

**CONTRACT DOCUMENTS
AND
CONSTRUCTION SPECIFICATIONS
FOR**

**TRIBUTARY CB-1 BANK
RESTORATION**

**FOR THE
CITY OF NORTH RICHLAND HILLS**



September 2024

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

Project RFB 24-033

ENGINEER:
BAIRD HAMPTON AND BROWN, INC.
3801 William D Tate Ave, Suite 500
Grapevine, TX 76051
BHB PROJ. NO. 2022.735.000
TBPELS Firm #44, #10011302

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NRH PURCHASING GUIDANCE



PURCHASING DEPARTMENT

REQUEST FOR BID

**24-033 TRIBUTARY CB-1 BANK
RESTORATION**

BIDS DUE THURSDAY, OCTOBER 31, 2024

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: 24-033
- Bid Type: REQUEST FOR BID
- Bid Name: TRIBUTARY CB-1 BANK RESTORATION
- Bid Due Date: Thursday, October 31, 2024
- Bid Due Time: 2:00 P.M. Central Time
- Pre-Bid Conference: 10:00 A.M. Central Time, Wednesday, October 16, 2024
- Location: On-Site in Rear Parking Lot of Holiday Lane Estates, 6155 Holiday Ln, North Richland Hills, TX 76180
- Deadline for questions:
 - Date: Friday, October 25, 2024
 - Time: 12:00 P.M. Central 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. Thursday, October 31, 2024**. 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 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.

26. 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. TRIBUTARY CB-1 BANK RESTORATION CONTRACT
2. TRIBUTARY CB-1 BANK RESTORATION SIGNED/SEALED PLANS

SECTION II

BIDDING DOCUMENTS

NOTICE TO BIDDERS

UPLOADED BIDS on forms prepared by the Engineer will be received until 2:00 p.m. on Thursday, October 31, 2024 for furnishing all labor, material, equipment and the performance of all work required for:

TRIBUTARY CB-1 BANK RESTORATION

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 on-site at **10:00 a.m. on Wednesday, October 16, 2024**, in the Rear Parking Lot of **Holiday Lane Estates, 6155 Holiday Ln, North Richland Hills, TX 76180** keeping in accordance with the latest CDC guidelines.

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: Approximately two hundred linear feet of channel restoration along Tributary CB-1 downstream of Davis Boulevard. Channel restoration will primarily consist of concrete channel lining.

CITY OF NORTH RICHLAND HILLS

Eva Ramirez
Purchasing Manager

ADVERTISEMENT DATES:

- **Friday, September 13, 2024**
- **Sunday, September 15, 2024**

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 on-site at 10:00 A.M. Central Time Wednesday, October 16, 2024, in the Rear Parking Lot of Holiday Lane Estates, 6155 Holiday Ln, 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) on Friday, October 25, 2024. 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, October 25, 2024. 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
24-033 TRIBUTARY CB-1 BANK RESTORATION
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 (Central Time), Thursday, October 31, 2024

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

FOR: TRIBUTARY CB-1 BANK RESTORATION

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 100 – Miscellaneous Items \$ _____

Section 200 – Demolition Items \$ _____

Section 300 – Grading and Drainage Improvements \$ _____

\$ _____
(Total Amount Bid, Numerical Value)

