

**CONTRACT DOCUMENTS
AND
CONSTRUCTION SPECIFICATIONS
FOR
NORTH RICHLAND
BOULEVARD
PAVING, WATER, & SANITARY
SEWER REHABILITATION
FOR THE
CITY OF NORTH RICHLAND HILLS**



June 2025

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

Project RFB 25-024

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NRH PURCHASING GUIDANCE



PURCHASING DEPARTMENT

REQUEST FOR BID

25-024 NORTH RICHLAND

BOULEVARD

PAVING, WATER, & SANITARY

SEWER REHABILITATION

BIDS DUE TUESDAY, JULY 22, 2025

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: 25-024
- Bid Type: REQUEST FOR BID
- Bid Name: NORTH RICHLAND BOULEVARD PAVING, WATER, & SANITARY SEWER REHABILITATION
- Bid Due Date: Tuesday, July 22, 2025
- Bid Due Time: 2:00 P.M. Central Standard Time
- Pre-Bid Conference: 10:00 A.M. Central Standard Time, Tuesday July 1, 2025
- Location: Development Services Public Conference Room, 4301 City Point Dr, North Richland Hills, TX 76180
- Deadline for questions:
 - Date: Friday, July 11, 2025
 - 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, July 22, 2025**. 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. NORTH RICHLAND BOULEVARD CONTRACT
2. NORTH RICHLAND BOULEVARD 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 City Hall until **2:00 p.m. on Tuesday, July 22, 2025**, for furnishing all labor, material, equipment and the performance of all work required for:

NORTH RICHLAND BOULEVARD PAVING, WATER, & SANITARY SEWER REHABILITATION

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, July 01, 2025**, at **Development Services Public Conference 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, Eva Ramirez, 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: The project consists of the design and reconstruction of approximately 3,575 linear feet of North Richland Boulevard from Holiday Lane to Davis Boulevard. The improvements include reconstructing the existing roadway with new full-depth subgrade, with new pavement, and basic wet utility replacement as needed to ensure subsurface infrastructure has an expected life span that exceeds the proposed pavement work. Sidewalks will be reconstructed as needed, with any missing segments filled in. The road will be reconstructed within the existing right-of-way in its current configuration.

CITY OF NORTH RICHLAND HILLS

Eva Ramirez
Purchasing Manager

ADVERTISEMENT DATES:

- June 20, 2025
- June 23, 2025

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, July 01, 2025, at Development Services Public Conference 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 Eva Ramirez, Purchasing Manager by **12:00pm (noon) CST on Friday, July 11, 2025**. 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 Eva Ramirez, 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 Eva Ramirez, Purchasing Manager or directly through Public Purchase and to be given consideration, must be received by **12:00PM (noon) on Friday, July 11, 2025**. 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
NORTH RICHLAND BOULEVARD
PAVING, WATER, & SANITARY SEWER
REHABILITATION
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, July 22, 2025

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

FOR: NORTH RICHLAND BOULEVARD PAVING, WATER, &
SANITARY SEWER REHABILITATION

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	\$ _____
Section II – Paving	\$ _____
Section III – Storm Drain	\$ _____
Section IV – Water and Sewer	\$ _____
Section V – Pavement Marking and Signing	\$ _____
Section VI – Landscaping and Irrigation	\$ _____
Section VII – Contingency	\$ _____

\$ _____
(Total Amount Bid, Numerical Value)

Total Amount Bid: Bid Alternate #1*:

Full Sidewalk Remove and Replace	\$ _____
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(Total Amount Bid Alternate #1, Numerical Value)

Total Amount Bid: Bid Alternate #2*:

Sanitary Sewer Line Pipe Bursting	\$ _____
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(Total Amount Bid Alternate #2, Numerical Value)

Total Amount Bid: Bid Alternate #3A*:

Lime Stabilized Subgrade	\$ _____
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(Total Amount Bid Alternate #3A, 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 **470 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						
SECTION I - GENERAL						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
1	NCTCOG 203.1	GENERAL SITE PREPARATION per unit	1	LS	\$	\$
2	TXDOT 500	MOBILIZATION per unit	1	LS	\$	\$
3	CITY DETAIL	PROJECT SIGN per unit	2	EA	\$	\$
4	TXDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING per unit	16	MO	\$	\$
5	TXDOT 560	MASONRY MAILBOX (REMOVE & REPLACE) per unit	9	EA	\$	\$
6	TXDOT 560	STANDARD POLE MAILBOX (REMOVE & REPLACE) per unit	36	EA	\$	\$
7	NCTCOG 202	SWPPP PLAN AND EROSION CONTROL ITEMS per unit	1	LS	\$	\$
8	NCTCOG 201.1	TREE PROTECTION FENCING per unit	30	LF	\$	\$
9	NCTCOG 201.1	REMOVE TREE per unit	4	EA	\$	\$
10	NCTCOG 203.1	REMOVE CONCRETE PAVEMENT per unit	60	SY	\$	\$
11	NCTCOG 203.1	REMOVE 6" ASPHALT PAVEMENT per unit	13,882	SY	\$	\$
12	NCTCOG 203.1	REMOVE CONCRETE CURB & GUTTER per unit	1,063	SY	\$	\$
13	NCTCOG 203.1	REMOVE CONCRETE DRIVEWAY per unit	1,385	SY	\$	\$
14	NCTCOG 203.1	REMOVE CONCRETE SIDEWALK per unit	981	SY	\$	\$
15	NCTCOG 203.1	REMOVE CONCRETE RAMPS per unit	107	SY	\$	\$
16	NCTCOG 203.1	REMOVE CONCRETE RETIAING WALL (<3.0') per unit	7	LF	\$	\$
17	NCTCOG 203.1	REMOVE CONCRETE VALLEY GUTTERS per unit	411	SY	\$	\$
18	NCTCOG 203.1	REMOVE CONCRETE FOUNDATION per unit	1	CY	\$	\$
19	NCTCOG 203.1	REMOVE CURB INLET TOP per unit	5	EA	\$	\$
SUBTOTAL - SECTION I - GENERAL					\$	
SECTION II - PAVING						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
20	NCTCOG 203.2	EXCAVATION (ROADWAY) per unit	4,200	CY	\$	\$
21	TXDOT 247	8" TXDOT FLEXBASE TYPE A, GRADE 1 OR 2 per unit	16,660	SY	\$	\$
22	TXDOT 360	7" REINFORCED CONCRETE PAVING W/MONOLITHIC CURB per unit	15,100	SY	\$	\$
23	TXDOT 530	6" CONCRETE DRIVEWAY per unit	1,385	SY	\$	\$
24	TXDOT 340	ASPHALT TRANSITION PAVEMENT (2" TY D ASPHALT ON 4" TY B ASPHALT) per unit	391	SY	\$	\$
25	DETAIL	REINSTALL CURB DRAIN per unit	5	EA	\$	\$
26	TXDOT 531	4" CONCRETE SIDEWALK per unit	1,495	SY	\$	\$
27	TXDOT 529	MONOLITHIC CURB WALL per unit	200	LF	\$	\$
28	TXDOT 531	CURB RAMP per unit	25	EA	\$	\$
SUBTOTAL - SECTION II - PAVING					\$	
SECTION III - STORM DRAIN						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
29	TXDOT 465	CONCRETE INLET TOP per unit	30	SY	\$	\$
SUBTOTAL - SECTION III - STORM DRAIN					\$	

SECTION IV - WATER AND SEWER

Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
30	TXDOT 402	TRENCH SAFETY (WATER) per unit	3,722	LF	\$	\$
31	NCTCOG 501.14	6" PVC AWWA C900 DR18 CLASS 150 WATER PIPE (OPEN CUT) per unit	476	LF	\$	\$
32	NCTCOG 501.14	8" PVC AWWA C900 DR18 CLASS 150 WATER PIPE (OPEN CUT) per unit	3,560	LF	\$	\$
33	NCTCOG 501.14	12" PVC AWWA C900 DR18 CLASS 150 WATER PIPE (OPEN CUT) per unit	56	LF	\$	\$
34	CITY DETAIL	TEMPORARY PAVEMENT REPAIR (WATER) per unit	3,720	LF	\$	\$
35	NCTCOG 502.6	6" RESILIENT SEATED GATE VALVE W/ BOX per unit	6	EA	\$	\$
36	NCTCOG 502.6	8" RESILIENT SEATED GATE VALVE W/ BOX per unit	14	EA	\$	\$
37	NCTCOG 502.6	12" RESILIENT SEATED GATE VALVE W/ BOX per unit	1	EA	\$	\$
38	NCTCOG 502.6	12"x8" TAPPING SLEEVE AND VALVE per unit	1	EA	\$	\$
39	NCTCOG 502.5	DUCTILE IRON FITTINGS per unit	3.22	TN	\$	\$
40	NCTCOG 502.3	FIRE HYDRANT ASSEMBLY per unit	6	EA	\$	\$
41	NCTCOG 502.10	WATER SERVICE (SHORT) per unit	15	EA	\$	\$
42	NCTCOG 502.10	WATER SERVICE (LONG) per unit	10	EA	\$	\$
43	NCTCOG 201.2	CONNECTION TO EXISTING WATER LINE per unit	9	EA	\$	\$
44	NCTCOG 502.10	TEMPORARY WATER SERVICE per unit	1	LS	\$	\$
45	NCTCOG 107.20.3	TRENCH SAFETY (SEWER) per unit	2,860	LF	\$	\$
46	NCTCOG 504.17	6" PVC SDR-26 SANITARY SEWER PIPE (OPEN CUT) per unit	27	LF	\$	\$
47	NCTCOG 504.17	6" PVC SDR-35 SANITARY SEWER PIPE (OPEN CUT) per unit	134	LF	\$	\$
48	NCTCOG 504.17	8" PVC SDR-26 SANITARY SEWER PIPE (OPEN CUT) per unit	120	LF	\$	\$
49	NCTCOG 504.17	8" PVC SDR-35 SANITARY SEWER PIPE (OPEN CUT) per unit	2,579	LF	\$	\$
50	CITY DETAIL	TEMPORARY PAVEMENT REPAIR (SEWER) per unit	3,755	LF	\$	\$
51	NCTCOG 502.1	4' DIA SANITARY SEWER MANHOLE (5FT DEEP) per unit	13	EA	\$	\$
52	NCTCOG 502.1	EXTRA DEPTH MANHOLE (>5FT) per unit	14	VF	\$	\$
53	NCTCOG 502.10	SANITARY SEWER SERVICE (SHORT) per unit	21	EA	\$	\$
54	NCTCOG 502.10	SANITARY SEWER SERVICE (LONG) per unit	26	EA	\$	\$
55	NCTCOG 507.5	PRE-CCTV INSPECTION per unit	2,860	LF	\$	\$
56	NCTCOG 507.5	POST-CCTV INSPECTION per unit	2,860	LF	\$	\$
57	NCTCOG 502.10	MANHOLE VACUUM TESTING per unit	13	EA	\$	\$
58	NCTCOG 502.1	CONNECT TO EXISTING SANITARY SEWER LINE per unit	4	EA	\$	\$
59	NCTCOG 701.2	WATER ABANDONMENT PLUG per unit	25	EA	\$	\$
60	NCTCOG 701.2	REMOVE AND SALVAGE WATER VALVE per unit	18	EA	\$	\$
61	NCTCOG 701.2	REMOVE AND SALVAGE FIRE HYDRANT per unit	6	EA	\$	\$
62	NCTCOG 701.2	REMOVE SANITARY SEWER MANHOLE per unit	11	EA	\$	\$
SUBTOTAL - SECTION IV - WATER AND SEWER					\$	

SECTION V - 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
63	TXDOT 636	RELOCATE SIGN PANEL(S) ON NEW POST per unit	17	EA	\$	\$
64	TXDOT 636	INSTALL SM SIGN PANEL(S) ON NEW POST per unit	2	EA	\$	\$
65	TXDOT 666	REFL PAV MARK TY I (W)8"(SLD) per unit	80	LF	\$	\$
66	TXDOT 666	REFL PAV MARK TY I (W)12"(SLD) per unit	80	LF	\$	\$
67	TXDOT 666	REFL PAV MARK TY I (W)24"(SLD) per unit	482	LF	\$	\$
68	TXDOT 666	REFL PAV MARK TY I (Y)4"(SLD) per unit	160	LF	\$	\$
69	TXDOT 672	REFL PAV MRKR TY II-A-A per unit	1,192	EA	\$	\$
70	TXDOT 672	REFL PAV MRKR TY Y per unit	316	EA	\$	\$
71	NCTCOG 804.2	INSTALL PAINTED CURB ADDRESS per unit	43	EA	\$	\$

SUBTOTAL - SECTION V - PAVEMENT MARKING AND SIGNING

\$

SECTION VI - LANDSCAPE AND IRRIGATION

Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
72	TXDOT 160	FURNISHING AND PLACING TOPSOIL (4") per unit	370	CY	\$	\$
73	TXDOT 162	BLOCK SODDING per unit	3,325	SY	\$	\$
74	NCTCOG 204	LANDSCAPING RESTORATION ALLOWANCE Ten Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 10,000.00	\$ 10,000.00
75	NCTCOG 502	IRRIGATION RESTORATION ALLOWANCE (RESIDENTIAL) Seventy Five Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 75,000.00	\$ 75,000.00
76	NCTCOG 502	IRRIGATION RESTORATION ALLOWANCE (COMMERICAL) Fifteen Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 15,000.00	\$ 15,000.00

SUBTOTAL - SECTION VI - LANDSCAPE AND IRRIGATION

\$

SECTION VII - CONTINGENCY

Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
77	PROJECT MANUAL	PROJECT CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00
78	PROJECT MANUAL	UTILITY CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00
79	PROJECT MANUAL	PAVEMENT CONTINGENCY AS DIRECTED BY OWNER Twenty Thousand DOLLARS and Zero CENTS per unit	1	LS	\$ 20,000.00	\$ 20,000.00

SUBTOTAL - SECTION VII - CONTINGENCY

Sixty Thousand DOLLARS and Zero CENTS \$ **60,000.00**

TOTAL - BASE BID (SECTIONS I THROUGH VII)

\$

BID ALTERNATE #1 - FULL SIDEWALK REMOVE/REPACE

Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
A1-1	NCTCOG 203.1	REMOVE CONCRETE SIDEWALK (ALT BID) per unit	1,557	SY	\$	\$
A1-2	NCTCOG 203.1	4" CONCRETE SIDEWALK (ADDITIONAL ALT BID) per unit	1,410	SY	\$	\$

TOTAL - BID ALTERNATE #1 - FULL SIDEWALK REMOVE/REPACE

					\$	
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BID ALTERNATE #2 - SANITARY SEWER LINE "A", "A1", AND "B1" PIPE BURSTING

Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
A2-1	NCTCOG 107.20.3	TRENCH SAFETY (SEWER) per unit	(2,600)	EA	\$	\$
A2-2	NCTCOG 504.14	8" PVC SDR-26 SANITARY SEWER PIPE (OPEN CUT) per unit	(120)	EA	\$	\$
A2-3	NCTCOG 504.14	8" PVC SDR-35 SANITARY SEWER PIPE (OPEN CUT) per unit	(2,480)	LF	\$	\$
A2-4	CITY DETAIL	TEMPORARY PAVEMENT REPAIR (WATER) per unit	(2,600)	LF	\$	\$
A2-5	NCTCOG 601.8	8" PIPE BURSTING WITH POLYETHYLENE PIPE per unit	2,600	LF	\$	\$

TOTAL - BID ALTERNATE #2 - SANITARY SEWER LINE "A" AND "B-1" PIPE BURSTING

					\$	
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BID ALTERNATE #3 - LIME STABILIZED SUBBASE IN LIEU OF FLEXBASE

Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
A3-1	NCTCOG 203.2	EXCAVATION (ROADWAY) per unit	(3,700)	CY	\$	\$
A3-2	TXDOT 247	8" TXDOT FLEXBASE TYPE A, GRADE 1 OR 2 per unit	(16,660)	SY	\$	\$
A3-3	NCTCOG 301.2	HYDRATED LIME per unit	400	TON	\$	\$
A3-4	NCTCOG 301	8" LIME STABILIZED SUBGRADE (48 LB/SY) per unit	16,660	SY	\$	\$

TOTAL - BID ALTERNATE #3 - LIME STABILIZED SUBBASE IN LIEU OF FLEXBASE

					\$	
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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:

NORTH RICHLAND BOULEVARD PROJECT

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 and 3) shall start immediately following the previous phase. There shall be no stopping of work or delay of work between phases. Contractor can coordinate with the City of North Richland Hills on a schedule to work on multiple phases concurrently.

