling equipment outfitted with continuous flight augers. Undisturbed samples of cohesive soils and highly weathered rock strata were obtained using 3-inch diameter tube samplers, which were advanced into the

soils in 1-to 2-foot increments by the continuous thrust of a hydraulic ram located on the drilling equipment. After sample extrusion, a hand penetrometer measurement was performed on each cohesive soil to provide an estimate of soil stiffness.

Subsurface materials were also tested and sampled in general accordance with the Standard Penetration Test (ASTM D1586). During this test, disturbed samples of subsurface material are recovered using a nominal 2-inch O.D. split-barrel sampler. The sampler is driven into the soil strata with an automatic hammer utilizing the energy equivalent of a 140-pound hammer falling freely from a height of 30 inches and striking an anvil located at the top of the drill string. The number of blows required to advance the sampler in three consecutive 6-inch increments is recorded, and the number of blows required for the final 12 inches is noted as the "N"-value. The test is terminated at the first occurrence of either of the following: 1) when the sampler has advanced a total of 18 inches; 2) When the sampler has advanced less than one complete 6-inch increment after 50 blows of the hammer; 3) when the total number of blows reaches 100; or 4) if there is no advancement of the sampler in any 10-blow interval.

A cone penetration test was performed on a dense soil layer in Boring RW2 in order to determine its resistance to penetration. For this test, a 3-inch diameter steel cone is driven by the energy of a 170-pound hammer falling freely from a height of 24 inches and striking an anvil located at the top of the drill string. Depending on the resistance of the soil and bedrock materials, either the number of blows of the hammer required to provide 12 inches of penetration is recorded (as two increments of 6 inches each), or the inches of penetration of the cone resulting from 100 blows of the hammer are recorded (as two increments of 50 blows each).

All samples obtained were placed in plastic bags to minimize changes in the natural moisture condition, labeled according to the appropriate boring number and depth, and placed in protective cardboard boxes for transportation to the laboratory. The approximate locations of the borings performed at the site are shown on the boring location map that is included in Appendix A. The specific depths, thicknesses, and descriptions of the strata encountered are presented on the individual Boring Log illustrations, which are also included in Appendix A. Strata boundaries shown on the boring logs are approximate.

3.2 Laboratory Testing

Laboratory tests were performed to identify the relevant engineering characteristics of the subsurface materials encountered and to provide data for developing engineering design parameters. The subsurface materials recovered during the field exploration were initially logged in the field by the drill crew and were later described by a Staff Engineer after the samples arrived in the laboratory. These descriptions were later refined by a Geotechnical Engineer based on results of the laboratory tests performed. All recovered soil samples were classified and described in part using the Unified Soil Classification System (USCS) and other accepted procedures.

In order to determine soil characteristics and to aid in classifying the soils, classification testing was performed on selected samples as requested by the Geotechnical Engineer. Classification testing was performed in general accordance with the following ASTM testing standards:

- Moisture Content ASTM D2216
- Atterberg Limits ASTM D4318
- Percent of Particles Finer than No. 200 Sieve ASTM D1140

Additional tests were performed to aid in evaluating the strength and volume change characteristics, which consisted of the following:

- Unconfined Compressive Strength of Soil Samples ASTM D2166
- Overburden Swells ASTM D4546

The results of these tests are presented at the corresponding sample depths on the appropriate Boring Log illustrations. The classification tests are described in more detail in Appendix B (General Description of Procedures).

3.2.1 Unconfined Compression Tests

Unconfined compression strength testing was performed on a selected sample of the weathered shale bedrock. These tests were performed in general accordance with ASTM D2166 for the samples. During each test, a cylindrical specimen is subjected to an axial load that is applied at a constant rate of strain until either failure or a large strain (i.e., greater than 15 percent) occurs. Once the test is completed, the unit weight of the sample is determined based on the moisture content.

3.2.2 Overburden Swell Test

A sample of the near-surface soils in Boring RW2 was subjected to overburden swell testing. For this test, a sample is placed in a consolidometer and subjected to the estimated overburden pressure. The sample is then inundated with water and is allowed to swell. Moisture contents are determined both before and after completion of the test. Test results are recorded as the percent swell, with initial and final moisture content. The results from overburden swell tests performed indicate a low potential for swell with changes in soil moisture content.

4.0 SITE CONDITIONS

4.1 Stratigraphy

Based upon a review of the recovered samples, as well as the Geologic Atlas of Texas, Dallas Sheet, the subsurface conditions at this site within the boring depths drilled are characterized by soils associated with the Woodbine Formation. The Woodbine Formation is considered to have formed in a deltaic depositional environment, and as a result, it is highly variable in composition, both laterally and vertically. Subsurface materials of the

Woodbine geological formation typically consist of sands, sandy clays, and clays underlain by shale and/or sandstone bedrock. The subsurface materials of the Woodbine Formation often have little consistency and uniformity in deposition. The deposition of the sand, sandy clay, clay, sandstone, and shale layers can be very erratic and highly variable.