***- The Owner reserves the right to delete any bid items or portions thereof.**

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 **180 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 100 - MISCELLANEOUS ITEMS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
101	NCTCOG 203.1	GENERAL SITE PREPARATION	1	LS	\$	\$
		dollars and cents per unit				
102	NCTCOG 107.21	PROJECT SIGN	1	EA	\$	\$
		dollars and cents per unit				
103	TXDOT 500	MOBILIZATION	1	LS	\$	\$
		dollars and cents per unit				
104	NCTCOG 201.1	TREE PROTECTION FENCING	3	EA	\$	\$
		dollars and cents per unit				
105		MISCELLANEOUS UTILITY ADJUSTMENT (INCLUDING IRRIGATION)	1	LS	\$	\$
		dollars and cents per unit				
106		PROJECT CONTINGENCY	1	LS	\$ 30,000	\$ 30,000.00
		dollars and cents per unit				
SUBTOTAL SECTION 100 - MISCELLANEOUS ITEMS						
					DOLLARS	
					CENTS	\$
SECTION 200 - DEMOLITION ITEMS						
201		DEMOLISH & REMOVE CONCRETE PAVEMENT	1	LS	\$	\$
		dollars and cents per unit				
202		REMOVE CHAIN LINK FENCE	65	LF	\$	\$
		dollars and cents per unit				
203	NCTCOG 204.1	REMOVE & GRUB VEGETATION	1	LS	\$	\$
		dollars and cents per unit				
204	NCTCOG 201.1	Trim/Remove Trees and Shrubs	8	EA	\$	\$
		dollars and cents per unit				
SUBTOTAL SECTION 200 - DEMOLITION ITEMS						
					DOLLARS	
					CENTS	\$
SECTION 300 - GRADING AND DRAINAGE IMPROVEMENTS						
301	NCTCOG 203.2	UNCLASSIFIED EXCAVATION	170	CY	\$	\$
		dollars and cents per unit				
302	TXDOT 162 & 160	BLOCK SOD PLACEMENT	450	SY	\$	\$
		dollars and cents per unit				
303	TXDOT 162 & 160	IMPORTED TOP SOIL (4" THICK)	50	CY	\$	\$
		dollars and cents per unit				
304	NCTCOG 303	CONCRETE LINED CHANNEL & ALL APPURTENANCES	215	LF	\$	\$
		dollars and cents per unit				
305	NCTCOG 801.4	6' CHAIN LINK FENCE	235	LF	\$	\$
		dollars and cents per unit				
306	TXDOT 530	CONCRETE FLUME	225	SF	\$	\$
		dollars and cents per unit				
307	TXDOT 530	6" CONCRETE PAVEMENT	3030	SF	\$	\$
		dollars and cents per unit				
308	NCTCOG 202.1	EROSION CONTROL MEASURES	6	MO	\$	\$
		dollars and cents per unit				
SUBTOTAL SECTION 300 - GRADING AND DRAINAGE IMPROVEMENTS						
					DOLLARS	
					CENTS	\$
TOTAL - BASE BID (SECTIONS 100, 200 & 300)						
					DOLLARS	
					CENTS	\$

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 HILLS, 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:

TRIBUTARY CB-1 BANK RESTORATION

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.

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 **180 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.

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 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. This contract time is both multi-tiered and cumulative.

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

- (1) \$500 per Calendar Day for any unfinished work beyond 180 consecutive calendar days after the "Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER

- (2) It is understood between the parties hereto that these sums shall be treated as liquidated damages and not as a penalty, and the OWNER may withhold from the CONTRACTOR's compensation such sums as liquidated damages.

The parties consider the CONTRACTOR's failure to complete performance of the entire contract within the 180th calendar day after the "Notice to Proceed" date a substantial breach of this agreement, and the amount of liquidated damages set forth herein is a reasonable and fair estimate of just compensation for CONTRACTOR's failure to timely perform the contract.

If there is any conflict between any provision of this Article 3, and any other Provision in this agreement, or in any attachment hereto or any other Contract Document, this Article 3 shall control.

ARTICLE 4. PARTIAL PAYMENT.

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

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

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

ARTICLE 5. DISCRIMINATION.

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

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

ARTICLE 6. ENTIRE CONTRACT.

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

ARTICLE 7. MODIFICATION.

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

ARTICLE 8. VARIABLES IN COST.

The parties hereto assume and understand that the variables in the

CONTRACTOR's cost of performance may fluctuate; consequently, the parties hereto agree that any fluctuations in the CONTRACTOR's costs will in no way alter the CONTRACTOR's obligations under this contract nor excuse nonperformance or delay on his/her part.

ARTICLE 10. VENUE.

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

ARTICLE 11. CONTRACT DOCUMENTS.

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

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

ARTICLE 11. DEFAULT

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

ARTICLE 12. SUBCONTRACTORS

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

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

CITY OF NORTH RICHLAND HILLS:

By: _____
Paulette Hartman
City Manager
Date: _____

ATTEST:

By: _____

Alicia Richardson
City Secretary/Chief Governance Officer

CONTRACTOR:

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

ATTEST:

By: _____

Name: _____
Title: _____

APPROVED TO FORM AND LEGALITY:

By: _____

Bradley Anderle, City Attorney

Bond No. _____

PERFORMANCE 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") in the penal sum _____ DOLLARS AND _____ CENTS (\$XXX,XXX.00) [not less than 100% of the approximate total amount of the contract as evidenced in the bid proposal] in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