Traffic Control Phase	Duration (Calendar Days)	Anticipated Start Timeframe
<u>Phase 1</u> (Sanitary sewer replacement)	185 Days	Within 10 days from date on “Notice to Proceed”
<u>Phase 2</u> (Water line replacement)	185 Days	Immediately after Phase 1 is complete or coordinated with City
<u>Phase 3</u> (Concrete paving, sidewalks, and side streets)	100 Days	Immediately after Phase 2 is complete or coordinated with City
<u>Final Acceptance</u>	Within 470 days from date on “Notice to Proceed”	

** Alternate Bid(s) do not impact Durations.

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 **470** 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 Phase 1** provided in the Construction Drawings within 185 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 be considered completed, all construction activities included in the Sequence of Construction provided in the Construction Drawings must:
 - a. be in place;
 - b. be functional;
 - c. all permanent sewer lines, manholes, and service connections and appurtenances shall be operational as determined by the OWNER, AND;
 - d. 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 Phase 2** provided in the Construction Drawings within 185 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 permanent water lines, fire hydrants, service connections and appurtenances shall be operational as determined by the OWNER, AND;
 - d. 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 Phase 3** provided in the Construction Drawings within 100 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 sidewalks and ramps 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, AND;
- e. 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 3 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 Contract Time is of the essence and will be strictly enforced. Liquidated Damages will be assessed against the Contractor for failure to complete the project to total (100%) Final Completion within the Contract Time (470 calendar days). The Contractor and surety agree that the liquidated damages provisions in this Contract are reasonable, facially valid, are not a penalty, and do not otherwise operate as a penalty.

For each and every calendar day that any Work shall remain incomplete after the expiration of the Contract Time as specified in the Contract Documents, including any time extension authorized in writing by the Owner, the sum of \$1,000.00 per calendar day may be deducted from the moneys due to the Contractor, or may be charged against the Contractor, not as a penalty, but as liquidated damages. The Contractor agrees that for purposes of Texas Gov't Code Ch. 2252, a bone fide dispute exists if liquidated damages are assessed under this Contract and the Owner may withhold Retainage to satisfy liquidated damages owed to the Owner hereunder.

The sum of money thus deducted or charges as liquidated damages is not to be consisted as a penalty, but shall be deemed, taken, and treated as reasonable liquidated damages, representing a reasonable estimate of damages, or reasonable forecast of just compensation, because the harm caused by the breach is incapable or extremely difficulty of estimation due to the public nature of the work and the likely loss to be sustained by the Owner and the general public, estimated at or before the time of executing this Contract.

Further, the parties acknowledge the Owner's paramount purposes and duty to protect the "public fisc" and the general health, safety, and welfare of the public, and the parties agree that any alleged disparity between actual and liquidated damages shall be construed as bridgeable and acceptable as a matter of law and public policy and shall be calculated and construed in favor of the Owner.

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 9. 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 10. 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 Office

CONTRACTOR:

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

ATTEST:

By: _____
Name: _____
Title: _____

APPROVED TO FORM AND LEGALITY:

By: _____
Bradley 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 (\$ _____) [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:

NORTH RICHLAND BOULEVARD PROJECT

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__.

_____ <i>(Company Name of Principal)</i>	_____ <i>(Company Name of Surety)</i>
_____ <i>(Signature)</i>	_____ <i>(Signature)</i>
_____ <i>(Printed Name)</i>	_____ <i>(Printed Name)</i>
_____ <i>(Title)</i>	_____ <i>(Title)</i>
_____ <i>(Address Line 1)</i>	_____ <i>(Address Line 1)</i>
_____ <i>(Address Line 2)</i>	_____ <i>(Address Line 2)</i>
_____ <i>(City, State and Zip Code)</i>	_____ <i>(City, State and Zip Code)</i>
_____ <i>(Witness)</i>	_____ <i>(Witness)</i>

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

_____ <i>(Name)</i>	
_____ <i>(Address Line 1)</i>	
_____ <i>(Address Line 2)</i>	
_____ <i>(City, State and Zip Code)</i>	
_____ <i>(Telephone Number)</i>	_____ <i>(Fax Number)</i>

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 (\$) [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:

NORTH RICHLAND BOULEVARD PROJECT

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__.

_____ <i>(Company Name of Principal)</i>	_____ <i>(Company Name of Surety)</i>
_____ <i>(Signature)</i>	_____ <i>(Signature)</i>
_____ <i>(Printed Name)</i>	_____ <i>(Printed Name)</i>
_____ <i>(Title)</i>	_____ <i>(Title)</i>
_____ <i>(Address Line 1)</i>	_____ <i>(Address Line 1)</i>
_____ <i>(Address Line 2)</i>	_____ <i>(Address Line 2)</i>
_____ <i>(City, State and Zip Code)</i>	_____ <i>(City, State and Zip Code)</i>
_____ <i>(Witness)</i>	_____ <i>(Witness)</i>

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

_____ <i>(Name)</i>	
_____ <i>(Address Line 1)</i>	
_____ <i>(Address Line 2)</i>	
_____ <i>(City, State and Zip Code)</i>	
_____ <i>(Telephone Number)</i>	_____ <i>(Fax Number)</i>

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:

NORTH RICHLAND BOULEVARD PROJECT

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: **NORTH RICHLAND BOULEVARD PROJECT**

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 _____ (NAME OF COMPANY) (a

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 **NORTH RICHLAND BOULEVARD PROJECT** (hereinafter referred to as the "Work"), for a total consideration of _____ and /100 Dollars (\$ _____) 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), November 2017 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), November 2017 Edition. TxDOT Standard Specification Item refers to Texas Department of Transportation’s “Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges” 2014.

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

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

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 1: GENERAL SITE PREPARATION

General Site Preparation shall be in accordance with 203.1 of the NCTCOG Specifications. This pay item will include removal of improvements or obstructions not specifically provided for in other pay items of the Bid Proposal which includes but is not limited to removing gravel, riprap, stumps (all sizes), landscaping, planter boxes, shrubbery, plantings, fences, brick columns, and other items located within the right-of-way.

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 for trees / shrubs less than 3" in trunk diameter which are not specifically identified for removal on the plans but which must be removed because they are in conflict with the proposed sidewalk or will have exposed roots due to parkway grading. Any backfill necessary after stump removal is subsidiary to this bid item. The City's representative shall authorize any tree/shrub removal which is not specifically identified in the plans.

Only trees, landscaping and plantings located within the right-of-way and designated for removal on the plans shall be removed. Trees or shrubs which overhand the proposed sidewalk shall be trimmed to be clear of the sidewalk to a height of 72". Tree/shrub trimming is subsidiary to ROW maintenance. All other trees and landscaping shall be protected from damage as shown in the plan details. This item includes all safety measures and additional traffic control as needed to complete the work. All trees and plant materials shall be properly disposed of offsite.

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.

Contractor will be responsible for minimum dust on a daily basis and when instructed by the City. Dust control shall include, but is not limited to, operations such as watering stockpiles, subgrade, pavement, sawing, concrete joint sealing, routing, and crack sealing. Equipment necessary for capturing particulate matter during the process of routing, cleaning, and sealing cracks and joints shall be considered subsidiary. The necessary application of water for dust shall be considered subsidiary.

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. 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.

Right-of-way maintenance shall include providing temporary all-weather access to local residences after working hours and during weekends and holidays. Unless otherwise provided, existing storm sewer pipe, inlets or other concrete structures to be removed, shall be paid under this pay item.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price of Lump Sum.

BID ITEM 2: 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.

BID ITEM 3: 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 North Richland Boulevard. 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.

Sign Data:

Project Name: North Richland Boulevard Rehabilitation

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 4: 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.

This item shall include the furnishing and installing of traffic control devices, signing, and portable message boards used in accordance with the Detour Maps in the Plans.

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.

Approval of a change order, including those that extend contract time, does *not* constitute automatic or implied approval of additional compensation for traffic control. Any adjustments to this item must be specifically requested and approved in writing, with justification demonstrating the need for additional traffic control beyond the original scope.

MEASUREMENT AND PAYMENT: 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 5: MASONRY MAILBOX (REMOVE & REPLACE)

This item shall be used for the remove, salvage, and replacement of masonry mailboxes. Contractor is responsible for coordinating with the postal office for mailbox identification and access. Brick and Stone mailboxes are to be replaced in locations specified or as directed by the Engineer and as per USPS guidelines. Damaged mailboxes will be replaced at the Contractor's expense. Brick and stone 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 ITEM 6: STANDARD POLE MAILBOX (REMOVE & REPLACE)

This item shall be used for the remove, salvage, and replace 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 replaced in locations specified or as directed by the Engineer 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 ITEM 7: SWPPP PLAN AND EROSION CONTROL ITEMS

It will be the responsibility of the CONTRACTOR to develop a SWPPP. The CONTRACTOR shall submit the plan to the OWNER in accordance with NCTCOG Specification 202. Once the SWPPP is deemed acceptable by the OWNER, the CONTRACTOR shall obtain a National Pollutant Discharge Elimination System (NPDES) permit. The SWPPP is to be kept on the construction site and implemented throughout the construction duration.

This item shall govern the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the Texas Commission on Environmental Quality's (TCEQ) Texas Pollution Discharge Elimination System (TPDES) General Permit Number TXR150000. Implementation of the SWPPP, installation of erosion control devices, maintenance of such devices, removal of the devices after completion of the project and vegetation has been re-established in all disturbed areas, and all required documentation, and any required application fees as outlined in the TPDES General Permit TXR150000 shall be included in the price of this item. The Contractor shall submit to the City a copy of TPDES documents, as appropriate, prior to commencing construction. See NCTCOG Item 202 for erosion control devices.

Cost for furnishing and installing any and all BMP's specified in the SWPPP including, but not limited to, silt fence, inlet protection, rock berms, curlex and stabilized construction entrances shall be subsidiary to this bid item.

If the OWNER or Owner's Representative including the Engineer or City Inspector deems the SWPPP devices deficient, CONTRACTOR will make necessary adjustments to adhere to the SWPPP plan at CONTRACTOR'S expense. No additional payment will be made for repair to erosions control devices.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price of lump sum for installing and maintaining all necessary erosion control items and the preparation of the SWPPP and its implementation, including any site postings from the beginning of construction through final acceptance and establishment of grass coverage. Payment will be made on a monthly basis by dividing the lump sum contract price by the total contract time (months) for the project.

BID ITEM 8: TREE PROTECTION FENCING

Install Tree Protection Fencing in accordance with NCTCOG Specification 201.1 and the Plans.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot.

BID ITEM 9: REMOVE TREE

Remove Tree in accordance with NCTCOG Specification 201.1 and the Plans.

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

BID ITEMS 10 – 18: PAVEMENT REMOVAL ITEMS (A1-1)

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. Item 203.1 of the NCTCOG Specifications shall govern the removal of existing concrete and asphalt.

MEASUREMENT AND PAYMENT: Refer to the Unit Price Bid Form. Removal of any concrete or asphalt shall include the cost of saw cutting.

BID ITEM 19: STORM CURB INLET TOP REMOVAL ITEMS

Remove existing storm pipe, box culvert, lids, inlets, and junction boxes in accordance with NCTCOG Specification 203.1 and the Plans.

MEASUREMENT AND PAYMENT: Refer to the Unit Price Bid Form.

BID ITEM 20: EXCAVATION (A3-1)

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 including but not limited to any abandoned utilities, 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) shall meet the requirements of Item 203.2 of the NCTCOG Specifications.

MEASUREMENT AND PAYMENT: 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.**

BID ITEM 21: FLEXBASE TYPE A, GRADE 1 OR 2 (A3-2)

Flexbase Type A, Grade 1 or 2 for subgrade shall be furnished in accordance with TxDOT Specification 247.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard of subgrade thickness as specified in the construction plans.

BID ITEM 22: 7" REINFORCED CONCRETE PAVING W/MONOLITHIC CURB

Reinforced concrete paving shall be constructed with 4,000 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 6" thick reinforced concrete paving on North Richland Boulevard 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 (or approved equal) 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 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.

BID ITEM 23: 6" CONCRETE DRIVEWAY

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

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard.

BID ITEM 24: ASPHALT TRANSITION PAVEMENT (2" TY D ASPHALT ON 4" TY B ASPHALT)

Asphalt Transition Pavement shall be 2" of TY D Asphalt on 4" TY B Asphalt. 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.

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

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard asphalt in place. Prime Coat shall be subsidiary to this item.

BID ITEM 25: REINSTALL CURB DRAIN

Reinstall curb drain as detailed in the plans. At the time of bidding, only one existing curb drain was visible in the field. The bid quantity of five (5) is an estimate and provided for bidding purposes only. Actual quantities may vary and are subject to field conditions as determined during construction. However, no guarantee is made that the full bid quantity will be utilized. Payment will be made only for the actual number of curb drain(s) reinstalled as indicated in the plans or as directed and approved by the Engineer/Owner.

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

BID ITEM 26: 4" CONCRETE SIDEWALK (A1-2)

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.

Sidewalks with monolithic curb wall shall be constructed per City of Fort Worth detail D546 and per Plans. Sidewalk will be part of this Bid Item and curb wall will be paid with separate Bid Item.

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: 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.

BID ITEM 27: MONOLITHIC CURB WALL (A1-2)

Construct monolithic curb wall on 4" concrete sidewalk as shown on the plans and in accordance with TxDOT Specification 529. Sidewalk will be paid with separate Bid Item. Actual quantities may vary and are subject to field conditions as determined during construction. However, no guarantee is made that the full bid quantity will be utilized. Payment will be made only for the actual number of curb drain(s) reinstalled as indicated in the plans or as directed and approved by the Engineer/Owner.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot.

BID ITEM 28: 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: Payment for this item shall be at the contract unit price 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.

BID ITEM 29: CONCRETE INLET TOP

Storm drain inlets lids shall be constructed in accordance with City Standard Details and TxDOT Specification 465.