Sandy soils were encountered at the surface of the borings. The sandy soils were generally very loose to very dense in soil condition, brown and reddish brown in color, contained varying amounts of clay, silt, sandstone fragments, an interbedded weathered shale layer of about 4 feet in thickness in Boring RW1, and extended to depths of about 18.5 feet below existing grades.

Below the overburden soils, weathered shale bedrock strata were encountered. The shale bedrock strata were soft to medium hard in rock hardness, various shades of brown and gray in color, contained varying amounts of iron oxide stains, occasional sandstone layers, and extended to the maximum depths explored of about 30 feet below existing grades.

4.2 Groundwater

Groundwater seepage was encountered in Boring RW1 at a depth of about 25 feet during drilling activities and was observed to be at a depth of about 22 feet upon completion of drilling operations. Groundwater seepage was not encountered within Boring RW2 during drilling or upon completion of drilling operations. Groundwater is often contained within the joints, fractures and other rock mass defects present in bedrock strata. When intercepted, these defects can produce appreciable amounts of water for a period of time, especially if those defects are extensive and well inter-connected. Groundwater levels may be anticipated to fluctuate with seasonal and annual variations in rainfall, and also may vary as a result of development and landscape irrigation.

5.0 ENGINEERING ANALYSIS

5.1 Estimated Potential Vertical Movement (PVM)

Potential Vertical Movement (PVM) was evaluated utilizing different methods for predicting movement, as described in Appendix B, and based on our experience and professional opinion.

At the time of our field investigation, the overburden soils were generally found to be dry to wet in moisture condition. Based upon the results of our analysis, the site is estimated to possess a PVM on the order of about 1 inch at the soil moisture conditions existing at the time of the field investigation. If the near surface soils are allowed to dry appreciably to significant depth prior to or during construction, the potential for post-construction vertical movement may increase. Please note that dry, average, and wet are relative terms based on moisture content and plasticity.

6.0 RETAINING WALL RECOMMENDATIONS

6.1 Lateral Earth Pressures

Retaining walls will be subjected to lateral earth pressures and should be designed in consideration of these forces. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction and/or compaction, the strength of the materials being restrained, and drainage conditions.

Active earth pressure is commonly used for design of free-standing cantilever retaining walls and assumes some small outward rotation of the wall (Figure 1). The design lateral earth pressures recommended herein do not include a Factor of Safety and do not provide for hydrostatic or dynamic pressures on the walls. Wall height (H) should be taken from the bottom of wall footing. Where maintenance work will occur on the back of the wall for a distance of $1.5H$, we recommend a minimum surcharge value of 250 pounds per square foot. Lateral loads due to surcharge should be calculated as shown in Table 1.

Equivalent fluid pressures are provided for the retaining wall backfill materials. If a drained condition is selected, the wall must include a drainage system to prevent hydrostatic pressure from developing behind the wall.