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

TRIBUTARY CB-1 BANK RESTORATION

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

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

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

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

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

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

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

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

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

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

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

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

Bond No. _____

PAYMENT BOND

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

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

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

TRIBUTARY CB-1 BANK RESTORATION

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

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

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

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

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

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

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

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

Bond No. _____

MAINTENANCE BOND

STATE OF TEXAS §
§ 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") 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:

TRIBUTARY CB-1 BANK RESTORATION

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: **TRIBUTARY CB-1 BANK RESTORATION**

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

(NAME OF CORPORATION)

(AUTHORIZED AGENT)

CORPORATION ACKNOWLEDGMENT

STATE OF TEXAS §
 §
COUNTY OF _____ §

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

CONTRACTOR'S RELEASE TO CITY *(Continued)*

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

(Notary Public in and for the State of Texas)

(Type or Print Notary's Name)

My Commission Expires: _____

CONTRACTOR'S AFFIDAVIT OF FINAL PAYMENT

STATE OF TEXAS §

§

COUNTY OF TARRANT §

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

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

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

Texas (hereinafter referred to as "Contractor"), which said Contractor was awarded the contract dated the _____ day of _____, 2020, for the construction of the **TRIBUTARY CB-1 BANK RESTORATION** (hereinafter referred to as the "Work"), for a total consideration of _____ and XX/100 Dollars (\$ XXX,XXX.00) to be paid to the said Contractor (the "Contract"), and that Affiant has full power of authority to make this affidavit.

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

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

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

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

(Affiant)

(Printed Name)

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

(Notary Public in and for the State of Texas)

(Type or Print Notary's Name)

My Commission Expires: _____

SECTION IV

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

For this contract, the Site Protection & Preparation (Division 200), Roadway Construction (Division 300), Roadway Maintenance & Rehabilitation (Division 400), Underground Construction & Appurtenances (Division 500), Conduit and Appurtenance Rehabilitation (Division 600), Structures (Division 700) and Miscellaneous Construction & Materials (Division 800) of the “Public Works Construction Standards – North Central Texas” adopted by the North Central Texas Council of Governments (NCTCOG), 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. Proposed Concrete Mix Designs, including the documentation of all proposed concrete admixtures.
- D. Stormwater Pollution Prevention Plan

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 101: 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 or easements.

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

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

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

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

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

BID ITEM 102: PROJECT SIGN

The provisions of Item 107.21 of the NCTCOG Specifications and City Specifications shall govern for the erection of project signs.

The CONTRACTOR shall install one (1) Project Signs for TRIBUTARY CB-1 BANK RESTORATION. The exact locations shall be approved by the OWNER prior to installation.

These signs shall be in accordance with Figure 2M (R 07-01-2009) of the City of North Richland Hills' Public Works Design Manual. These signs shall be installed within 15 calendar days from the date the OWNER awards the contract and shall remain in place during the entire construction period. These Signs shall be removed within 15 calendar days after the OWNER's acceptance of the project improvements. The CONTRACTOR shall maintain the signs for the duration of the construction. The Project Signs shall be measured and paid for at the bid price "per each".

Sign Data:

Project Name: TRIBUTARY CB-1 BANK RESTORATION

Project - \$: To Be Determined After Contract Award

Projected Completion: To Be Determined After Contract Award

This item includes all labor, materials, and supplies required to furnish, install, and maintain project signs for the duration of construction. The project signs shall be placed on site at the locations designated by the City. The unit price bid includes all compensation due for this item.

BID ITEM 103: 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 104: TREE PROTECTION FENCING

Install Tree Protection 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 ITEM 105: MISCELLANEOUS UTILITY ADJUSTMENT (INCLUDING IRRIGATION)

Miscellaneous utility adjustments include lawn sprinkler systems, subsurface drains and other private services and appurtenances that are the property owner's responsibility to maintain. Every effort will be made by the Contractor to ensure that no damage is done to miscellaneous utilities and that they are in place each and every day of the construction period. It shall be the responsibility of the "Contractor" to provide the services of a licensed plumber/irrigator to replace any damaged lawn sprinkler systems. The "Contractor" is required to drill into the proposed curb to enable the redirection of existing lawn storm drain stub outs into the street.

BID ITEM 106: PROJECT CONTINGENCY

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 \$30,000 is provided for this item. At the completion of the work, funds not utilized in this item shall be removed from the Contract.