All inlet lids shall be cast-in-place. Concrete for inlet lid shall be Class “C” with a minimum 5 sacks per cubic yard of cement content and a 3,000 psi compressive strength when tested at 28 days.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard.

BID ITEM 30 AND 45: TRENCH SAFETY (WATER, AND SEWER) (A2-1)

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.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot.

BID ITEM 31-33: PVC DR18 WATER PIPE (VARIOUS SIZES)

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: 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 34 AND 50: TEMPORARY PAVEMENT REPAIR (WATER AND SEWER) (A2-4)

Place a temporary surface on any cut opening as per City of North Richland Hills Detail Figure 15P-1 (R09-20-2024). Temporary surfaces shall be adequately compacted and sealed to prevent degradation of the repair during the temporary period. Any temporary surface that fails to provide a nondegraded riding surface shall be removed and replaced at the CONTRACTOR'S expense.

MEASUREMENT AND PAYMENT: Payment for Temporary Pavement Repair shall be at the contract unit price per linear foot.

BID ITEM 35-37: RESILIENT SEATED GATE VALVE (VARIOUS SIZES)

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

MEASUREMENT AND PAYMENT: 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.

BID ITEM 38: TAPPING SLEEVE AND VALVE (VARIOUS SIZES)

Install Tapping Sleeve and Valve in accordance with NCTCOG Specification 502.6 and the Plans.

MEASUREMENT AND PAYMENT: 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.

BID ITEM 39: DUCTILE IRON FITTINGS

Install Ductile Iron Fittings in accordance with NCTCOG Specification 502.5 and the Plans.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per ton.

BID ITEM 40: FIRE HYDRANT ASSEMBLY

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

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

BID ITEM 41-42: WATER SERVICE (SHORT AND LONG)

Install water services to waterline in accordance with NCTCOG Specification 502.10 and the Plans.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each for short connection and long connection and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

BID ITEM 43: 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: Payment for this item shall be at the contract unit price per each.

BID ITEM 44: TEMPORARY WATER SERVICE

Temporary Water Service needed to maintain service during water main replacement project. The price bid shall include:

1. Temporary water service line
2. Connections
3. Fittings
4. Valves
5. Corporation stops
6. Temporary asphalt for crossings
7. Traffic Control
8. Disinfection
9. Removal of temporary services

All Temporary Water Service components in contact with potable water shall conform to the requirements of NSF 61. Minimum flow rate of 5 GPM at a dynamic pressure of 35 psi with a 2-inch minimum pipe size

Temporary Water Service Installation

1. Connect to existing water supply
 - a. Fire hydrant
 - i. Connect to fire hydrant with hydrant meter and 2-inch gate valve.
 - b. If a fire hydrant is not available, tap existing water main.
 - i. Connect to water main with 2-inch service tap and a corporation stop.
 - ii. Record water usage with a hydrant meter.
 - iii. Do not tap existing water main, unless approved by the City.
2. Water service
 - a. Connect $\frac{3}{4}$ -inch water service to 2-inch temporary water service main.
 - b. Remove existing meters, tag with address and provide to City Inspector.
 - c. Connect $\frac{3}{4}$ -inch temporary water service to existing private service.
 - d. Cover domestic meter box with protective guard or barricade.
3. Intersection and Driveway Approach Crossing for Temporary Water Service
 - a. Crossing for Temporary Water Service Main

- i. Cover temporary service line with sufficient asphalt to protect service line and to provide a driveable crossing.
- ii. If required to bury temporary service line due to high volume traffic, or other reasons required by the City, excavate, embed and backfill.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per lump sum.

BID ITEM 46-49: PVC SDR SANITARY SEWER PIPE (OPEN CUT) (VARIOUS SIZES) (A2-2, A2-3)

Install SDR-26 and SDR-35 sanitary sewer pipe of various sizes in accordance with NCTCOG Specifications 501.17, 504 and 507 and the Plans. Should existing sanitary sewer main be disrupted, CONTRACTOR shall use bypass sewage pumping to avoid disrupting sewer flow during construction of the new sewer main. The cost of sewage pumping shall be subsidiary to this bid item. CONTRACTOR shall have pumped on the job site capable of handling the flow.

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 tracer wire.

MEASUREMENT AND PAYMENT: 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 51: 4' DIA SANITARY SEWER MANHOLE (5FT DEEP)

Install 4' diameter sanitary sewer manhole, up to 5-feet deep, in accordance with NCTCOG Specification 502.1 and the Plans.

Manholes installed in asphalt pavement require a concrete collar and shall be considered subsidiary to 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: 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.

BID ITEM 52: EXTRA DEPTH MANHOLE (>5FT)

Install 4' diameter sanitary sewer manhole in excess of the basic 5-foot depth in accordance with NCTCOG Specification 502.1 and the Plans.

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: Payment for this item shall be at the contract unit price per vertical linear foot and shall include excavation, materials, backfill, manhole tie-ins, and vacuum testing.

BID ITEMS 53 AND 54: SEWER SERVICE (SHORT AND LONG)

Install sanitary sewer services and 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: Payment for this item shall be at the contract unit price per each for short connection and long connection and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

BID ITEMS 55 AND 56: PRE- AND POST-CCTV INSPECTION

Pre-construction television inspection shall be performed on existing sanitary sewer lines in accordance with Items 507.5.2 and 507.2 of the NCTCOG Specifications. Cleaning and bypass pumping will be performed as necessary to allow the television inspection. The CONTRACTOR shall furnish to the city a color videotape of all television inspections.

Post-construction television inspection shall be performed on all sanitary sewer lines in accordance with Item 507.5.2 of the NCTCOG Specifications prior to acceptance. The CONTRACTOR shall employ a firm qualified in the type of work to make the television inspections. The City's inspector shall be present during the

television inspection. The CONTRACTOR shall furnish to the City a color videotape of all television inspections.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot of pipe actually inspected. Cleaning shall be considered subsidiary to this item.

BID ITEMS 57: MANHOLE VACUUM TESTING

Manholes shall be tested by vacuum tested in accordance with NCTCOG Specification 502.1.5 and the Plans.

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

BID ITEM 58: CONNECTION TO EXISTING SANITARY SEWER LINE

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

MEASUREMENT AND PAYMENT: 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.

BID ITEM 59: WATER ABANDONMENT PLUG

Abandoned water lines are to be plug in accordance with City of North Richland Hills Water Abandonment Notes detail and the Plans.

MEASUREMENT AND PAYMENT: 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.

BID ITEM 60: REMOVE AND SALVAGE WATER VALVES

Existing water valves on main lines and fire hydrant leads shall be removed and salvaged where shown on the plans and shall follow the provisions of Item 203.3. The City maintains salvage rights on existing water valves removed and shall provide a location for the contractor to transport the assembly. If the City does not wish to obtain the salvaged assembly, the contractor shall dispose of the assembly offsite in a lawful manner.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract price per each and shall include excavation, removal, backfill, and transporting the water valve offsite.

BID ITEM 61: REMOVE AND SALVAGE FIRE HYDRANT

Existing fire hydrant assembly shall be removed and salvaged where shown on the plans and shall follow the provisions of Item 203.3. Associate gate valve shall be removed and salvaged subsidiary to this bid item. The City maintains salvage

rights on existing fire hydrants removed and shall provide a location for the contractor to transport the assembly. If the City does not wish to obtain the salvaged assembly, the contractor shall dispose of the assembly offsite in a lawful manner.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract price per each and shall include excavation, removal, backfill, and transporting the fire hydrant assembly.

BID ITEM 62: REMOVE SANITARY SEWER MANHOLE

Existing sanitary sewer manholes to be removed shall become the property of the CONTRACTOR to be disposed in accordance with local, state, and federal guidelines.

MEASUREMENT AND PAYMENT: Payment for this item shall be on the contract price per each and shall include the complete removal and disposal of manholes, manhole lids, rings, concrete cones, concrete walls, concrete bases, piping, and plugging the ends of the sanitary sewer mains to be abandoned with an adequate quantity of concrete to form a tight enclosure where specified, and backfilling the remaining hole to match surrounding grades or as specified.

BID ITEM 63 AND 64: RELOCATE OR INSTALL NEW SIGN PANEL ON NEW POST

For locations shown on the Plans, remove the existing sign panels, clean and salvage panels and dispose of the existing sign post. Refer to the Plans for the location of sign panels to be salvaged and installed on a new post per TxDOT Item 636

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: This item shall be on the bases of price bid per each sign post removed. Salvaging and cleaning all sign panels on the existing post and disposing of the existing post is subsidiary to the existing post or per each new sign installed.

BID ITEM 65-68: 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 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: Payment for this item shall be at the contract unit price per linear foot and shall include all labor, materials, equipment, and incidentals necessary to complete the work, including removal of existing signage, markings, surface preparations, sealing, etc. as called for on the plans and in TxDOT specifications. Any damage to existing facilities, markings, sod, etc. as a result of this work will be subsidiary to the cost of this bid item.

BID ITEM 69-70: RAISED PAVEMENT MARKERS

Pavement markers 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 markers as shown on the Plans in accordance with the Texas Department of Transportation Items 672. All work, labor, materials, and equipment required for surface preparation and installation of pavement markers shall be subsidiary to each pavement marker bid item placed.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each of the types specified and shall include all labor, materials, equipment, and incidentals necessary to complete the work as called for on the plans and in TxDOT specifications. Any damage to existing facilities, markers, etc. as a result of this work will be subsidiary to the cost of this bid item.

BID ITEM 71: INSTALL PAINTED CURB ADDRESS

Painted curb addresses are to be installed to each residence driveway and shall meet the City's Code and Fire Department regulations. Addresses are to be white numbers on black background with any variation to be approved prior to installation by the City.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each and shall include all required labor, materials, equipment, and appurtenances for the address painting.

BID ITEM 72 AND 73: 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: 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 ITEM 74: LANDSCAPING RESTORATION ALLOWANCE

Landscaping Restoration Allowance shall consist of restoring all existing landscaped areas affected by the construction to an equal or better condition. This work shall include, but not be limited to, any relocation/replacement of landscape plants, bedding material, edging material, decorative rocks/boulders and any other plan material that may be encountered during construction.

The CONTRACTOR shall only utilize this item when approved and should avoid damaging existing landscaping whenever possible. This item should only be used if damaging the existing landscaping is unavoidable. It is the CONTRACTOR'S responsibility to verify the existing conditions and plant species within landscape areas prior to construction. This item may be used with approval by the Owner. Owner reserves the right to delete any or all of this item from the Contract if it is not needed.

MEASUREMENT AND PAYMENT: Payment for landscape restoration will be provided out of the allowance for Landscaping Restoration Allowance. Payment will be based on a price agreed upon prior to the work being performed. 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 75 AND 76: IRRIGATION RESTORATION ALLOWANCE FOR RESIDENTIAL OR COMMERCIAL

Irrigation Restoration Allowance shall consist of restoring all existing irrigation systems affected by the construction to an equal or better condition. This work shall include, but not be limited to, any relocation/replacement of spray heads, control valves, piping, sleeving, and all other irrigation equipment that may be encountered during construction.

The CONTRACTOR shall only utilize this item when approved and should avoid damaging existing irrigation whenever possible. This item should only be used if damaging the existing irrigation is unavoidable. It is the CONTRACTOR'S responsibility to verify the existing conditions and types of irrigation appurtenances (spray heads, drip irrigation, piping, etc) within landscape areas prior to construction. This item may be used with approval by the Owner. Owner reserves the right to delete any or all of this item from the Contract if it is not needed.

MEASUREMENT AND PAYMENT: Payment for irrigation restoration will be provided out of the allowance for Irrigation Restoration Allowance. Payment will be based on a price agreed upon prior to the work being performed. Payment under this item will be based on actual verified costs and itemized invoice(s). A markup not to exceed ten percent (10%) for overhead and profit is allowable, consistent with the intent of NCTCOG Standard Specification Section 109.3. No additional markup will be permitted beyond 10%. 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 77: 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 78: 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 79: 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.

ALTERNATE BID LINE ITEM DESCRIPTIONS

Repeated bid items are identified in Base Bid Items above.

BID ITEM A2-5: 8" PIPE BURSTING W/POLYETHYLENE PIPE

Install 8" polyethylene pipe in accordance with NCTCOG Specification 601.8 and the Plans.

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot.

BID ITEM A3-3: HYDRATE LIME

Hydrated lime for subgrade stabilization shall be furnished in accordance with NCTCOG Specification 301.2.

MEASUREMENT AND PAYMENT: 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 48 pounds per square yard at an 8-inch depth.

BID ITEM A3-4: 8" LIME STABILIZED SUBGRADE (48 LB/SY)

The subgrade shall be stabilized with lime in accordance with the applicable provisions of NCTCOG Specification 301, "Subgrade, Subbase and Base Preparation."

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.

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: 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.

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
Good Friday	Friday before Easter Sunday
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:

$$E = R - P \quad \text{where } P \text{ is greater than or equal to } R, \text{ and}$$

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

The Contract Time is of the essence and will be strictly enforced. Liquidated Damages will be assessed against the Contractor for failure to complete the project to total (100%) Final Completion within the Contract Time (470 calendar days). The Contractor and surety agree that the liquidated damages provisions in this Contract are reasonable, facially valid, are not a penalty, and do not otherwise operate as a penalty.

For each and every calendar day that any Work shall remain incomplete after the expiration of the Contract Time as specified in the Contract Documents, including any time extension authorized in writing by the Owner, the sum of \$1,000.00 per calendar day may be deducted from the moneys due to the Contractor, or may be charged against the Contractor, not as a penalty, but as liquidated damages. The Contractor agrees that for purposes of Texas Gov't Code Ch. 2252, a bone fide dispute exists if liquidated damages are assessed under this Contract and the Owner may withhold Retainage to satisfy liquidated damages owed to the Owner hereunder.

The sum of money thus deducted or charges as liquidated damages is not to be consisted as a penalty, but shall be deemed, taken, and treated as reasonable liquidated damages, representing a reasonable estimate of damages, or reasonable forecast of just compensation, because the harm caused by the breach is incapable or extremely difficulty of estimation due to the public nature of the work and the likely loss to be sustained by the Owner and the general public, estimated at or before the time of executing this Contract.

Further, the parties acknowledge the Owner's paramount purposes and duty to protect the "public fisc" and the general health, safety, and welfare of the public, and the parties agree that any alleged disparity between actual and liquidated damages shall be construed as bridgeable and acceptable as a matter of law and public policy and shall be calculated and construed in favor of 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 North Richland Boulevard. One sign shall be at or near the intersection of Holiday Lane and North Richland Boulevard Trail and one sign shall be at or near the intersection of Davis Boulevard and North Richland Boulevard. 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:

North Richland Boulevard

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

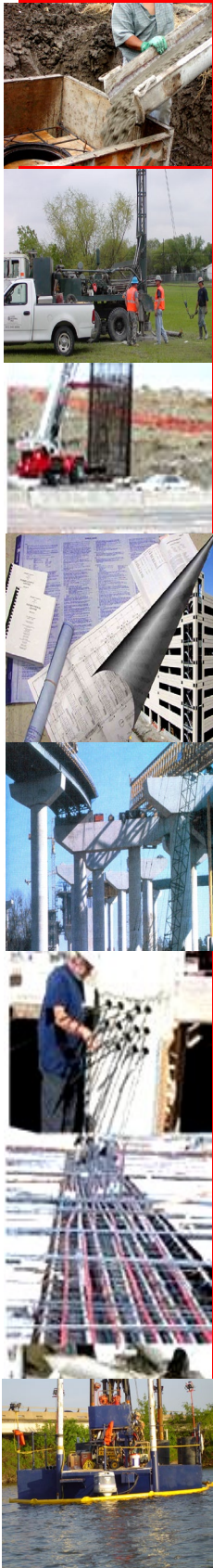
All drawings, specifications and copies thereof furnished by the Engineer shall not be reused on other work, and, with the exception of the signed contract sets, are to be returned to him on request, at the completion of the work. All models are the property of the OWNER.