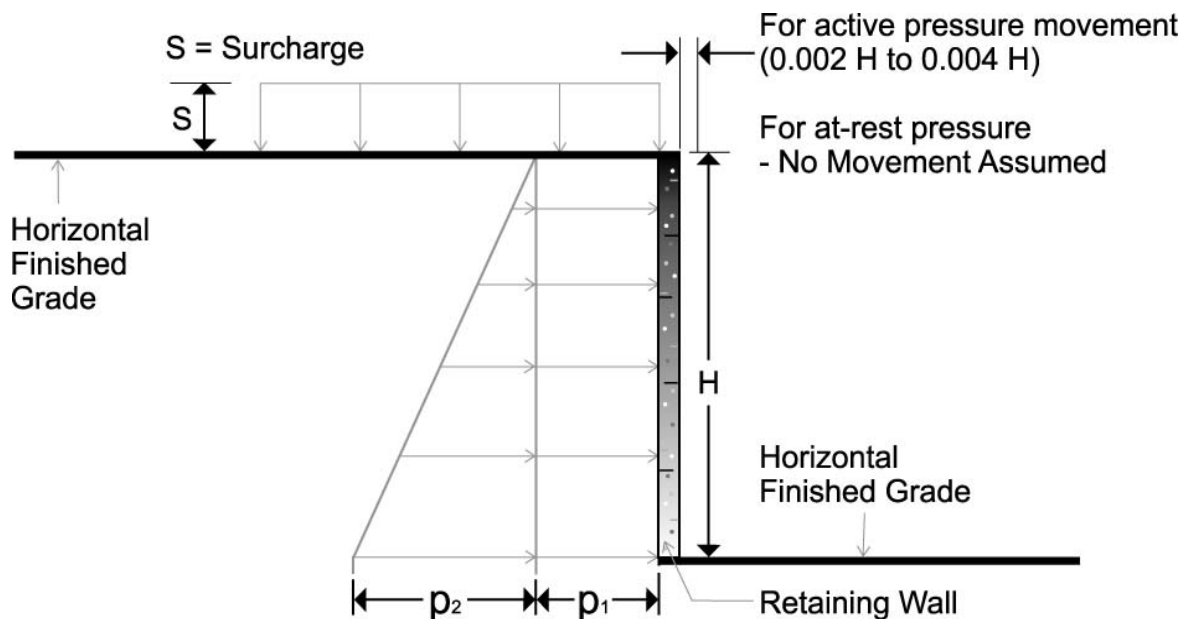


Figure 1: Lateral Earth Pressure

Table 1. Earth Pressure Recommendations

Earth Pressure Conditions	Coefficient for Backfill Type	Drained Equivalent Fluid Density (pcf)	Undrained Equivalent Fluid Density (pcf)	Surcharge Pressure (psf)	Earth Pressure (psf)
Active (K_a)	Free Draining Aggregate - 0.28	31	NA	(0.28)S	(EFD)H
	Select Fill Soil - 0.39	49	87	(0.39)S	(EFD)H
	Common Fill/ On-Site Soil - 0.39	49	87	(0.39)S	(EFD)H
At Rest (K_o)	Free Draining Aggregate - 0.44	47	NA	(0.44)S	(EFD)H
	Select Fill Soil - 0.56	70	98	(0.56)S	(EFD)H
	Common Fill/ On-Site Soil - 0.56	70	98	(0.56)S	(EFD)H

Applicable conditions to Table 1 above include:

- Uniform surcharge, where S is surcharge pressure.
- EFD is Equivalent Fluid Density (drained or undrained as appropriate).
- Wall height (H) should be taken from the base of any unbalanced soil.
- Estimated free draining backfill density weight of 110 pcf may be used.
- Soil backfill total unit weight with a maximum of 125 pounds per cubic foot (pcf).
- Horizontal backfill, compacted a minimum of 95 percent of Standard Proctor maximum dry density, or to a minimum of 70 percent relative density.
- Positive drainage is provided behind all below-grade walls to preclude development of hydrostatic pressures in free draining backfill.
- For the granular values to be valid, the granular backfill must extend out from a point 2 feet from the base of the wall at an angle of at least 0.6H:1V or flatter.
- No loading contribution from compaction equipment, nearby footings, or pavement slabs.
- Select fill should meet the requirements specified in Section 6.3. Onsite soils that meet the above specifications can be used as select fill.
- The “on-site soils” exclude any weathered shale that may be encountered during excavation.

Table 2. Effective Friction Angle and Unit Weight

Backfill Type	Effective Friction Angle (degrees)	Unit Weight (pcf)
Free Draining Aggregate (Current Backfill Material)	34°	110
Select Fill Soils	26°	125
Common/On-site Soils (Foundation)	26°	125

6.2 Wall Foundations

Retaining walls may be supported on shallow continuous strip footings. For shallow continuous strip footings, we recommend that structural loads for the retaining walls be supported on reinforced concrete, monolithic shallow isolated or continuous footings founded at a depth of at least 24 inches below final exterior grade. The footings should be a minimum of 18 inches in width and should be designed for an allowable bearing capacity of 2,000 pounds per square foot if founded in reworked soils. A footing to soil friction factor of 0.3 may be used for reworked soils. A coefficient of 2.56 may be used for an allowable passive earth pressure for undisturbed on-site sands with a friction angle of 26°.

If footings are formed, the sides of the footings should be carefully backfilled with on-site or imported soils. Backfill soils obtained from on-site should be compacted to at least 95 percent of the maximum dry density, as determined by ASTM D698 (standard proctor), and should be placed at a moisture content that is at or above the optimum moisture content, as determined by the same test, or to a minimum of 70 percent relative density.

All footings or footing segments should be constructed in a relatively seamless operations, with excavation activities and placement of the reinforcement steel and concrete occurring within the same day. In the event that concrete cannot be placed in newly excavated footings, the base of each excavated footing may be covered with a thin seal of lean concrete. We recommend a representative of Geotex observe all footing excavations prior to placing concrete to verify bearing stratum competence. Any footing excavations left open overnight should be observed by Geotex prior to concrete placement in order to determine the extent of stratum degradation and the amount of additional depth of excavation required. The current wall backfill can be reused as backfill for the planned reconstruction, but should be inspected to verify that there are no construction debris present that were not observed at the time of drilling operations.