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 201: DEMOLISH & REMOVE CONCRETE PAVEMENT

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 pavement 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 of 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 202: REMOVE CHAIN LINK FENCE

Remove, haul-off and dispose of existing chain link fence. Coordinate fence removal with Property Owner. Temporary fencing shall be installed prior to removal of existing fence and remain in place until the permanent fence is constructed. New fence must be erected within one day of removal.

BID ITEMS 203: REMOVE & GRUB VEGETATION AND SEDIMENT

Remove, haul-off and disposal of existing shrubs and vegetation as indicated on the plans and in the channel within the limits of construction. Shrubs shall be removed in accordance with NCTCOG Specification 204.1 and the Plans. Coordinate removal with the City and Property Owner. Stumps shall be removed and/or ground to at least six inches below final grade to allow for surface restoration with topsoil and sod. Payment for this item shall be one lump sum.

BID ITEM 204: TRIM/REMOVE TREES AND SHRUBS

Trim and remove trees and shrubs as necessary to facilitate construction. Any trimming or removal of trees and shrubs shall be coordinated and approved with the City in advance. Any trimming or removal that occurs without prior approval from the City may not be compensated.

BID ITEM 301: UNCLASSIFIED EXCAVATION

Unclassified Excavation shall consist of all the required excavation within the project limits as shown on the Construction Plans, the removal, proper utilization or disposal of all excavated material, and the shaping and finishing of all earthwork in conformity with the lines and grades as shown on the Construction 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. Unclassified Excavation shall meet the requirements of Item 203.2 of the COG Specifications.

The unit bid price includes the necessary, removal, demolition, haul off, backfill, subgrade preparation, compaction, and final grading to construct proposed improvements. Unclassified Excavation shall be measured and paid for by the cubic yard for excavation from its original position. **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 302 & 303: BLOCK SOD PLACEMENT & IMPORTED TOP SOIL (4"THICK)

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 TxDOT 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 ensure 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 304: CONCRETE LINED CHANNEL & ALL APPURTENANCES

Concrete channel lining with the dimensions and grades shown on the construction plans. This bid item includes all forming, finishing, reinforcing steel, earthwork, gravel backfill, filter fabric, geogrid, and all other appurtenances shown in the detail on the construction plans. The limits of channel demolition and reconstruction are based on topographic survey data and visual inspection completed in July 2023. Final limits of demolition and reconstruction should be coordinated with City inspector based on field conditions at time of construction.

MEASUREMENT AND PAYMENT: Concrete lined channel shall be measured per linear foot. The unit price bid includes all compensation due for this item.

BID ITEM 305: 6' CHAIN LINK FENCE

This item includes the materials, labor, and supplies for the installation of a new chain link fence. The location of the new fence shall be coordinated with the City

and Property Owner. The unit price bid includes all compensation due for this item in totality and shall be measured per linear foot. The fence shall be a six-foot chain link fence with metal posts installed at the top of the channel utilizing a PVC sleeve. PVC sleeves should be grouted after installing the fence posts. The new fence shall be installed straight/parallel along the top of the channel. It is the responsibility of the CONTRACTOR to verify any underground utilities, including irrigation, prior to installing fence. Should irrigation be damaged during installation, CONTRACTOR is responsible to replace or restore irrigation at no additional cost to the city.

BID ITEM 306: CONCRETE FLUME

Construct concrete flume in accordance with TxDOT Specification 530 and the Plans. This item includes forming, reinforcement, concrete, finishing, materials, labor, supplies, and installation of new reinforced concrete flume. The unit price bid includes all compensation due for this item.

BID ITEM 307: 6" CONCRETE PAVEMENT

Construct concrete pavement in accordance with TxDOT Specification 530 and the Plans. This item includes saw cutting, demolishing, and removing of the existing pavement being replaced and the forming, reinforcement, concrete, finishing, materials, labor, supplies, and installation of new reinforced concrete pavement at the location directed by OWNER. The unit price bid includes all compensation due for this item.

This is a contingency item and is to be used at the discretion of the OWNER to cover replacement of private pavement damaged during the construction process. Any work performed without prior authorization from the OWNER shall not be paid under this item. At the completion of the work, funds not utilized in this item shall be removed from the Contract.

MEASUREMENT AND PAYMENT: Payment for this contingency item shall be made per square foot at the agreed upon locations and quantities 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 be compensated for the amount of pavement actually installed.

BID ITEM 308: EROSION CONTROL MEASURES

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.