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



GEOTECHNICAL INVESTIGATION

PAVEMENT RECONSTRUCTION NORTH RICHLAND BLVD NORTH RICHLAND HILLS, TEXAS

AGG REPORT: DE24-015

MARCH 22, 2024

PREPARED FOR:

**MULTATECH ARCHITECTS AND ENGINEERS
FORT WORTH, TEXAS**

PRESENTED BY:



**Geotechnical Engineering – Construction Services – Construction Materials Engineering Testing
3228 Halifax Street - Dallas, TX 75247 Ph. 972.444.8889 FX. 972.444.8893**



CONSTRUCTION MATERIALS ENGINEERING & TESTING
GEOTECHNICAL ENGINEERING
CONSTRUCTION INSPECTION SERVICES
FORENSIC STUDIES

March 22, 2024

Mr. Eric Canales, P.E., PMP
Vice President / Senior Project Manager
MULTATECH Architects and Engineers
2821 W. 7th St., Suite 400
Fort Worth, TX 76107

Phone: (817) 289-2087
Cell: (682) 308-3210
Email: ECanales@multatech.com

Re: Geotechnical Investigation
Pavement Reconstruction – North Richland Blvd
From Davis Blvd. to Holiday Lane
North Richland Hills, Texas
AGG Report No. DE24-015

Dear Mr. Canales:

Please find enclosed our report summarizing the results of the geotechnical investigation performed at the above-referenced project. We trust the recommendations derived from this investigation will provide you with the information necessary to complete your proposed project successfully.

For your future construction materials testing and related quality control requirements, it is recommended that the work be performed by Alliance Geotechnical Group, Inc. to maintain continuity of inspection and testing services for the project under the direction of the Geotechnical Project Engineer.

We thank you for the opportunity to provide you with our professional services. If we can further assist, please do not hesitate to contact us.

Sincerely,
ALLIANCE GEOTECHNICAL GROUP, INC.

Rupesh Thapa, E.I.T.
Staff Engineer

Michael D. Roland, P.E.
Vice President

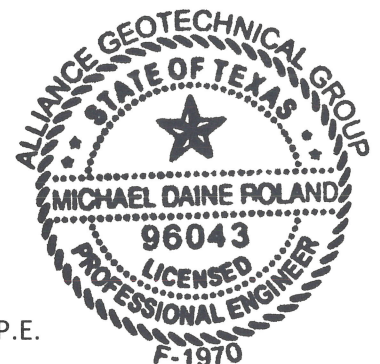




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**GEOTECHNICAL INVESTIGATION
PAVEMENT RECONSTRUCTION
NORTH RICHLAND BLVD
NORTH RICHLAND HILLS, TEXAS**

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The project consists of reconstructing 3,575 linear feet of North Richland Blvd from Davis Blvd to Holiday Lane in North Richland Hills, Texas. North Richland Blvd is a Minor Collector Street. The subject alignment is a two-lane undivided asphalt residential roadway that is showing numerous signs of distress. The distress consists of longitudinal and lateral cracks, separation, and differential movement. There are numerous large to medium trees present along the alignment with driplines extending over the roadway. It is understood that the roadway will be reconstructed with the same alignment and will not be widened.

In addition to the pavement reconstruction, it is understood that new water, and sanitary sewer lines will be installed during the pavement reconstruction work. The invert depths of the proposed new utility lines will be 10 feet or less below the existing pavement grade. It is further understood that the new utility lines will be installed using open cut construction.

1.2 PURPOSE AND SCOPE

The purposes of this geotechnical investigation were to: 1) explore the subsurface conditions at the site, 2) provide boring logs that present subsurface conditions encountered including water level observations and laboratory test results, 3) provide comments on the presence and effect of expansive soils on the subject roadway, and 4) provide recommendations for utility trench excavations, 5) provide recommendations for open cut, shoring, and utility trench backfilling, and 6) provide pavement subgrade preparation and pavement section recommendations. This report was prepared in general accordance with AGG Proposal No. P23-1119E dated November 28, 2023.

2.0 FIELD INVESTIGATION

The field investigation consisted of drilling a total of five (5) test borings (Borings B-1 thru B-5) along the pavement alignment. The test borings were advanced to depths of 15 feet below existing pavement grade. The pavement was cored with a coring machine prior to drilling. Photographs of the pavement cores are provided in Appendix B of this report. The existing asphalt pavement thickness at the boring locations ranges from 5.5 to 6 inches. The pavement thickness was measured at each of the boring locations and is shown on the Logs of Borings (Figures 2 thru 6).



A truck-mounted drilling rig was used to advance these borings and to obtain samples for laboratory evaluation. The borings were located at the approximate locations shown on the Plan of Borings (Figure 1).

Undisturbed samples of the soils were obtained at intermittent intervals with standard, thin-walled, seamless tube samplers. These samples were extruded in the field, logged, sealed, and packaged to protect them from disturbance and maintain their in-situ moisture content during transportation to our laboratory.

The relative density of the marly clay soil encountered within the test Boring 1 was evaluated by performing a Standard Penetration Test (SPT) in conjunction with split spoon sampling. The SPT's involves driving a standard 2-inch diameter sampler a total of 18 inches or until 50 blows for 6-inches or less occurs. The blow counts and driving distances for each 6-inch or 50 blow increment are recorded. The first 6-inch drive is for seating purposes. The results of the SPT's are recorded at the respective testing depths on the logs.

The results of the boring program are presented on the Logs of Borings (Figures 2 thru 6). A Key to the descriptive terms and symbols used on the logs is presented on Figure 7.

3.0 LABORATORY TESTING

The laboratory tests were performed on representative samples of the soil to aid in classification of the soil materials. These tests included Atterberg limits tests, percent passing #200 sieve, grain size distribution, moisture content tests and dry unit weight determinations. Hand penetrometer tests were performed on the soil samples to provide indications of the swell potential and the foundation bearing properties of the subsurface strata. The results of these tests are presented on the Logs of Borings (Figures 2 thru 6) and on the Grain size distribution on Figure 10.

To provide additional information about the swell characteristics of these soils at their in-situ moisture conditions, absorption swell tests were performed on selected samples of the clay soils (See Figure 8). In addition, soluble sulfate testing was performed on selected samples. The results of the sulfate testing are provided in Figure 9.

4.0 SITE AND SUBSURFACE CONDITIONS

4.1 GENERAL SITE CONDITIONS

The subject pavement alignment is currently paved with asphalt. The existing pavement is in poor condition and contains numerous cracks, differential movements. There are numerous medium to large trees along the pavement with dripline extending to the pavement. See the Plan of Borings (Figure 1) for site configuration, location and aerial view. See the photograph below showing typical existing pavement conditions.



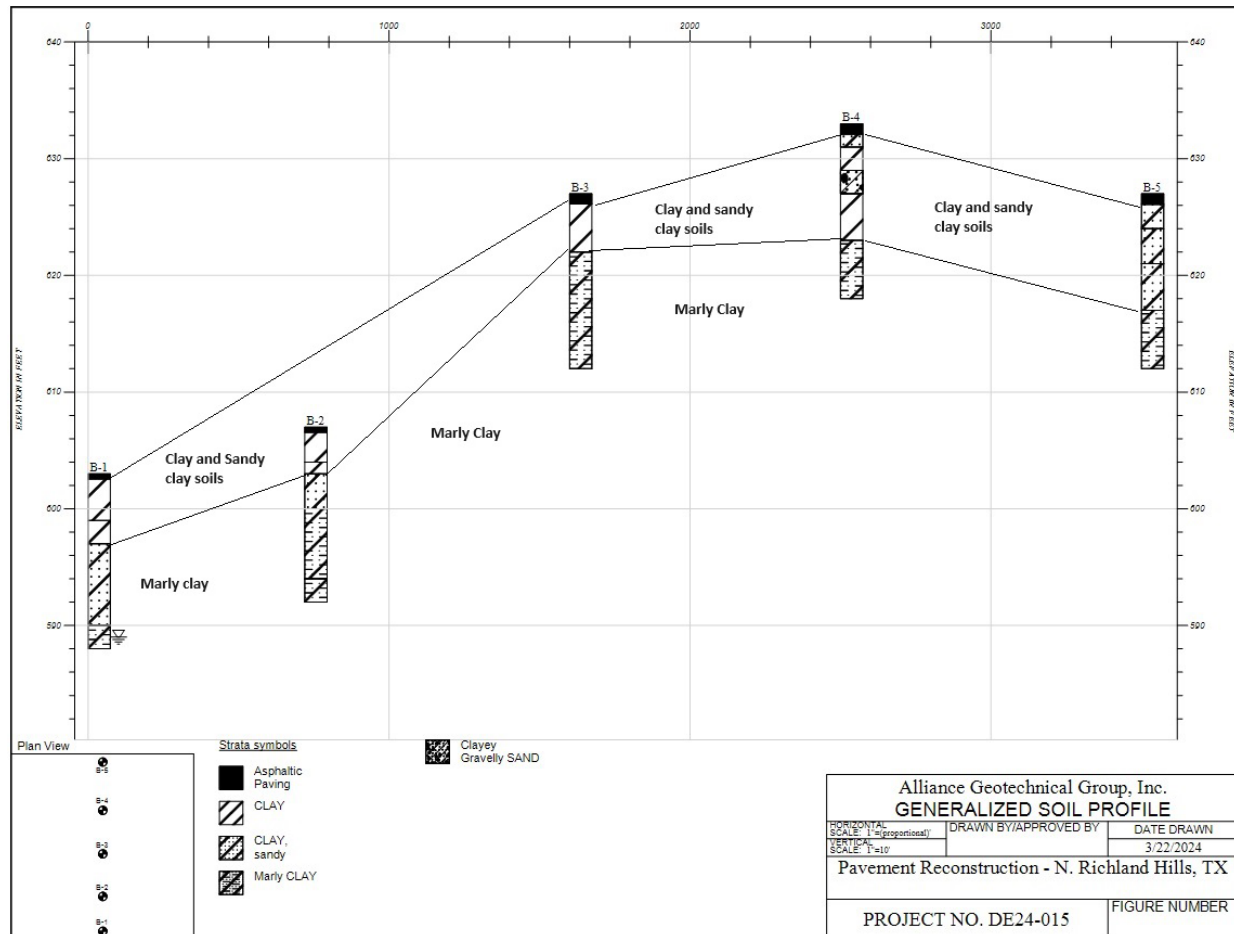
4.2 SITE GEOLOGY

As shown on the Geologic Atlas of Texas, the alignment is located in an area underlain by the Grayson Marl and Main Street Limestone formation. The Grayson Marl & Main Street Limestone Formation typically consists of very hard limestone, calcareous clay, marl and calcareous shale. Soils derived from this formation are typically highly plastic clays exhibiting a high shrink/swell potential with variations in moisture content.



4.3 SUBSURFACE CONDITIONS

Subsurface conditions encountered in the borings, including descriptions of the various strata, their depths, and thicknesses, are presented on the Logs of Borings. Note that depth on all borings refers to the depth from the existing grade or ground surface present at the time of the investigation. Boundaries between the various soil types are approximate. Soil profile along the alignment is shown below.



4.4 GROUNDWATER CONDITIONS

The borings were advanced using continuous flight auger methods. Advancement of the borings using these methods allows observation of the initial zones of seepage. Groundwater was generally not encountered within the test borings. However, groundwater was encountered at a depth of 13 feet within Boring B-1 during drilling. The borings were immediately backfilled and the pavement patched prior to moving to the next boring location. Therefore, delayed water level readings were not obtained. See the Logs of Borings for the groundwater level.

It is not possible to accurately predict the magnitude of subsurface water fluctuations that might occur based upon short-term observations. The subsurface water conditions are subject to change



with variations in climatic conditions and are functions of subsurface soil conditions, rainfall and water levels within nearby creeks, ponds, and adjacent drainage ditches.

5.0 ANALYSIS AND RECOMMENDATIONS

5.1 SOIL MOVEMENT

The subsurface exploration revealed the presence of deep active sandy clay and marly clay soils. These clayey soils will have a moderate to very high shrink/swell potential depending upon the soil moisture condition at the time of construction. Potential soil swell movement calculations were performed using swell test results, pocket penetrometer readings, and moisture content tests to estimate the swell potential of the soil. The potential soil swell movement values are based upon current soil moisture conditions and current grades at the test boring locations.

Potential soil swell heave within a typical 10-foot-deep “active zone” has been estimated to range from 2 to 3 inches beneath the existing pavement (outside of tree influenced areas). The existing clay soils are typically in a moist to average moisture condition beneath the pavement outside of tree influenced areas. The clay soils are very dry within tree influenced areas due to tree root moisture absorption (soil desiccation). The potential “active zone” soil swell heave is estimated to exceed 8+ inches within all tree influenced areas. There is a potential of up to 6+ inches of differential “active zone” soil swell heave between tree influenced areas and non-tree influenced areas.

In addition to swelling within a typical 10-foot-deep “active zone”, the potential for additional “deep-seated” swell exists at this site. The assumed “active zone” swell values are upward soil movements that could occur due to typical seasonal moisture changes and soil swelling within the upper ten (10) feet as measured from finished floor grade. The deep-seated swell values are additional upward soil movements that could occur due to moisture changes and soil swelling below a typical ten (10) foot deep “active-zone”.

Deep-seated swell could occur due to groundwater fluctuations or free water sources such as ponding water conditions, percolation of water in landscaped areas, leaking sprinkler lines and/or leaking utility lines that are not detected and repaired in an expedient manner. At this site, the deep-seated swell is estimated to be on the order of one (1) inch or less outside of tree influenced areas and in excess of 3 inches within tree influenced areas. The risk of differential deep-seated swell below pavements is generally not a high risk due to the low probability of deep-water percolation below 10-foot depths but could occur if a free water source occurs over an extended period of time. Measures to minimize deep seated swell associated with free water sources are provided in Appendix A to this report.



Note 1: If the trees are to be removed (or if they die due to reconstruction activities or for any other reason in the future) large differential pavement movements would occur as described above. Site preparation work would have to be performed if any tree is removed or killed during construction in order to lower the potential differential movements. If trees are to be removed and it is desired for the potential soil swell movements to be reduced, Alliance Geotechnical Group should be contacted to provide recommendations in order to reduce the movements to acceptable levels.

Note 2: If the existing trees near the roadway remain, differential pavement settlements caused by ground shrinkage associated with moisture absorption by the root systems will continue as the trees continue to mature. An arborist should be consulted for recommendations related to root barriers. See Section 8.0 for tree effects.