6.3 Wall Drainage

Where possible, positive drainage should be provided behind the walls to preclude development of hydrostatic pressure behind the walls, and to prevent saturation of backfill and foundation soils. If a wall drain system is not possible, such walls will need to be designed and constructed to accommodate the hydrostatic pressures that may be expected over the design life of the wall. When utilized, we recommend that a perimeter drain, such as a perforated pipe drain, be installed along the base of the fill behind the walls to rapidly

remove water from behind the wall. The perimeter drain should discharge collected water at least 5 feet away from any structure foundations.

Weep holes or other methods for drainage may also be considered to further aid in reducing the build-up of hydrostatic pressures. The drainage elements should be screened, or otherwise fitted to prevent appreciable loss of granular backfill and to prevent debris from clogging the elements.

For the granular earth pressure values to be valid, the granular backfill must extend at least 2 feet from the base of the wall and then up at an angle of 35 degrees from vertical or flatter. Free-draining select backfill should meet the requirements of TxDOT Item 423 Sizes AS, BS, or DS. Size DS select backfill should be used where inundation conditions are anticipated. ASTM C-33, size numbers 57, 6, 67, 7, 8, 89 or 9 may also be suitable, but should be evaluated prior to use. Filter fabric should be placed between free-draining backfill and on-site retained or backfill soils. A minimum 2-foot thick backfill cap utilizing imported clays should be placed over free-draining wall backfill from the outer edge of the wall excavation to a distance of at least two (2) feet beyond the wall excavation limits in order to minimize water infiltration into the wall backfill.

7.0 EARTHWORK RECOMMENDATIONS

We recommend that the slope be reconstructed and flattened at a maximum incline of 4H:1V (or flatter). Recommendations are provided in the following sections for reconstruction of the slopes and design and construction of the potential retaining wall.

We have the following earthwork recommendations for embankment reconstruction.

- After excavation, rework and recompact the exposed subgrade to a depth of 12 inches. The scarified and reworked soils should be compacted to at least 95 percent of the maximum dry density, as determined by ASTM D698 (standard Proctor), and at a moisture content that is at or above the optimum moisture content, as determined by that same test.
- Within 24 hours of recompacting the reworked excavated exposed subgrade, begin fill operations with the stockpiled on-site soils or imported soils to finished pad elevation. The fill should be spread across the benched pads in a uniform thickness atop the scarified layer as the first and succeeding lifts. The reworked or imported fill soils should be placed in maximum 8-inch compacted lifts, be compacted to at least 95 percent of the maximum dry density as determined by ASTM D698 (standard Proctor) and be placed at a moisture content that is at or above the optimum moisture content, as determined by that same test.
- Grade raise fill within the slope area may be on-site or imported material. Imported materials should have a Liquid Limit (LL) of less than 50, a Plasticity Index (PI) of less than 30, be essentially free of particles in excess of 4 inches in their longest direction and have a minimum of 35 percent passing the No. 200 sieve.

- Good surface drainage should be established at the beginning of construction and maintained thereafter to prevent ponding of water in or around construction areas.
- Each lift of fill placed should be tested for moisture content and degree of compaction by a testing laboratory at a minimum frequency of one (1) test performed for every 3,000 square-feet, and with a minimum of three (3) tests performed per lift of fill placed within the footprint of the remediation.
- Grass or vegetation should be maintained to prevent erosion in those areas.

8.0 OTHER CONSTRUCTION

8.1 Site Grading

Expansive clay cut and fill slopes should be gentle and preferably should not exceed 4 horizontals to 1 vertical (4H: 1V).

Excess water ponding on and beside roadways can cause unacceptable heave of these structures. To reduce this potential heave, good surface drainage should be established. In addition, final grades in the vicinity pavements should provide for positive drainage away from these elements.

8.2 Excavations

Excavations greater than 4 feet in height/depth should be in accordance with OSHA 29CFR 1926, Subpart P. Temporary construction slopes should incorporate excavation protection systems or should be sloped back. Where the excavation does not extend close to building lines, these areas may be laid back. Where space allows, temporary slopes should be sloped at 1.5 horizontal to 1 vertical (1.5H: 1V) or flatter.

Where excavation slopes greater than four (4) feet in height cannot be laid back, these areas will require installation of a temporary retention system or shoring to protect the existing construction, restrain the subsurface soils and maintain the integrity of the excavation. We recommend that monitoring points be established around the retention system and that these locations be monitored during and after the excavation activities to confirm the integrity of the retention system.

The slopes and temporary retention system should be verified by and designed by the contractor's engineer and should not be surcharged by traffic, construction equipment, or permanent structures. The slopes and temporary retention system should be adequately maintained and periodically inspected to ensure the safety of the excavation and surrounding property.

9.0 LIMITATIONS

The professional geotechnical engineering services performed for this project, the findings obtained, and the recommendations prepared were accomplished in accordance with currently accepted geotechnical engineering principles and practices.