This item includes the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and all materials, labor, and supplies necessary to install and maintain, for the duration of the project, adequate erosion control measures consistent with the SWPPP and all applicable laws and regulations. The SWPPP shall be submitted to the City prior to construction for approval. This item will be paid for on a lump sum basis. The lump sum bid includes all compensation due for this item.

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. Erosion Control
3. Grading
4. Concrete Lined Channel

SP-3: DEFINITIONS

Modify GP Item 101.1 Definitions as follows:

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

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

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

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

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

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

SP-4: INFORMATION CONCERNING CONDITIONS

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

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

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

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

SP-5: ADDENDA

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

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

SP-6: PROPOSED GUARANTY

Modify GP Item 102.5. Proposal Guaranty to include:

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

SP-7: FILING OF PROPOSAL

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

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

SP-8: REJECTION OF PROPOSALS

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

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

SP-9: DISQUALIFICATION OF BIDDERS

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

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

SP-10: QUALIFICATION TO PERFORM

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

SP-11: AWARD OF CONTRACT

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

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

SP-12: BONDS - AMOUNT AND TERMS

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

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

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

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

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

General conditions for bonds are as follows:

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

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

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

SP-13: INSURANCE REQUIREMENTS

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

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

A. Definitions:

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

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

- (2) Building or construction - Has the meaning defined in the Texas Labor Code, §406.096(e)(1).
- (3) Contractor - A Person bidding for or awarded a building or construction project by a governmental entity.
- (4) Coverage - Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, §401.011(44).
- (5) Coverage Agreement - A written agreement on form TWCC-81, form TWCC-82, form TWCC-83, or form TWCC-84, filed with the Texas Workers' Compensation Commission which establishes a relationship between the parties for purposes of the Workers' Compensation Act, pursuant to the Texas Labor Code, Chapter 406, Subchapters F and G, as one of employer/employee and establishes who will be responsible for providing workers' compensation coverage for persons providing services on the project.
- (6) Duration of the project - Includes the time from the beginning of the work on the project until the work on the project has been completed and accepted by the governmental entity.
- (7) Persons providing services on the project ("subcontractor" in §406.096) - Includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the CONTRACTOR and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- (8) Project - Includes the provision of all services related to a building or construction contract for a governmental entity.
- B. The CONTRACTOR shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the CONTRACTOR providing services on the project for the duration of the project.
- C. The CONTRACTOR must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the CONTRACTOR's current certificate of coverage ends during the duration of the project the CONTRACTOR must prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The CONTRACTOR shall obtain from each person providing services on the project and provide to the governmental entity:
 - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
 - (2) no later than seven days after receipt by the CONTRACTOR, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- F. The CONTRACTOR shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The CONTRACTOR shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the CONTRACTOR knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
- H. The CONTRACTOR shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

- I. The CONTRACTOR shall contractually require each person with whom it contracts to provide services on a project, to:
- (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 - (2) provide to the CONTRACTOR, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - (3) provide the CONTRACTOR, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (4) obtain from each other person with whom it contracts, and provide to the CONTRACTOR:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - (6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
 - (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

- J. By signing this contract or providing or causing to be provided a certificate of coverage, the CONTRACTOR is representing to the governmental entity that all employees of the CONTRACTOR who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the CONTRACTOR to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The CONTRACTOR's failure to comply with any of these provisions is a breach of contract by the CONTRACTOR which entitles the governmental entity to declare the contract void if the CONTRACTOR does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

In accordance with statutory requirements, the CONTRACTOR shall:

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

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

Figure 1:

REQUIRED WORKERS' COMPENSATION COVERAGE

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

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

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

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

Contractor's General Liability and Property Damage Insurance:

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

Property Damage \$ 600,000 each occurrence

SP-14: POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

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

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

SP-15: ORDER OF WORK

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

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

SP-16: PRIORITY OF CONTRACT DOCUMENTS

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

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

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

SP-17: WARRANTY

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

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

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

SP-18: LINES AND GRADES

Add the following to GP Item 105.4. Construction Stakes:

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

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

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

SP-19: INSPECTION AND TESTING

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

The CONTRACTOR shall be responsible for paying for all testing and testing related items (acquiring specimens, proper specimen control, etc.) on this Project.

During the progress of the work, all materials, equipment and workmanship shall be subjected to such inspections and tests as will assure conformance with the contract requirements.