5.2 OPTIONAL SITE MODIFICATION TO REDUCE SOIL MOVEMENTS

As mentioned above, large differential upward pavement movements are likely at this site due to soil swelling. If it is required that the differential potential soil swell movements for the proposed new pavement be reduced, excavation and moisture conditioning of the in-situ clay soils will be required. AGG should be contacted for site preparation work recommendations in order to reduce the soil swell movements to acceptable levels. See Section 8.0 for potential settlements caused by new trees planted along the roadway.

It is imperative that all cracks and joints in the pavement be sealed and maintained by routine sealing in order to minimize differential pavement deflections caused by soil swelling. It is also imperative that positive drainage be provided along the pavement edges to prevent ponding near the curb lines.

5.3 PROOFROLLING AND FILL PLACEMENT

After the existing pavement is removed and prior to placing fill, the exposed subgrade should be proof-rolled. Proof-rolling can generally be accomplished using a heavy (25 ton or greater total weight) pneumatic tired roller making several passes over the areas. The proof-rolling operations should be performed under the direction of an AGG Geotechnical Engineer. Where soft or compressible zones are encountered, these areas should be removed to a firm subgrade as determined by AGG. Any resulting void areas should be backfilled to finished subgrade in 8-inch loose lifts and compacted to a minimum of 95% of ASTM D698 at optimum to +3% above optimum. The upper 8 inches of the pavement subgrade should be compacted at -1% to +2% of optimum to a minimum of 98% of Standard Proctor Density (ASTM D698).

5.4 STABILIZATION WITH HYDRATED LIME

Based upon the results of the subsurface exploration and based upon the anticipated cuts to pavement subgrade, the revealed surficial materials that are anticipated to be present at the base of cut will consist primarily of plastic clay soils, sandy clay soils. The clay soils react with hydrated lime



which serves to improve their support value at higher moisture levels and provides a firm, uniform subgrade beneath the pavement. It is anticipated that five (5) to eight (8) percent hydrated lime by dry weight (36 to 48 pounds per square yard per 8-inch depth) would be required to stabilize the existing clay subgrade. The actual lime requirement will depend upon the actual subgrade soils exposed at final grade and should be determined at the time of construction. In addition, sulfate testing should be performed to determine that the sulfate concentrations are less than 3,000 ppm.

We recommend that once pavement subgrade has been achieved that an AGG engineer observe these exposed subgrades to identify areas where friable lime treated clay soils are present within the pavement subgrade. Wherever friable lime treated clay soils are present, the upper 5 to 6 inches of the friable lime treated clay should be over excavated and replaced with onsite clay soils. Afterwards, lime stabilization should be performed.

The lime should be thoroughly mixed and blended with the top 8 inches of the subgrade per TxDOT Item 260. The mixture should be compacted to a minimum of 95 percent of maximum dry density as determined in accordance with ASTM D698, within -2% and +2% of the soils optimum moisture content. We recommend that this lime stabilization extend 2 feet beyond exposed pavement edges in order to reduce the effects of shrinkage during extended dry periods.

Note: After final grading has been performed, depth checks and PI verification checks should be performed to verify that proper stabilization has been achieved as evidenced by a PI of 15 or less.

Sand should be specifically prohibited beneath pavement areas during final grading (after stabilization), since these more porous soils can allow water inflow, resulting in heave and strength loss of subgrade soils. It should be specified that only lime-stabilized soil will be allowed for fine grading. After fine grading each area in preparation for paving, the subgrade surface should be lightly moistened, as needed and recompact to obtain a tight non-yielding subgrade.

Project specifications should allow a curing period between initial and final mixing of the lime/soil mixture. After initial mixing, the lime-treated subgrade should be lightly rolled and maintained at or to 5% above the soils optimum moisture content until final mixing and compaction. We recommend a 3-day curing period for these soils. The following gradation requirements are recommended for the stabilized materials before final compaction.

	<u>Percent</u>
Maximum Passing 1 3/4" Sieve	100
Maximum Passing 3/4" Sieve	85
Minimum Passing No. 4 Sieve	60



All non-slaking aggregates retained on the No. 4 sieve should be removed before testing. The stabilized subgrade should be protected and moist cured or sealed with a bituminous material for a minimum of 5 days before further courses are added or any construction traffic/equipment permitted. The final lift should not be exposed for more than 14 days without protection or the placement of a base course or pavement. Pavement areas should be graded to prevent ponding and infiltration of excessive moisture on or adjacent to the pavement areas.

5.5 FLEXBASE

In lieu of lime stabilization, eight (8) inches of crushed “Chico” stone and/or recycled crushed concrete flex base should be used. The flex base should be compacted at optimum to +2% above optimum to a minimum of 95% of Modified Proctor density (ASTM D1557). The base materials should comply with TxDOT Item 247, Type D, Grades 1 or 2. We recommend that the base materials extend at least two feet beyond the pavement edges (where possible).

After proofrolling (see Section 5.3), the upper eight (8) inches of pavement subgrade should be scarified and compacted prior to placing flex base. The upper eight (8) inches of the subgrade clay soils should be compacted at -1% to +2% of optimum moisture to a minimum of 98% of Standard Proctor density (ASTM D698). If a rain event occurs prior to placing the flex base, the subgrade should be aerated and re-tested prior to flex base placement.

5.6 RECOMPACTED PAVEMENT SUBGRADE

In lieu of performing lime stabilization or using flex base, the concrete pavement thickness could be increased and placed directly on compacted subgrade soils. The upper 8 inches of subgrade soil should be compacted at -1% to +2% of optimum moisture to a minimum of 98% of Standard Proctor density (ASTM D698). Prior to placing fill and subgrade compaction, the subgrade should be proofrolled. Proofrolling should be performed in accordance with Section 5.3 of this report.

Only on-site soil (comparable to the underlying subgrade soil) should be used for fine grading the pavement areas. After fine grading, the subgrade should again be watered if needed and re-compacted in order to re-achieve the moisture and density levels discussed above and provide a tight non-yielding subgrade.

Sand should not be allowed for use in fine grading the pavement areas. Sand should be specifically prohibited beneath pavement areas during final grading since these more porous soils can allow water in flow, resulting in heave and strength loss of subgrade soils. The subgrade moisture content and density must be maintained until paving is completed. The subgrade should be watered just prior to paving to assure concrete placement over a moist subgrade. If a rain event occurs prior to paving, the subgrade should be aerated and re-tested prior to paving.



After completion of proof-rolling, the ground surface should then be scarified to a depth of 8 inches and recompact to a minimum of 98 percent of the maximum density as determined by ASTM D698 between -1% and +2% of its optimum moisture content.

6.0 PAVEMENT SECTION RECOMMENDATIONS

The required pavement sections depend on the traffic volume and the frequency of heavy truck traffic. The pavement designs in this report are based upon TxDOT's traffic volume. The design ESAL of 1,446,482 was based on the total traffic volume for a 20-year design life beginning in 2022. The design ESAL is based on the Average Daily Traffic (ADT) of 2,246. The traffic data was retrieved from the TxDOT Traffic Count Database System (TCDS) website. A 50% directional split was used. A 1% annual traffic growth rate was assumed to evaluate the design ESAL. Based on the roadway classification of minor collector roadway with heavy duty traffic, the design ESAL accounted for 3% heavy duty traffic.

The heavy-duty traffic comprises of 50% combination of bus and single unit trucks and 50% WB-50 trucks. The loading configuration for the bus/single unit truck consists of 8 kips front single-axle and 32 kips back single-axle. The loading configuration for the WB-50 truck consist of 8 kips front single-axle and two 32 kips back tandem-axle. The loading configuration for automobiles consists of 2 kips front single-axle and 2 kips back single-axle.

The pavement section recommendations provided below were designed based upon AASHTO Guide for Design of Pavement Structures using WinPAS 12 computer program. The traffic data used for design was based on the TCDS website.

Pavement Thickness:	7.0 inches
Initial Serviceability:	4.5
Terminal Serviceability:	2.25
Modulus of Rupture:	588 psi (4,000 psi concrete)
Elasticity Modulus:	3,932,000 psi
Effective k-value:	200 psi/in – lime-stabilized or flex base
Effective k-value:	50 psi/in – recompact subgrade
Reliability Level:	85%
Standard Deviation:	0.39
Load Transfer J:	2.7 (adequate edge support)
Drainage Coefficient:	1.0



Table 1 presents the recommended pavement sections for the anticipated traffic loading.

TABLE 1 - RECOMMENDED PAVEMENT SECTIONS (20 YEAR DESIGN LIFE)

NORTH RICHLAND BLVD FROM DAVIS BLVD TO HOLIDAY LANE	
<u>PCC SECTION</u>	
7.0 inches Portland Cement Concrete (4,000 psi Concrete) *	
8.0 inches Lime-stabilized soils (Section 5.4)	
Or	
7.0 inches Portland Cement Concrete (4,000 psi Concrete) *	
8.0 inches Crushed Concrete Flex Base (Section 5.5)	
Or	
8.0 inches Portland Cement Concrete (4,000 psi Concrete) *	
8.0 inches Compacted Subgrade (Section 5.6)	

**4,000 psi (at 28 days) for machine finish. For hand finish, increase concrete strength to 4,500 psi at 28 days. A minimum 28-day flexural strength of 588 psi.*

Note: The above pavement designs are based upon adequate pavement edge support being provided. If adequate edge support is not provided, the above concrete pavement thickness should be increased by one (1) inch.

Concrete quality will be important in order to produce the desired flexural strength and long-term durability. We recommend that the concrete have 5% entrained air plus or minus 1%. The concrete should be placed at a slump of 4 inches plus or minus 1 inch for hand pours and a slump of 2 inches plus or minus 1 inch for machine finish pours.

Proper joint placement and design is critical to pavement performance. Load transfer at all joints and maintenance of watertight joints should be provided. Control joints should be sawed as soon as possible after placing concrete and before shrinkage cracks occur. All joints including sawed joints should be properly cleaned and sealed as soon as possible to avoid infiltration of water.

Our previous experience indicates that joint spacing on 12 to 15 foot centers have generally performed satisfactorily. It is our recommendation that the concrete pavement be reinforced with a minimum of No. 4 bars placed on chairs on approximately 18-inch centers in each direction.



6.1 PAVEMENT CONSIDERATIONS

It is recommended that provisions be made in the contract to provide for proofrolling in areas where the subgrade will support new pavements. It is also recommended that an item be included for removal and replacement of soft materials, which are identified by this procedure. We recommend that the base of cut be proofrolled per section 5.3.

Achieving the required field density is dependent upon the adequate pulverization of the clay fill materials, the magnitude of compaction energy and the maintenance of field moisture near optimum. All joints and pavements should be inspected at regular intervals to ensure proper performance and to prevent crack propagation.

The soils at the site are active and differential heave within the paving areas will occur. If it is desired to reduce differential upward soils swell movements, excavation and moisture conditioning in lifts would be required. The extent of excavation would depend upon the desired tolerance for movement. See Sections 5.1 and 5.2 of this report.

The service life of paving may be reduced due to water infiltration into subgrade soils through heave induced cracks in the paving section. This will result in softening and loss of strength of the subgrade soils. A regular maintenance program to seal paving cracks will help prolong the service life of the paving. The life of the pavement can be increased with proper drainage. Areas should be graded to prevent ponding adjacent to curbs or pavement edges. Granular backfill materials, which could hold water behind the curb, should not be permitted. Compacted clay soils should be used behind the curb. Flat pavement grades should be avoided.

7.0 UTILITY LINE CONSTRUCTION

7.1 OPEN CUT EXCAVATIONS

It is understood that open cut trench excavations will be performed for the proposed new water and sewer lines along the roadway alignment. The proposed new utility lines are anticipated to have invert depths of 10 feet or less below existing grade.

Subsurface soil conditions encountered along the alignment for the utility line installations will vary significantly along the alignment. The anticipated subsurface conditions to be encountered consists of lime-treated clay, fill soils, clay soils, sandy clay soils, gravelly sand, marly clay soils and calcareous marly clay soils. Groundwater was not encountered within the borings during the drilling operations. However, groundwater was encountered at a depth of 13 feet within Boring B-1. Shallow groundwater levels should be anticipated in all areas after periods of rain.



Sloughing of the friable lime-treated fill soils, jointed and fissured clay soils; jointed and blocky marly clay soils; should be anticipated. Sloughing should be anticipated during the excavation and installation operations.

For excavations at this site, it will be necessary to employ either sloped excavations or temporary bracing in accordance with OSHA regulations. General guidelines for design are discussed in the following sections. See Section 7.3 regarding Construction Considerations.

Recommended slope ratios for the respective soil conditions are presented graphically on Figure 11. Trench excavations encountering submerged soils from which water is seeping should be cut back along flatter slopes as indicated on Figure 11. Trench excavations to any depths at this site should be cut back in accordance with OSHA regulations.

It should be recognized that free standing slopes will be less stable when influenced by groundwater or saturated by rain. Additionally, layers of potentially caving friable lime-treated clay soils, jointed and fissured clay soils; jointed and blocky marly clay soils and gravelly sand should be anticipated. As a result, the soils within the trench excavations will be unstable even for cuts which remain open for short durations.

Surcharge loads, such as those resulting from excavation spoil, or equipment, should be placed no closer than five (5) feet from the crest of the slope and in accordance with OSHA regulations. Vehicle traffic should be maintained at least five feet from the edge of the crest. Excavation may encounter non-compact fill soils placed during previous construction of underground utilities. If encountered, these fill soils should be sheeted, shored, and braced, or laid back on slopes no steeper than 1.5 (H): 1(V) short term (less than 8 hours) and no steeper than 2 (H): 1(V) long term (over 8 hours). The contractor will need to take measures to avoid undermining and damaging the existing underground utilities.

7.2 BRACING/SHORING

Where site limitations require excavations to have vertical side walls, an internal bracing system will be necessary. Bracing may consist of timber or steel shoring or manufactured steel trench braces. The lateral pressure distribution to be used in the design of excavation bracing may be determined as presented on Figure 12. It should be recognized that pressures are not included from hydrostatic pressures, surcharge loads, or traffic live loads at excavation side walls, dynamic loads, and vibration, which if present, must be included in bracing design. The excavation support system should be designed by a shoring specialist.



7.3 CONSTRUCTION CONSIDERATION

It should be anticipated that groundwater could be encountered above the invert depths especially after periods of heavy rain. A system of ditches, sumps, deep wells and/or dual staged well points, and pumping will be required to provide groundwater control. The design of the actual dewatering system required is the contractor's responsibility. This includes the control of tail-water flow through previous backfilled sections and/or existing adjacent utility trenches. Prior to excavation, the alignment should be dewatered whereby the groundwater level is lowered to an elevation of at least 5 feet below the deepest required excavation. Confirmation of adequate dewatering along the alignment should be verified prior to beginning excavation.