Variations in the subsurface conditions are noted at the specific boring locations for this study. As such, all users of this report should be aware that differences in depths and thicknesses of strata encountered can vary between the boring locations. Statements in the report as to subsurface conditions across the site are extrapolated from the data obtained at the specific boring locations. The number and spacing of the exploration borings were chosen to obtain geotechnical information for the design and construction of a retaining wall system. If there are any conditions differing significantly from those described herein, Geotex should be notified to re-evaluate the recommendations contained in this report.

Recommendations contained herein are not considered applicable for an indefinite period of time. Our office must be contacted to re-evaluate the contents of this report if construction does not begin within a one-year period after completion of this report.

The scope of services provided herein does not include an environmental assessment of the site or investigation for the presence or absence of hazardous materials in the soil, surface water, or groundwater.

All contractors referring to this geotechnical report should draw their own conclusions regarding excavations, construction, etc. for bidding purposes. Geotex is not responsible for conclusions, opinions or recommendations made by others based on these data. The report is intended to guide preparation of project specifications and should not be used as a substitute for the project specifications.

Recommendations provided in this report are based on our understanding of information provided by the Client to us regarding the scope of work for this project. If the Client notes any differences, our office should be contacted immediately since this may materially alter the recommendations.

This report has been prepared for the exclusive use of our client for specific applications to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Geotex reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX A - BORING LOGS AND SUPPORTING DATA



BORING LOCATIONS ARE INTENDED FOR GRAPHICAL REFERENCE ONLY



BORING LOCATIONS ARE INTENDED FOR GRAPHICAL REFERENCE ONLY



NORTH RICHLAND HILLS

PLAN OF BORINGS
NRH RETAINING WALL

TEXAS

SHEET NO.
G2

DATE DRILLED
March 28, 2024

LITHOLOGIC SYMBOLS

ARTIFICIAL		Asphalt
		Aggregate Base
		Concrete
		Fill

SOIL		CH: High Plasticity Clay
		CL: Low Plasticity Clay
		GP: Poorly-graded Gravel
		GW: Well-graded Gravel
		SC: Clayey Sand
		SP: Poorly-graded Sand
		SW: Well-graded Sand

ROCK		Limestone
		Mudstone
		Shale
		Sandstone
		Weathered Limestone
		Weathered Shale
		Weathered Sandstone

CONSISTENCY OF SOILS

CONSISTENCY: FINE GRAINED SOILS		
Consistency	SPT (blowcounts)	PP (tsf)
Very Soft	0 - 2	< 0.25
Soft	3 - 4	0.25 - 0.5
Medium Stiff	5 - 8	0.5 - 1.0
Stiff	9 - 15	1.0 - 2.0
Very Stiff	16 - 30	2.0 - 4.0
Hard	> 30	> 4.0

CONDITION OF SOILS

CONDITION: COARSE GRAINED SOILS			
Condition	SPT (blowcounts)	TCP (values)	Relative Density (%)
Very Loose	0 - 4	< 8	0 - 15
Loose	5 - 10	8 - 20	15 - 35
Medium Dense	11 - 30	20 - 80	35 - 65
Dense	31 - 50	80 - 5 in./100	65 - 85
Very Dense	> 50	0 in. - 5 in./100	85 - 100

SECONDARY COMPONENTS

QUANTITY DESCRIPTORS	
Trace	< 5% of sample
Few	5% to 10%
Little	10% to 25%
Some	25% to 35%
With	> 35%