The CONTRACTOR shall furnish at his/her expense all necessary specimens and samples for testing.

Sampling and testing of all materials or construction methods shall be performed by a commercial laboratory, approved by the City Engineer, and permitted with the City of North Richland Hills' Public Works Department.

When the CONTRACTOR's materials, construction items or products incorporated in the project fail to satisfy the minimum requirements of the initial test and he/she has to bear the cost of any retesting, he/she shall be responsible for any and all cost associated with such retesting. If in this situation, the CONTRACTOR utilizes the same testing laboratory as the OWNER, the CONTRACTOR shall pay said testing laboratory in full or the

testing laboratory shall be able to gain recourse through the CONTRACTOR's Payment Bond.

In the event a conflict arises concerning the interpretation of A.S.T.M., A.C.I., A.W.W.A., etc., specifications/standards, the City Engineer shall make his/her determination of the interpretation and his/her determination shall be final.

SP-20: INDEMNIFICATION

The CONTRACTOR shall familiarize himself/herself with GP Item 107.3. Indemnification and GP Item 107.20.3.2. Indemnification. Additionally, the following shall be added to both Indemnification items:

This agreement, however, does not waive any governmental immunity available to the OWNER under Texas law and nor any defenses of the parties under Texas law. The provisions of this paragraph are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity.

SP-21: SALES TAX

Add the following to GP Item 107.15. State and Local Sales and Use Taxes:

The OWNER qualifies for exemption from state and local sales and use taxes, pursuant to the provisions of Section 151.309 of the Texas Limited Sales, Excise and Use Tax Act, as amended. Therefore, the OWNER shall not be liable for, or pay the CONTRACTOR's cost of such sales and use taxes which would otherwise be payable in connection with the performance of this contract.

SP-22: TRAFFIC CONTROL

Add the following to GP Item 107.20.2. Protection of Persons and Property:

The CONTRACTOR shall not remove any regulatory sign, instructional sign, street name sign, or other sign which has been erected by the City. If it is determined that a sign must be removed to permit required construction, the CONTRACTOR shall contact the City to remove the sign. In the case of regulatory signs, the CONTRACTOR must replace the permanent sign with a temporary sign meeting the requirements of the above referenced manual and such temporary sign must be installed prior to the removal of the permanent sign. If the temporary sign is not installed correctly or if it does not meet the required specifications, the permanent sign shall be left in place until the temporary sign requirements are met. When construction work is completed to the extent that the permanent sign can be reinstalled, the CONTRACTOR

shall again contact the City to reinstall the permanent sign and shall leave his temporary sign in place until such installation is completed.

The CONTRACTOR shall prosecute his traffic control work in such a manner as to create a minimum of interruption to traffic and pedestrian facilities and to the flow of vehicular and pedestrian traffic within the project area.

Access to adjacent property shall be maintained at all times unless otherwise approved by the OWNER.

SP-23: TRENCH SAFETY

Add the following paragraph to GP Item 107.20.3. Trench Safety:

Per Chapter 756, Texas Health & Safety Code, it shall be the responsibility of the CONTRACTOR to provide and maintain a viable trench safety system at all times during construction activities. The CONTRACTOR is directed to become knowledgeable and familiar with the standards as set forth by the Occupational Safety and Health Administration for trench safety that will be in effect during the period of construction of the project and the CONTRACTOR is responsible for conforming to such regulations as prescribed by Occupational Safety and Health Administration standards.

SP-24: WORK-SITE AREA AND CLEAN-UP

Add the following to GP Item 107.22. Working Area:

During construction the CONTRACTOR shall at all times keep the job site free from waste, debris and rubbish, and shall maintain a daily routine of clean-up.

The working operations of the CONTRACTOR shall at all times be conducted so as to create a minimum of inconvenience to the OWNER or to the public. Stringing of pipe, stockpiling of materials, etc., will be allowed only where no inconvenience is caused and only in amounts that can be readily used by the CONTRACTOR.

All trees, stumps, slashings, brush or other debris to be removed from the site, shall be disposed of in a manner consistent with Local Ordinances and all State Regulations. Burning of trash, etc., will only be permitted where allowed by Local Ordinances and State Pollution Regulations.

All excavated earth in excess of that required for project embankments and/or backfilling shall be removed from the job site and disposed of in a satisfactory manner. Disposal of excess material into area creeks and drainageways will not be allowed.