The following guidelines are presented to aid in the development of the excavation plans:

- Surface areas behind the crest of the excavations should be graded so that surface water does not pond within 15 feet of the crest, nor drain into the excavation.
- Heavy material stockpiles should not be placed near the crest of slopes per OSHA requirements. Similarly, heavy construction equipment should not pass over or be parked within 5 feet of the crest.
- The crest of slopes should be continually monitored for evidence of movement or potential problems. Freestanding slopes will become less stable when influenced by groundwater or saturation by rain.
- Identify other sources that might affect trench stability.
- Identify underground utilities prior to the start of excavation.
- Inspect trench excavations prior to the start of each work shift by qualified.
- Continuously monitor trench excavations by qualified personnel during construction.
- Immediately inspect trench excavations following a rain event or other water intrusion by qualified personnel.
- Inspect trench excavations by qualified personnel when changing soil conditions are encountered or after any occurrence that could have affected trench stability.
- Test and monitor for atmospheric hazards (i.e. low oxygen levels, hazardous fumes, toxic gases) within trench excavations.

7.4 TRENCH BACKFILL

The excavated soils can be used for trench backfill. The backfill should be placed in thin compacted lifts as specified below. The fill materials should be free of surficial vegetation or debris. The fill



materials should be placed in 8-inch horizontal loose lifts and compacted to at least 95% of ASTM D698. The upper 8 inches of the pavement subgrade should be compacted at -1% to +2% of optimum to a minimum of 98% of Standard Proctor Density (ASTM D698). The clay and marly clay soils should be compacted at optimum to +3% above optimum moisture and the sandy clay soils and gravelly sand should be compacted between -2% to +2% of optimum moisture content.

For fill depths below 10 feet or where it is desired to reduce post-construction settlements, the compaction level should be increased to a minimum of 98% of ASTM D698, at -1% to +2% of optimum moisture.

Note 1: If the trench backfill materials are placed and compacted in accordance with the above recommendations, settlement / consolidation is estimated to be on the order of 1.0 percent of the fill height.

Note 2: Differential pavement movements should be anticipated between utility trench backfill areas and paved areas beyond the limits of the utility trenches. The utility trench backfill will be subject to settlements (see Note 1 above).

Note 3: The upper 8 inches of utility trench backfill beneath the pavement section should be compacted to a minimum of 98% of ASTM D698 at -1% to +2% of optimum.

8.0 TREE EFFECTS

Medium to large mature trees are present in some areas along the roadways with drip lines that extend near or above the pavement. The roots of mature trees absorb large amounts of moisture from the supporting soils. The lateral limits of tree root influence extend at least 5 feet beyond the unpruned drip line (and to much greater distances when the ground beneath the drip line is paved and/or if multiple trees are present in the area which occurs at this site).

To reduce future settlement after reconstruction, root barriers and/or irrigated tree wells could be considered. An arborist or landscape architect should be contacted regarding the required depth of the root barrier and whether or not this is a viable solution. Root barriers along both curb lines would require large roots to be severed. This might kill the trees. If this occurred, large pavement heave would then occur as described above (same as removing trees). If the barriers are effective in reducing soil suction from the root systems, large differential heave would still occur as the soils regain lost moisture causing differential heave due to soil swelling. Due to these concerns, root barriers are probably not a viable solution at this time for existing large trees unless an arborist is consulted and over excavation and moisture conditioning is performed. Root barriers and/or irrigated tree wells should be considered for existing small young trees and for new trees to be planted along the roadways.



One solution that can be considered is to thicken the pavement near the tree covered areas. An additional 1 to 2 inches of concrete (over the required desired thickness) could be used near the tree areas to provide additional rigidity to reduce differential deflections caused by post construction shrink/swell movements. Additional steel reinforcement could be used to further stiffen the pavement. Larger bars on a closer spacing and two mats of steel should be considered. A Structural Engineer should be consulted regarding the most cost-effective reinforcement design for the thickened sections.

If the pavement is thickened and stiffened as described above, differential deflections should be reduced. If differential settlements due to shrinkage caused by tree roots become objectionable, these areas could be mud-jacked in the future as needed to level the pavement.

9.0 FIELD SUPERVISION AND DENSITY TESTING

Field density and moisture content determinations should be made on each lift of fill with a minimum of 1 test per 100 linear feet for the roadways and a minimum of 1 test per lift per 150 linear feet for trench backfill. Supervision by the field technician and the project engineer is required. Some adjustments in the test frequencies may be required based upon the general fill types and soil conditions at the time of fill placement.

Many problems can be avoided or solved in the field if proper inspection and testing services are provided. It is recommended that all site and subgrade preparation and pavement placement be monitored by a qualified engineering technician. Density tests should be performed to verify compaction and moisture content of any earthwork. Inspection should be performed prior to and during concrete placement operations. Alliance Geotechnical Group employs a group of experienced, well-trained technicians for inspection and construction materials testing who would be pleased to assist you on this project.

10.0 LIMITATIONS

The professional services, which have been performed, the findings obtained, and the recommendations prepared were accomplished in accordance with currently accepted geotechnical engineering principles and practices. The possibility always exists that the subsurface conditions at the site may vary somewhat from those encountered in the test borings. The number and spacing of test borings were chosen in such a manner as to decrease the possibility of undiscovered abnormalities, while considering the nature of loading, size, and cost of the project. If there are any unusual conditions differing significantly from those described herein, Alliance Geotechnical Group, Inc. should be notified to review the effects on the performance of the recommended foundation system.

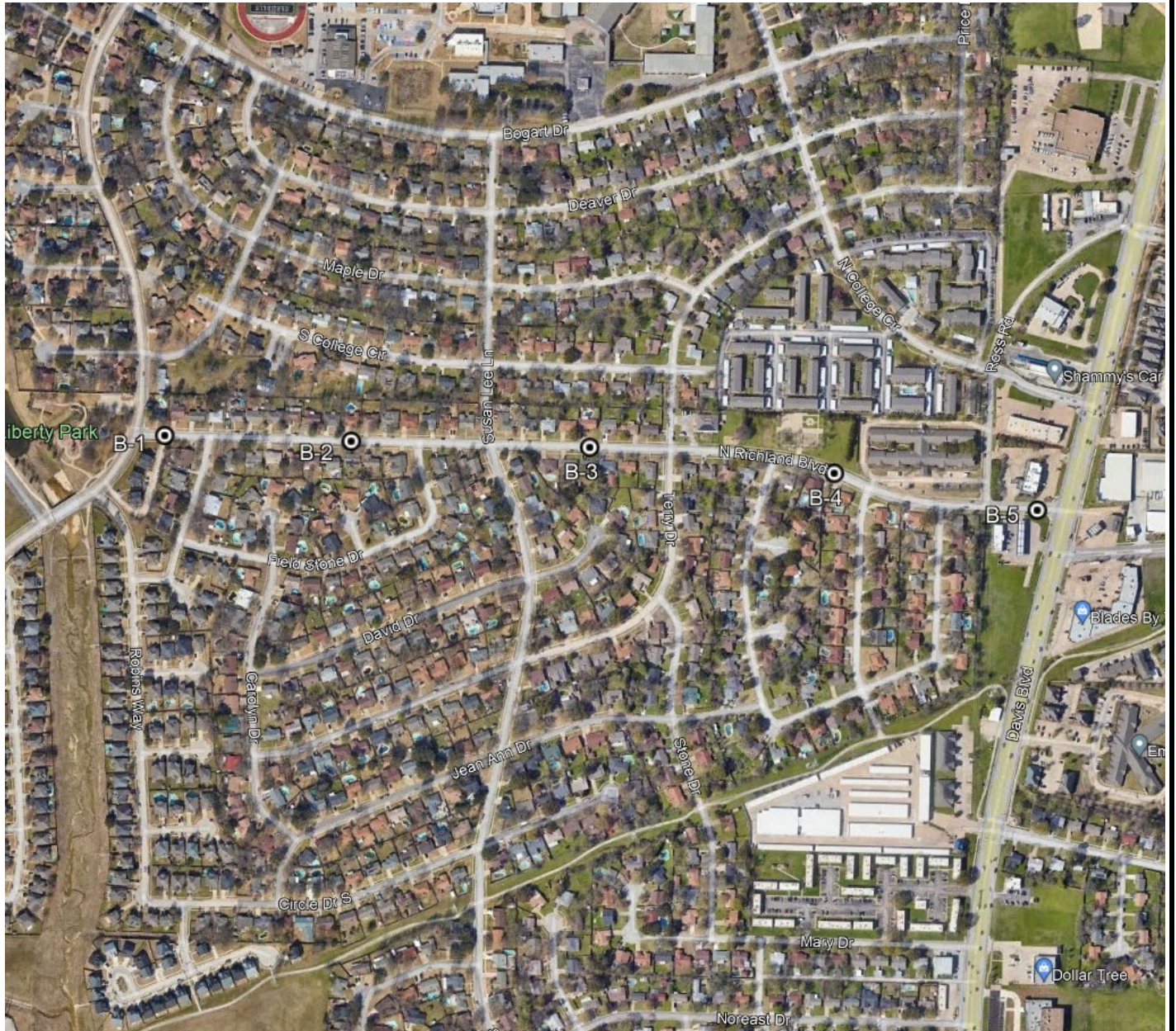


The recommendations given in this report were prepared exclusively for the use of the client, their client and their consultants. The information supplied herein is applicable only for the design of the previously described development to be constructed at locations indicated at this site and should not be used for any other structures, locations, or for any other purpose.

We will retain the samples acquired for this project for a period of 30 days subsequent to the submittal date printed on the report. After this period, the samples will be discarded unless otherwise notified by the owner in writing.



FIGURES



Project No:
DE24-015

PLAN OF BORINGS

PAVEMENT RECONSTRUCTION
NORTH RICHLAND BLVD
NORTH RICHLAND HILLS, TEXAS

FIGURE NO:

1

LOG OF BORING B-1

Project: **Pavement Reconstruction - N. Richland Hills, TX**

Project No.: **DE24-015**

Date: **2/15/2024**

Elev.: **603**

Location: **See Figure 1**

Depth to water at completion of boring: **14'**

Depth to water when checked:

was:

Depth to caving when checked:

was:

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA	DESCRIPTION	MC %	LL %	PL %	PI %	-200 %	DD pcf	P.PEN tsf	UNCON ksf	Strain %
0		5.5" ASPHALT over 2" Lime-Stabilized Soils									
		Brown and tan CLAY, slightly lime-treated, friable (FIL)									
600			22	51	18	33					
		Tan and gray CLAY, jointed, fissured, w/ iron stains, seams and calcareous nodules							2.75		
5			22	63	22	41			2.0		
		Tan and gray sandy CLAY, w/ numerous iron stains and calcareous nodules	19	43	14	29		112	3.0		
595									4.0		
									2.0		
10			21						2.5		
		-Water seepage at 13 feet during drilling.									
590		Dark brown marly CLAY, jointed, blocky, w/ severely weathered limestone seams and layers									
15		Boring terminated at 15 feet									
585											
20											
580											
25											
575											
30											
570											
35											

Notes:

FIGURE:2

LOG OF BORING B-2

Project: **Pavement Reconstruction - N. Richland Hills, TX**

Project No.: **DE24-015**

Date: **2/15/2024**

Elev.: **607**

Location: **See Figure 1**

Depth to water at completion of boring: **Dry**

Depth to water when checked:

was:

Depth to caving when checked:

was:

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA	DESCRIPTION	MC %	LL %	PL %	PI %	-200 %	DD pcf	P.PEN tsf	UNCON ksf	Strain %
0		5.5" ASPHALT over 4.5" Lime-Stabilized Soils									
605		Brown and tan CLAY, slightly lime-treated, friable (FILL)	37	51	31	20			3.5		
									3.0		
		Dark Brown CLAY, jointed, fissured, w/ calcareous nodules and iron stains	23						3.0		
5		Tan and gray sandy CLAY w/ iron stains	22						3.5		
									2.5		
600			21	48	18	30			4.0		
		Tan and gray marly CLAY, jointed, blocky, w/ iron deposits							4.0		
10			17	51	17	34		116	4.5+		
595									4.5++		
									4.5++		
									4.5++		
									4.5++		
15		Tan and gray calcareous marly CLAY, jointed, blocky	18	38	16	22		116	4.5++		
									4.5++		
590		Boring terminated at 15 feet									
20											
585											
25											
580											
30											
575											
35											

Notes:

FIGURE:3

LOG OF BORING B-3

Project: **Pavement Reconstruction - N. Richland Hills, TX**

Project No.: **DE24-015**

Date: **2/15/2024**

Elev.: **627**

Location: **See Figure 1**

Depth to water at completion of boring: **Dry**

Depth to water when checked:

was:

Depth to caving when checked:

was:

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA	DESCRIPTION	MC %	LL %	PL %	PI %	-200 %	DD pcf	P.PEN tsf	UNCON ksf	Strain %
0		6" ASPHALT over 4.5" Lime-Stabilized soils									
625		Tan and gray CLAY, jointed, fissured, w/ iron stains and calcareous nodules	20	54	16	38			3.5		
									4.0		
									4.5+		
5			19	62	22	40		113	4.5		
		Tan and gray marly CLAY, jointed, blocky, w/ calcareous deposits and iron stains							4.5+		
620			16	57	20	37			4.5+		
									4.5++		
			20	71	23	48		110	4.5++		
10									4.5++		
			18						4.5++		
615									4.5++		
									4.5++		
									4.5++		
15			20						4.5++		
		Boring terminated at 15 feet									
610											
20											
605											
25											
600											
30											
595											
35											

Notes:

FIGURE:4

LOG OF BORING B-4

Project: **Pavement Reconstruction - N. Richland Hills, TX**

Project No.: **DE24-015**

Date: **2/15/2024**

Elev.: **633**

Location: **See Figure 1**

Depth to water at completion of boring: **Dry**

Depth to water when checked:

was:

Depth to caving when checked:

was:

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA	DESCRIPTION	MC %	LL %	PL %	PI %	-200 %	DD pcf	P.PEN tsf	UNCON ksf	Strain %
0		5.5" ASPHALT over 5" Lime treated clay									
		Tan and brown sandy CLAY, w/ calcareous deposits and iron stains and seams	21	41	14	27			3.5		
630		Brown CLAY, jointed, fissured, w/ numerous gravel layers and seams	20	51	19	32			3.0		
		Gray clayey gravelly SAND, w/ iron stains	16				24		4.0		
5											
		Tan and gray CLAY, jointed, fissured, w/ iron stains	17					117	4.0		
625									4.0		
									4.5		
10									4.5+		
		Tan and gray marly CLAY, jointed, blocky, w/ iron stains							4.5++		
620									4.5+		
									4.0		
15			23	73	25	48			4.5		
		Boring terminated at 15 feet									
615											
20											
610											
25											
605											
30											
600											
35											

Notes:

FIGURE:5

LOG OF BORING B-5

Project: **Pavement Reconstruction - N. Richland Hills, TX**

Project No.: **DE24-015**

Date: **2/15/2024**

Elev.: **627**

Location: **See Figure 1**

Depth to water at completion of boring: **Dry**

Depth to water when checked:

was:

Depth to caving when checked:

was:

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA	DESCRIPTION	MC %	LL %	PL %	PI %	-200 %	DD pcf	P.PEN tsf	UNCON ksf	Strain %
0		6.5" ASPHALT over 4.5" BASE									
625		Gray <u>sandy CLAY</u> , w/ sand seams and lenses (FILL)	19	36	13	23			1.5		
									1.5		
5		Brown <u>sandy CLAY</u> , w/ calcareous nodules and iron stains					58		2.0		
			20						3.5		
									3.5		
620		Tan and brown <u>sandy CLAY</u> , w/ iron stains	18						3.5		
			18	47	15	32			3.0		
									2.5		
10									2.5		
		Gray and tan marly CLAY, jointed, blocky, w/ calcareous nodules and iron stains							3.0		
615											
									3.0		
15			22	66	20	46			4.0		
		Boring terminated at 15 feet									
610											
20											
605											
25											
600											
30											
595											
35											

Notes:

FIGURE:6

KEY TO LOG TERMS & SYMBOLS

Symbol Description

Symbol Description

Strata symbols



Standard
Penetration
Test



Asphaltic
Paving



CLAY



CLAY,
sandy



Marly CLAY



Clayey
Gravelly SAND

Misc. Symbols



Water table
at boring
completion

Soil Samplers



Auger



Thin Wall
Shelby Tube

Notes:

1. Exploratory borings were drilled on dates indicated using truck mounted drilling equipment.
2. Water level observations are noted on boring logs.
3. Results of tests conducted on samples recovered are reported on the boring logs. Abbreviations used are:

DD = natural dry density (pcf)	LL = liquid limit (%)
MC = natural moisture content (%)	PL = plastic limit (%)
Uncon. = unconfined compression (ksf)	PI = plasticity index
P.Pen. = hand penetrometer (tsf)	-200 = percent passing #200
4. Rock Cores

REC = (Recovery) sum of core sample recovered divided by length of run, expressed as percentage.
RQD = (Rock Quality Designation) sum of core sample recovery 4" or greater in length divided by the run, expressed as percentage.