RELATIVE HARDNESS OF ROCK MASS

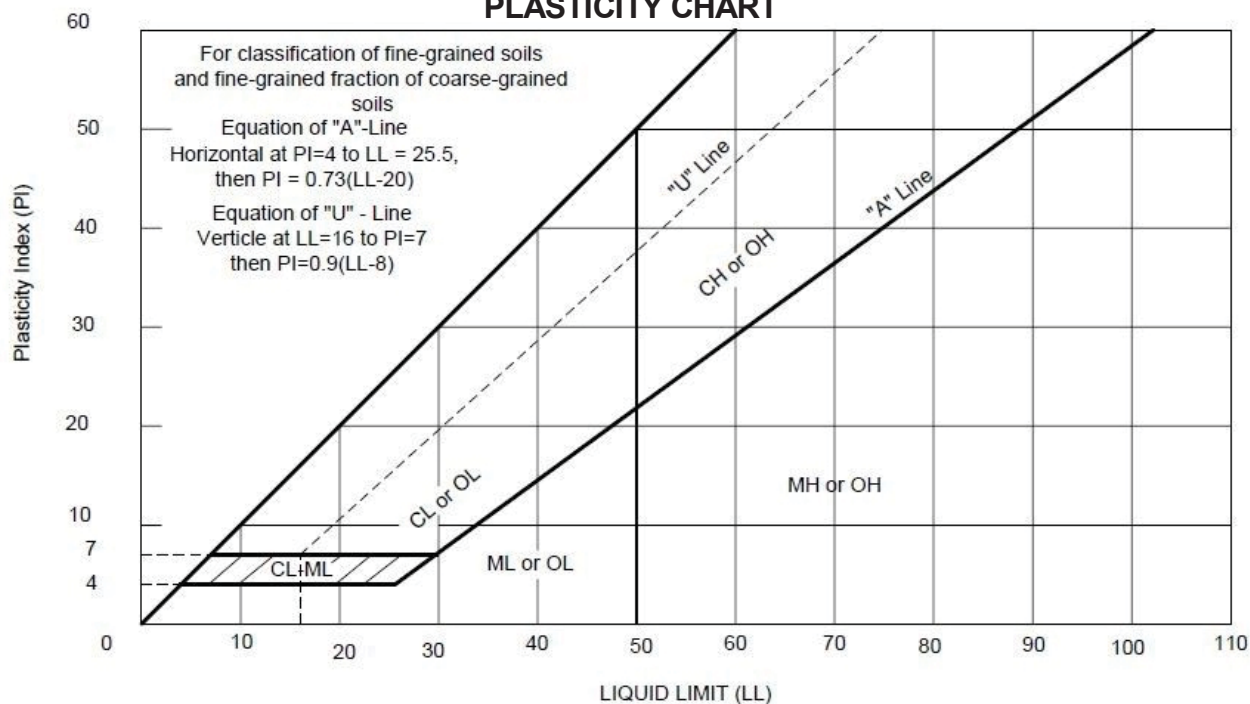
Designation	Description
Very Soft	Can be carved with a knife. Can be excavated readily with point of pick. Pieces 1" or more in thickness can be broken by finger pressure. Readily scratched with fingernail.
Soft	Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows with the pick point. Small, thin pieces can be broken by finger pressure.
Medium Hard	Can be grooved or gouged 1/4" deep by firm pressure on knife or pick point. Can be excavated in small chips to pieces about 1" maximum size by hard blows with the point of a pick.
Moderately Hard	Can be scratched with knife or pick. Gouges or grooves 1/4" deep can be excavated by hard blow of the point of a pick. Hand specimens can be detached by a moderate blow.
Hard	Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach a hand specimen.
Very Hard	Cannot be scratched with knife or sharp pick. Breaking of hand specimens requires several hard blows from a hammer or pick.

WEATHERING OF ROCK MASS

Designation	Description
Fresh	No visible sign of weathering
Slightly weathered	Penetrative weathering on open discontinuity surfaces, but only slight weathering of rock material
Moderately weathered	Weathering extends throughout rock mass, but the rock material is not friable
Highly weathered	Weathering extends throughout rock mass, and the rock material is partly friable
Completely weathered	Rock is wholly decomposed and in a friable condition but the rock texture and structure are preserved
Residual Soil	A soil material with the original texture, structure, and mineralogy of the rock completely destroyed

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS				GROUP SYMBOL	GROUP NAME
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS RETAINED ON THE NO. 200 SIEVE	GRAVELS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS	$Cu \geq 4$ and $1 \leq Cc \leq 3$	GW	WELL-GRADED GRAVEL
		(LESS THAN 5% FINES)	$Cu < 4$ and/or $[Cc < 1$ or $Cc > 3]$	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES	Fines classify as ML or MH	GM	SILTY GRAVEL
		(MORE THAN 12% FINES)	Fines classify as CL or CH	GC	CLAYEY GRAVEL
	SANDS MORE THAN 50% OF COARSE FRACTION PASSING THE NO. 4 SIEVE	CLEAN SANDS	$Cu \geq 6$ and $1 \leq Cc \leq 3$	SW	WELL-GRADED SAND
		(LESS THAN 5% FINES)	$Cu < 6$ and/or $[Cc < 1$ or $Cc > 3]$	SP	POORLY-GRADED SAND
		SANDS WITH FINES	Fines classify as ML or MH	SM	SILTY SAND
		(MORE THAN 12% FINES)	Fines classify as CL or CH	SC	CLAYEY SAND
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL PASSES THROUGH THE NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50	INORGANIC	PI > 7 and plots on or above "A" line	CL	LEAN CLAY
			PI < 4 or plots below "A" line	ML	SILT
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50	ORGANIC	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OL	ORGANIC CLAY ORGANIC SILT
		INORGANIC	PI plots on or above "A" line	CH	FAT CLAY
			PI plots below "A" line	MH	ELASTIC SILT
ORGANIC	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OH	ORGANIC CLAY ORGANIC SILT		
HIGHLY ORGANIC SOILS	PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR			PT	PEAT

PLASTICITY CHART


DRILLED BY: Octavio Herrera (Geotex)