Any trees or other landscape features scarred or damaged by the CONTRACTOR's operations shall be restored or replaced at the CONTRACTOR's expense. Trimming or pruning to facilitate the work will be permitted only by experienced workmen in an approved manner. Pruned limbs of one inch (1") diameter or larger, shall be thoroughly treated as soon as possible with a tree wound dressing.

The CONTRACTOR shall take all precautions required to prevent soil erosion during construction. If, in the opinion of the City Engineer, excessive erosion occurs, the CONTRACTOR shall take immediate measure to prevent further erosion and restore the disturbed surface with topsoil at completion of the work.

All property along and adjacent to the CONTRACTOR's operations including lawns, yards, shrubs, trees, etc., shall be preserved or restored after completion of the work, to a condition equal to or better than existed prior to start of work.

Upon completion of the work as a whole and prior to final acceptance, the CONTRACTOR shall clean and remove from the site all surplus and discarded materials, temporary structures and all debris. He/She shall leave the site in a neat and orderly condition with an appearance satisfactory to the City Engineer and OWNER. Method and location of disposal or surplus and waste materials shall be satisfactory to the City Engineer.

The CONTRACTOR shall then thoroughly clean all equipment and materials installed by him/her and shall present for final inspection materials and equipment in a clean, bright and new condition.

No extra payment will be made for any of this type of work required on the project.

SP-25: EXISTING STRUCTURES, FACILITIES AND IMPROVEMENTS

Add the following to GP Item 107.24. Existing Structures, Facilities and Appurtenances:

The CONTRACTOR's attention is directed to the necessity of taking adequate measures to protect all existing structures, facilities, improvements and utilities, including sprinkler systems, encountered.

The plans show the locations of most known surface and subsurface structures. However, the OWNER assumes no responsibility for failure to show any or all of these structures on the plans or in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work, or for increasing the pay quantities in any manner,

unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades, or requires the building of special works not provided for in the Contract Documents.

Any non-City utilities (cable, electric, gas, telephone, etc.) damaged by the CONTRACTOR shall be the responsibility of the CONTRACTOR for relocation and/or repair as well as the costs associated with the relocation and/or repair of utilities. Any City utilities (sanitary sewer main and water distribution main) damaged by the non-negligent acts of the CONTRACTOR will not be the responsibility of the CONTRACTOR for repair. Any delays associated with the relocation and/or repair of utilities shall not be basis for a claim for extra pay.

In the progress of the work, the CONTRACTOR may have to relocate certain existing utility service lines. All relocation, repairs and replacement work shall be done at the expense of the CONTRACTOR to the satisfaction of the OWNER, except those for which specific pay items appear in the Bid Proposal.

Any utilities damaged during construction work shall be immediately repaired at the CONTRACTOR's expense.

The CONTRACTOR shall at all times maintain streets and drives in a condition which will provide easy ingress and egress and upon completion of the work, repair all damages to roads and streets used during construction, to a condition at least as good as existed prior to the start of work.

SP-26: PROSECUTION OF CONSTRUCTION

Add the following to GP Item 108.2. Prosecution of the Work:

The CONTRACTOR will, unless otherwise approved by the City Engineer, prosecute the construction of this project during normal working hours as defined below:

- (a) Normal Work Day shall mean the normal eight (8) hour working day between the hours of 8:00am and 5:00pm
- (b) Normal Work Week shall mean the forty (40) hour work week encompassing the five (5) eight-hour days, Monday through Friday.

- (c) Holidays to be observed and to be included into the normal work week will be:

New Years Day	January 1 st
Martin Luther King Day	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4 th
Labor Day	First Monday in September
Thanksgiving Holiday	Fourth Thursday in November and the following Friday
Christmas Holiday	December 24 th & December 25 th

Any of the above dates falling on a Sunday shall be observed on the following Monday.

- (d) All work contemplated to be done which will not be in accordance with the normal hours will require prior approval from the City Engineer. The CONTRACTOR shall request permission by the City Engineer 72 hours in advance of the time he/she intends to work.

Work which is of necessity performed at times other than normal working hours will not require prior approval unless construction scheduling can be arranged to prevent such conflict of time requirements.

All work performed other than the normal working hours, whether scheduled or required, will in no way increase the cost to the OWNER for the performance of such work. The CONTRACTOR shall pay the OWNER for inspection services, city administrative fees, etc. when work has been approved to be performed on Weekends, Holidays and outside any normal working hours. These services shall be charged at the rate of \$75.00 per hour and shall include a four (4) hour minimum charge.