FIGURE:7

SWELL TEST RESULTS

BORING NO.	DEPTH (FEET)	UNIT WEIGHT	ATTERBERG LIMITS			IN-SITU MOISTURE CONTENT	FINAL MOISTURE CONTENT	LOAD (PSF)	VERTICAL SWELL %
			LL	PL	PI				
B-1	6-7	112.2	43	14	29	18.7	19.6	813	0.6
B-2	8-9	115.5	51	17	34	16.8	18.7	1063	2.3
	14-15	115.7	38	16	22	17.9	18.8	1813	0.9
B-3	4-5	113.1	62	22	40	18.5	22.3	563	4.4
	8-9	110.2	71	23	48	20.4	25.2	1063	6.6
B-4	7-8	116.9	-	-	-	17.0	18.0	938	1.1

PROCEDURE:

1. The subject sample is placed in a confined ring. Then, the design load (including overburden) is applied to the sample.
2. The confined ring with the sample is then submerged with free water with surfactant and allowed to swell completely.
3. Once the swell movement stabilized, the design load was removed and the sample was retrieved for final moisture content determination.



Project No:
DE22-015

SWELL TEST RESULTS

PAVEMENT RECONSTRUCTION
NORTH RICHLAND BLVD
NORTH RICHLAND HILLS, TEXAS

FIGURE
8

SOLUBLE SULFATES RESULTS

BORING NO.	DEPTH (FEET)	SOLUBLE SULFATES (PPM)
B-1	3-4	<100
B-2	1-2	440
B-3	2-3	500
B-4	1-2	<100
B-5	1-2	<100



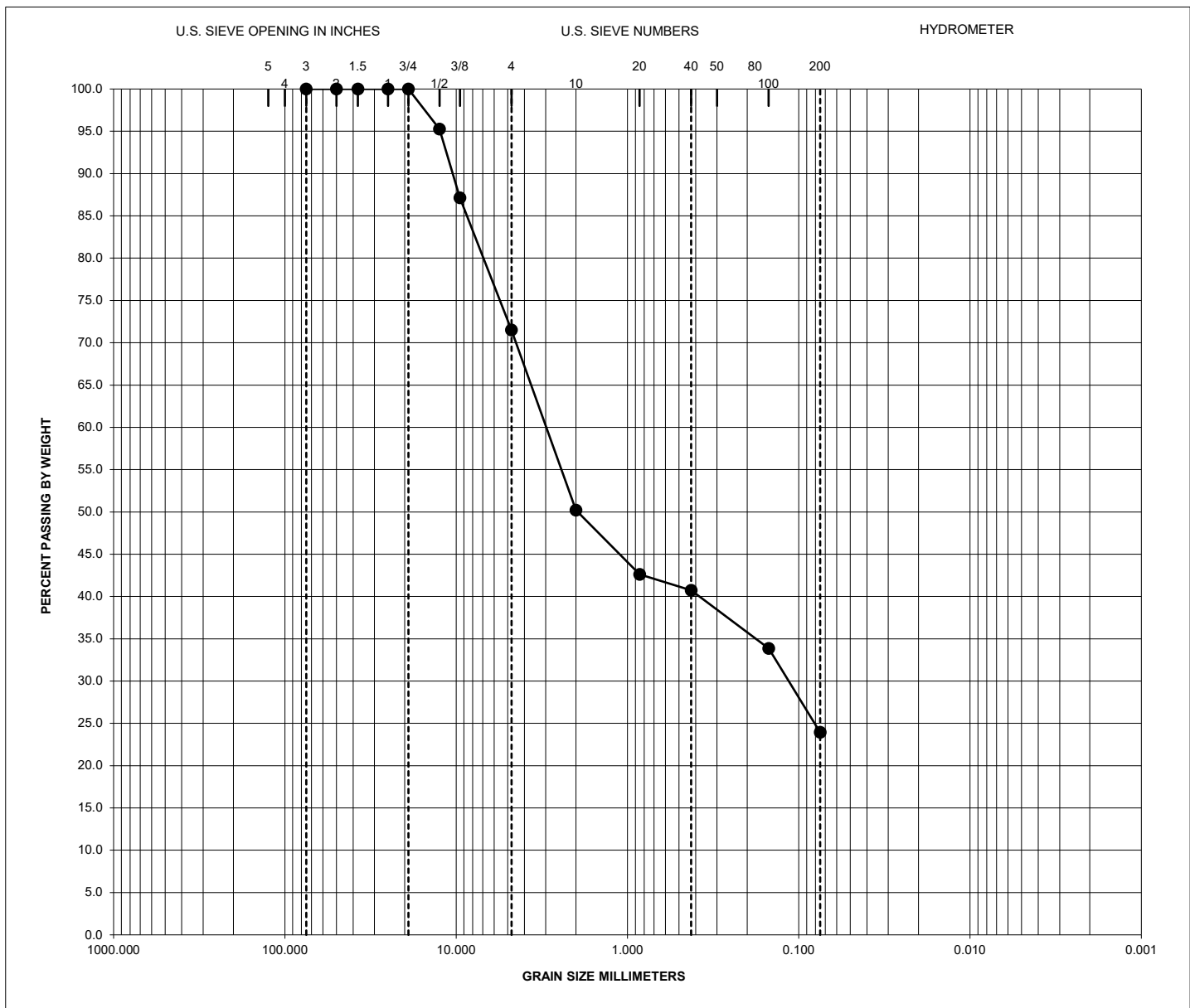
**ALLIANCE
GEOTECHNICAL
GROUP**

**Project No:
DE24-015**

SOLUBLE SULFATE TEST RESULTS


**PAVEMENT RECONSTRUCTION
NORTH RICHLAND BLVD
NORTH RICHLAND HILLS, TEXAS**

**FIGURE NO:
9**



Specimen Identification		Classification					LL	PL	PI	Cu	Cc
●	B-4	4-5	Gray clayey gravelly SAND								

Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	% -#200	
●	B-4	4-5				28.49	47.58	23.93	



GRAIN SIZE DISTRIBUTION

Project Name:

RECONSTRUCTION - NRH BLVD.

Project No:

DE24-015

Tested by:

BC

Date Tested:

2/20/2024

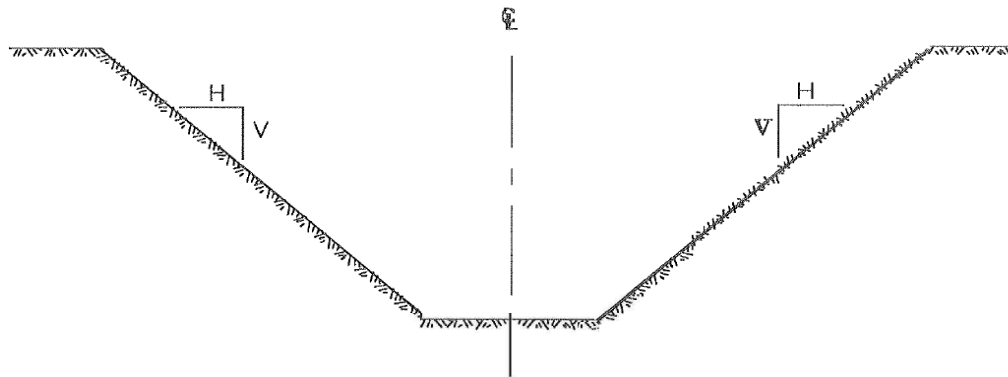
Checked by:

JP

Figure: 10

**RECOMMENDED SLOPE RATIOS
(FOR EXCAVATIONS OF 20 FEET OR LESS IN OVERBURDEN SOILS)**

OSHA TYPE	SOIL / ROCK	Short Term (under 8 hours)		Long Term (over 8 hours)	
		H	V	H	V
C	Existing fill material sands, gravels and soft clay soils (hand penetrometer of 0.5 to 0.9 tsf)	1-½	1	2	1
C	Submerged soils from which water is seeping*	1-½	1	2	1
B	Stiff to hard clay, sandy clay, marly clay and calcareous marly clay (water seepage <u>not</u> occurring)**	1	1	1	1



* In accordance with the best interpretation of OSHA regulations, submerged soil is defined as granular soils, fissured clay soils, from which groundwater is seeping.

** If Type C materials are encountered below Type B materials, the overlying Type B soils should be sloped back in accordance with requirements for Type C materials.

NOTE: Recommended slope ratios may be subject to reduced stability under the influence of groundwater or saturation by rain. Recommended slope ratios are designed for safety only of temporary excavations and are not designed to prevent limited sloughing during construction.



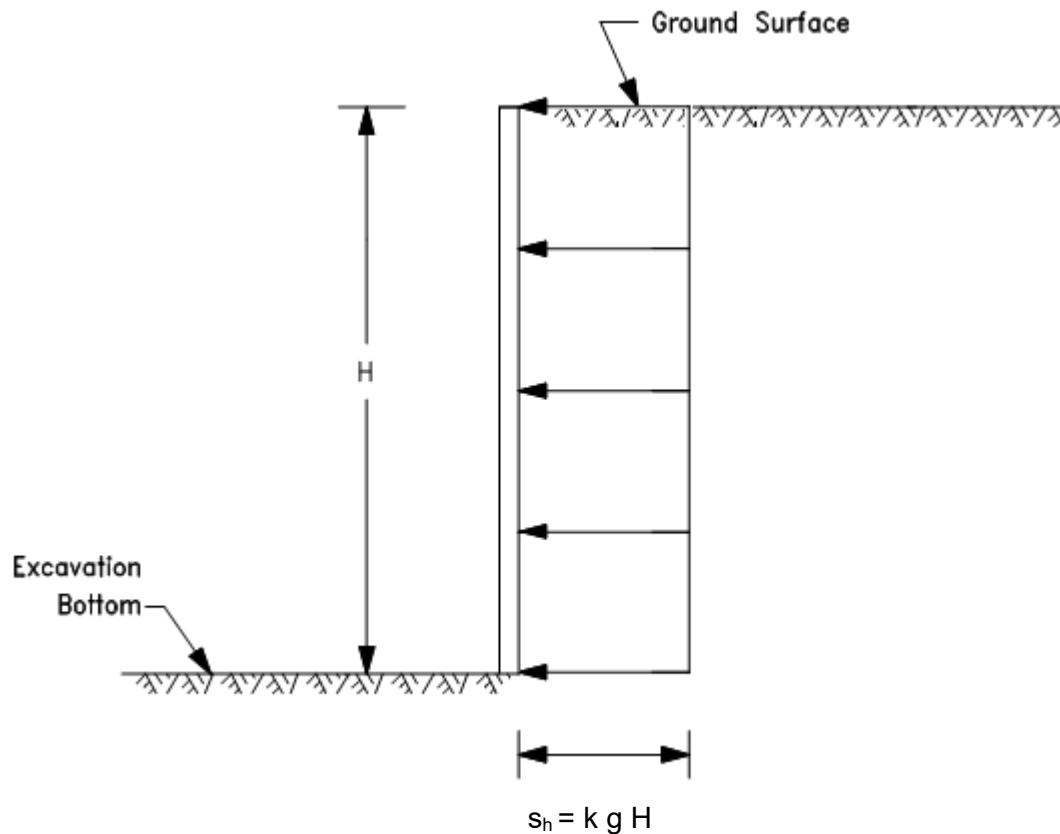
Project No:
DE24-015

RECOMMENDED SLOPE RATIOS

**PAVEMENT RECONSTRUCTION
NORTH RICHLAND BLVD
NORTH RICHLAND HILLS, TEXAS**

**FIGURE
11**

LATERAL EARTH PRESSURES FOR INTERNALLY BRACED EXCAVATIONS



WHERE:

s_h = Lateral Earth Pressure, psf.

g = Saturated Unit Weight of Soil

Use 130 pcf – Overburden Soils

H = Height of Excavation, ft.

k = Earth Pressure Coefficient;

Use 0.40 for fill soils, sands, and gravels.

Use 0.35 for clay, sandy clay marly clay and calcareous marly clay.

NOTES: 1) If water is not allowed to drain from behind shoring or bracing, full hydrostatic pressure must be considered.

2) Surcharge loads and traffic live loads, if present, must also be considered.

APPENDIX A

MEASURES TO MINIMIZE DEEP-SEATED SWELL

MEASURES TO MINIMIZE DEEP SEATED SWELL

In order to reduce the risk of excessive upward ground movements caused by soil swelling associated with free water sources, the following measures should be taken during design and construction:

- The use of superior contractors and utility line materials accompanied with Quality Control inspection and testing of all utility line installations.
- Utility under-drains with impervious barriers along the trench bottom may be used as an additional safeguard to minimize post-construction upward movement caused by water percolation into the deeper clay soils.
- Positive drainage should be provided. Surface drainage gradients within 10 feet of the pavement should be constructed with maximum slopes allowed by local codes.
- Rapid repair of any utility leak including water lines, sewer lines, and storm drains.
- Trees and deep rooted shrubs should be located no closer to the pavement than their ultimate mature height (and to greater distances were multiple trees are present and/or when the ground beneath the drip lines are paved) to reduce foundation settlement effects caused by moisture absorption of the root systems.
- It is imperative that all cracks and joints in the pavement be sealed and maintained by routine sealing in order to minimize differential pavement deflections caused by soil swelling.
- It is important that porous fill soils (sandy soil) not be used as backfill behind the curbs or as leveling sand below pavements to prevent ponding beneath the pavement or near the curb line.