Notes:
-seepage at 25 feet during drilling
-water at 22 feet at completion



DRILLED BY: Octavio Herrera (Geotex)

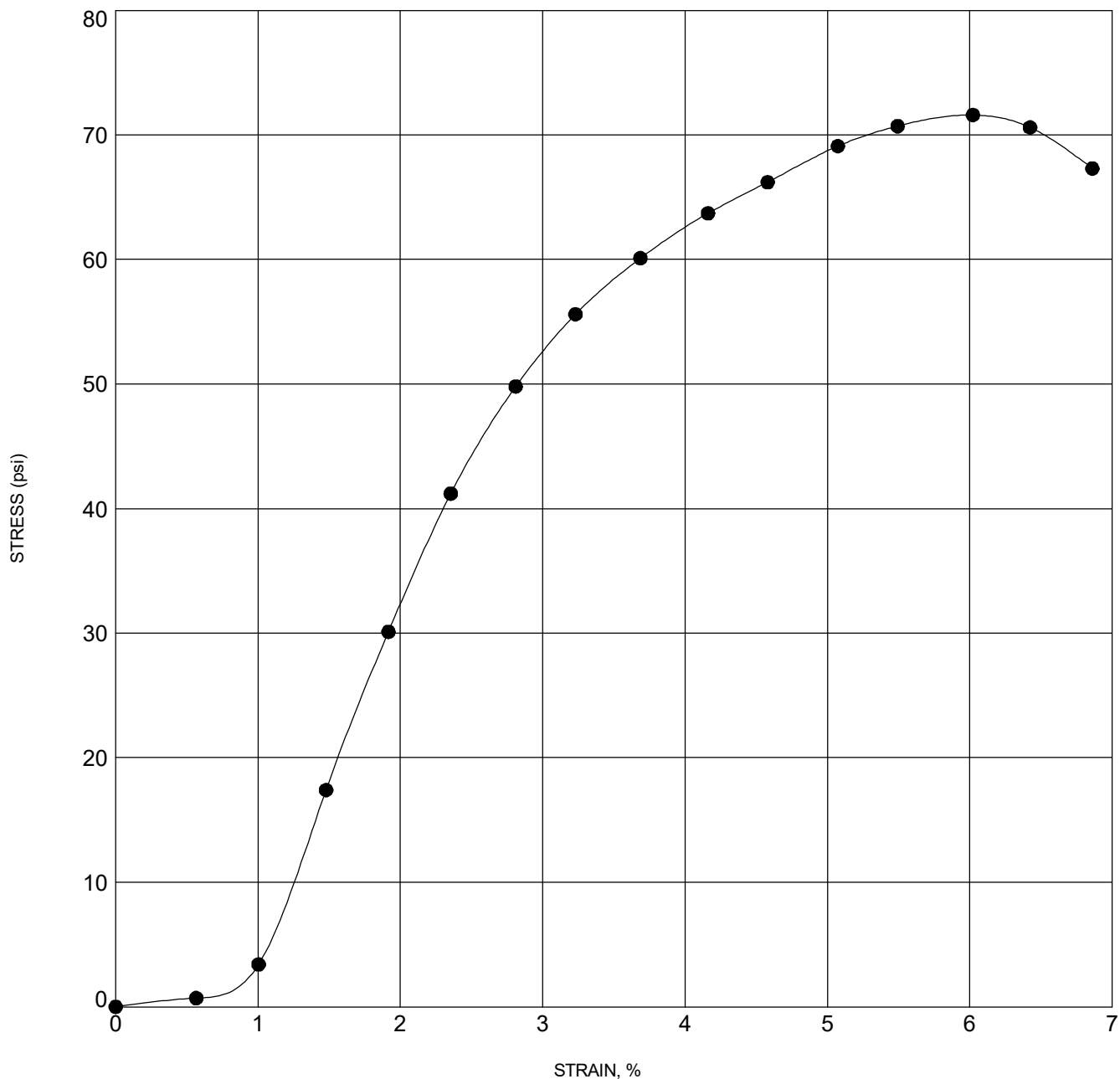
[illegible]

PROJECT: NRH Retaining Walls

CLIENT: Peloton Land Solutions

PROJECT NUMBER: G23-2232

LOCATION: North Richland Hills, Texas



Borehole	Depth	Description	Compressive Strength (psi)	γ_d (pcf)	MC%
● RW1	7.0	SHALE; highly weathered; very soft; light brown, gray	71.6	112.5	16.9



SWELL TEST RESULTS

PROJECT: NRH Retaining Walls

CLIENT: Peloton Land Solutions

PROJECT NUMBER: G23-2232

LOCATION: North Richland Hills, Texas

Boring Number	Depth feet	Initial Moisture Content, %	Final Moisture Content, %	Vertical Swell, %
RW2	5-6	12.4	15.4	0.1

APPENDIX B - GENERAL DESCRIPTION OF PROCEDURES

ANALYTICAL METHODS TO PREDICT MOVEMENT

INDEX PROPERTY AND CLASSIFICATION TESTING

Classification testing is perhaps the most basic, yet fundamental tool available for predicting potential movements of clay soils. Classification testing typically consists of moisture content, Atterberg Limits, and Grain-size distribution determinations. From these results a general assessment of a soil's propensity for volume change with changes in soil moisture content can be made.