APPENDIX B
PAVEMENT CORE PHOTOS



Photo 1: Pavement Core B-1

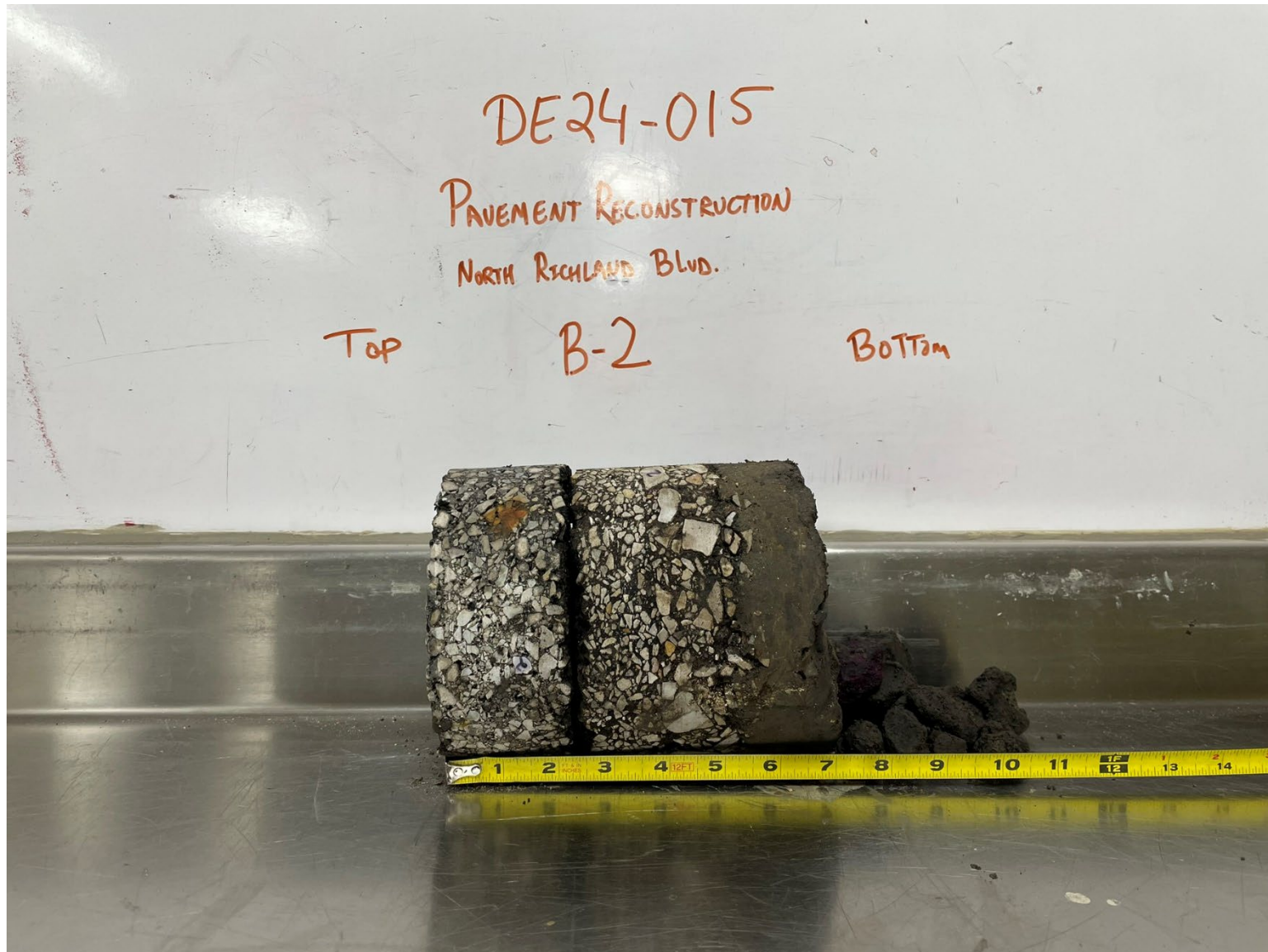


Photo 2: Pavement Core B-2

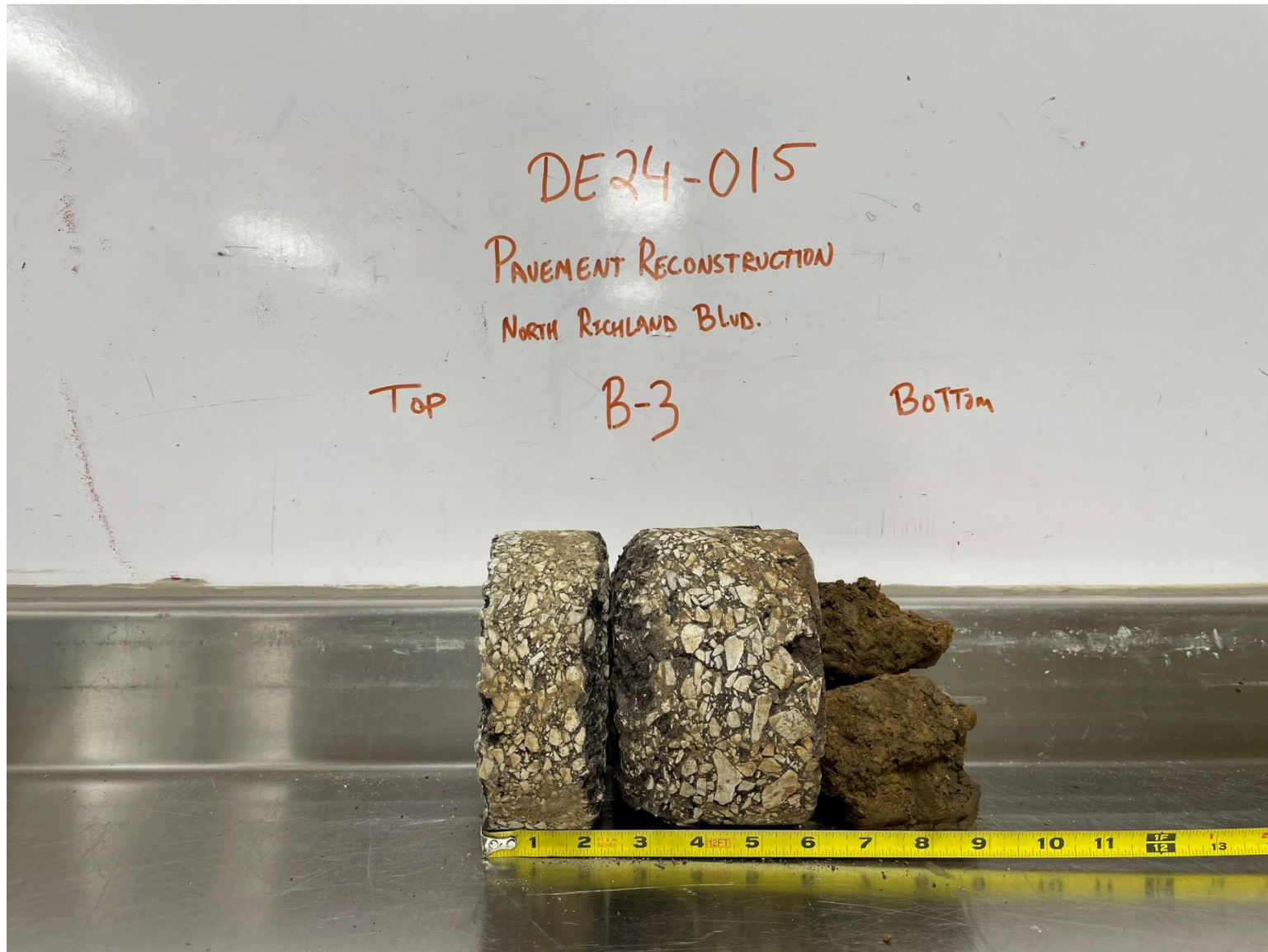


Photo 3: Pavement Core B-3

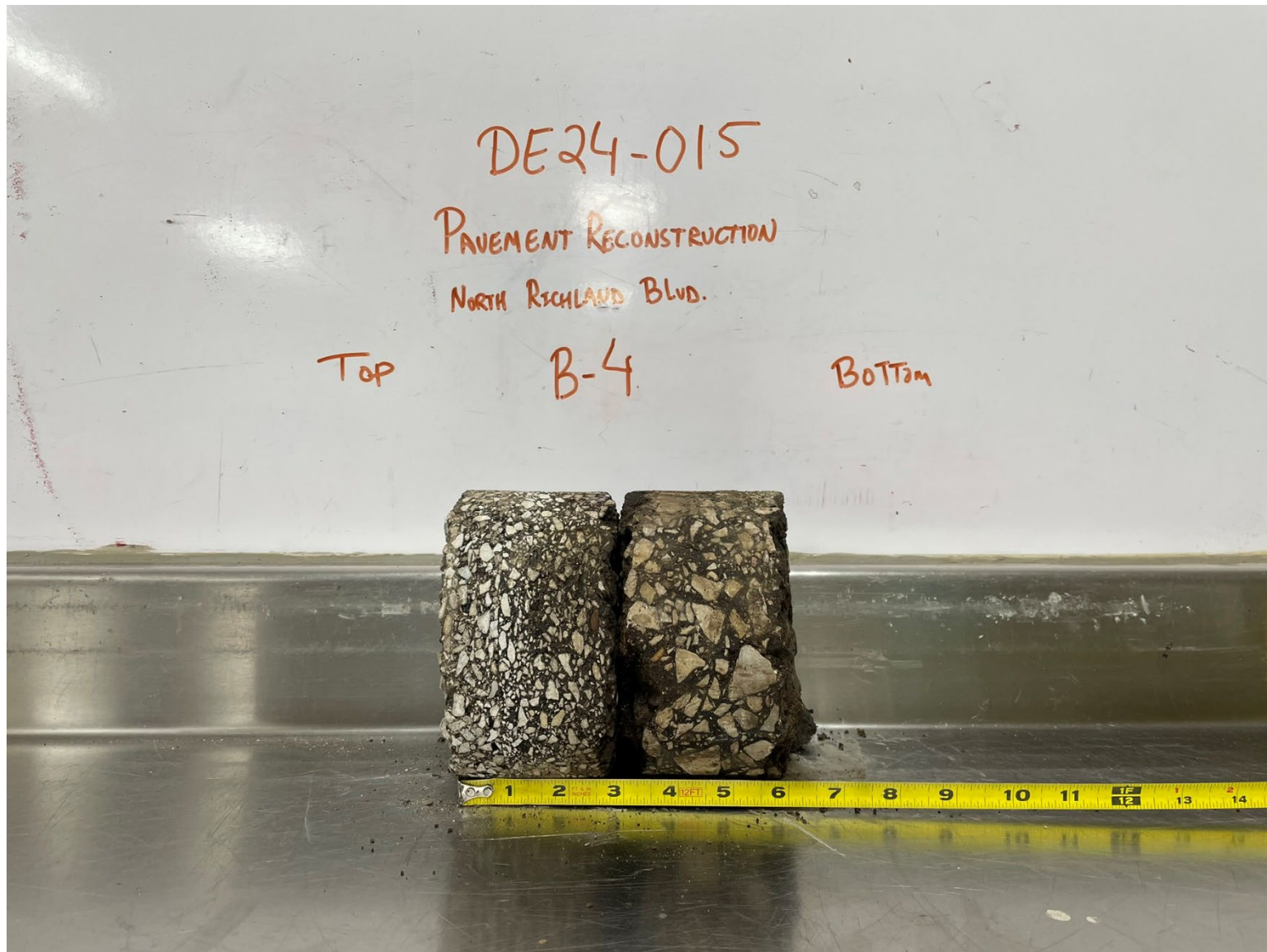


Photo 4: Pavement Core B-4

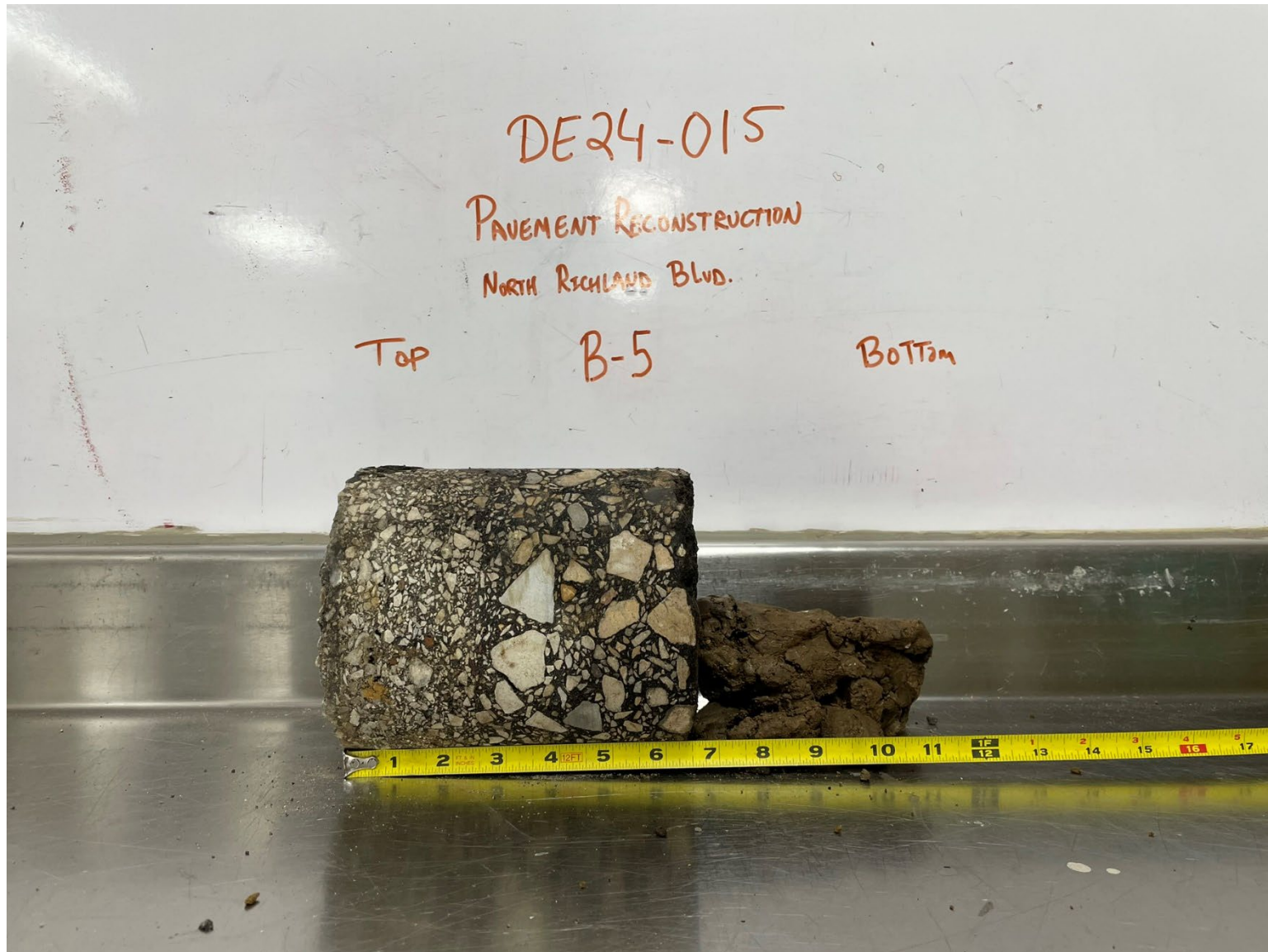


Photo 5: Pavement Core B-5