Moisture Content

By studying the moisture content of the soils at varying depths and comparing them with the results of Atterberg Limits, one can estimate a rough order of magnitude of potential soil movement at various moisture contents, as well as movements with moisture changes. These tests are typically performed in accordance with ASTM D2216.

Atterberg Limits

Atterberg limits determine the liquid limit (LL), plastic limit (PL), and plasticity index (PI) of a soil. The liquid limit is the moisture content at which a soil begins to behave as a viscous fluid. The plastic limit is the moisture content at which a soil becomes workable like putty, and at which a clay soil begins to crumble when rolled into a thin thread (1/8" diameter). The PI is the numerical difference between the moisture constants at the liquid limit and the plastic limit. This test is typically performed in accordance with ASTM D4318.

Clay mineralogy and the particle size influence the Atterberg Limits values, with certain minerals (e.g., montmorillonite) and smaller particle sizes having higher PI values, and therefore higher movement potential.

A soil with a PI below about 15 to 18 is considered to be generally stable and should not experience significant movement with changes in moisture content. Soils with a PI above about 30 to 35 are considered to be highly active and may exhibit considerable movement with changes in moisture content.

Fat clays with very high liquid limits, weakly cemented sandy clays, or silty clays are examples of soils in which it can be difficult to predict movement from classification testing alone.

Grain-size Distribution

The simplest grain-size distribution test involves washing a soil specimen over the No. 200 mesh sieve with an opening size of 0.075 mm (ASTM D1140). This particle size has been defined by the engineering community as the demarcation between coarse-grained and fine-grained soils. Particles smaller than this size can be further distinguished between silt-size and clay-size particles by use of a Hydrometer test (ASTM D422). A more complete grain-size distribution test that uses sieves to relative amount of particles according is the Sieve Gradation Analysis of Soils (ASTM D6913). Once the characteristics of the soil are determined through classification testing, a number of movement prediction techniques are available to predict the potential movement of the soils. Some of these are discussed in general below.

TEXAS DEPARTMENT OF TRANSPORTATION METHOD 124-E

The Texas Department of Transportation (TxDOT) has developed a generally simplistic method to predict movements for highways based on the plasticity index of the soil. The TxDOT method is empirical and is based on the Atterberg limits and moisture content of the subsurface soil. This method generally assumes three different initial moisture conditions: dry, "as-is", and wet. Computation of each over an assumed depth of seasonal moisture variation (usually about 15 feet or less) provides an estimate of potential movement at each initial condition. This method requires a number of additional assumptions to develop a potential movement estimate. As such, the predicted movements generally possess large uncertainties when applied to the analysis of conditions under pavements.

POTENTIAL VERTICAL MOVEMENT

A general index for movement is known as the Potential Vertical Rise (PVR). The actual term PVR refers to the TxDOT Method 124-E mentioned above. For the purpose of this report the term Potential Vertical Movement (PVM) will be used since PVM estimates are derived using multiple analytical techniques, and not just TxDOT methods.

Vertical movement of clay soils under pavements resulting to soil moisture changes can result from a variety causes, including poor site grading and drainage, improperly prepared subgrade, trees and large shrubbery located too close to structures, utility leaks or breaks, poor subgrade maintenance such as inadequate or excessive irrigation, or other causes.

PVM is generally considered to be a measurement of the change in height of a foundation from the elevation it was originally placed. Experience and generally accepted practice suggest that if the PVM of a site is less than one inch, the associated differential movement will be minor and acceptable to most people.

SPECIAL COMMENTARY ON CONCRETE AND EARTHWORK

UTILITY TRENCH EXCAVATION

Trench excavation for utilities should be sloped or braced in the interest of safety. Attention is drawn to OSHA Safety and Health Standards (29 CFR 1926/1910), Subpart P, regarding trench excavations greater than 5 feet in depth.

FIELD SUPERVISION AND DENSITY TESTING

Construction observation and testing by a field technician under the direction of a licensed geotechnical engineer should be provided. Some adjustments in the test frequencies may be required based upon the general fill types and soil conditions at the time of fill placement.

It is recommended that all site and subgrade preparation, proof rolling, and pavement construction be monitored by a qualified engineering firm. Density tests should be performed to verify proper compaction and moisture content of any earthwork. Inspection should be performed prior to and during concrete placement operations.



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