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

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

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

E = Extra Precipitation Days

P = Average Precipitation Days

R = Total Precipitation Days

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

Average Precipitation

Month No. of Days	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
	6	6	7	7	8	6	4	4	6	6	6	6

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

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

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

SP-27: LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE ON TIME

Delete the Table [Schedule 108.8.1.(a) Liquidated Damages] within GP Item 108.8.1. Liquidated Damages for Failure to Complete on Time and substitute the following:

The contract time for the entire project is based on three project phases. The contract time from the "Notice to Proceed" issuance date through completion is 180 consecutive calendar days. For additional information, refer to Article 3 of the Standard Form of Construction Agreement.

Liquidated damages will be assessed at the rate of **\$500** per consecutive calendar day for any unfinished work beyond the 180th calendar day after the "Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER.

SP-28: OCCUPATIONAL SAFETY AND HEALTH ACT

All work performed under this contract shall meet the requirements of the Occupational Safety and Health Act. It is the responsibility of the CONTRACTOR to familiarize himself/herself with the latest provisions of regulations published by the Occupational Safety and Health Administration in the Federal Register and to perform all of his/her responsibilities thereunder.

The CONTRACTOR shall comply with the provisions of the Occupational Safety and Health Act and the standards and regulations issued thereunder and warrant that all work, materials and products furnished under this contract will conform to and comply with said standards and regulations which are in existence on the date of this contract. The CONTRACTOR further agrees to indemnify, defend, and hold harmless the OWNER for all damages suffered by the OWNER as a result of the CONTRACTOR's failure to comply with the Act and the Standards issued thereunder and for the failure of any material and/or equipment furnished under this contract to so comply.

The CONTRACTOR shall also comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., if not in conflict with those of the Occupational Safety and Health Act and shall maintain an accurate record of all cases of death, occupational disease and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment or work under the contract.

The CONTRACTOR alone shall be responsible for the safety, efficiency and adequacy of his/her equipment and employees and for any damage which may result from their failure or their improper construction, maintenance or operation.

SP-29: EASEMENTS/RIGHTS-OF-WAY

Without cost to the CONTRACTOR, the OWNER will provide the necessary easements or rights-of-way required for the project. However, the CONTRACTOR may desire additional temporary easements for the duration of the work for his/her construction, storage or access. All such temporary easements shall be obtained by the CONTRACTOR at no additional cost to the contract or the OWNER.

Unless specifically provided otherwise, the CONTRACTOR, as part of his/her work, shall clear all easements or rights-of-way of all obstructions to the work. On conclusion of his/her operations, he/she shall replace, repair or restore any improvements which may have been removed or damaged, as directed by the City Engineer.

SP-30: RIGHT OF ENTRY

The OWNER reserves the right to enter the property or location on which the works herein contracted for are to be constructed or installed, by such agent or agents as he/she may elect, for the purpose of inspecting the work, or for the purchase of constructing or installing such collateral work as said OWNER may desire.

SP-31: AUTHORITY AND DUTIES OF INSPECTOR

Inspectors, designated by and acting under the direction of the OWNER, shall have the authority to inspect all work done and all materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. He/She is authorized to call to the attention of the CONTRACTOR any failure of the work or materials to conform to the plans, specifications and contract documents. He/She shall have the authority to reject materials or suspend the work until any situation at issue can be referred to and decided by the OWNER.

The Inspector is not authorized to revoke, alter or waive any requirements of the plans and specifications. He/She shall in no case act as foreman or perform other duties for the CONTRACTOR, interfere with the management of the work by the latter. Any advice which the Inspector may give the CONTRACTOR shall otherwise not be construed as binding the City Engineer in any way, or releasing the CONTRACTOR from fulfilling all of the terms of the Contract.

If the CONTRACTOR refuses to suspend operations on verbal order of the Inspector, a written order will be presented to the CONTRACTOR by the Inspector giving the reason for suspension of work. After placing the order in the hand of the "man-in-charge", the Inspector shall immediately leave the job. Work performed during the absence of the Inspector will not be accepted nor paid for, and shall be removed and replaced.

Notwithstanding any other provision of this agreement or any other Contract Documents, the Inspector shall not be in any way responsible or liable for any act, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR's or subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the work.

SP-32: OWNER-ENGINEER RELATIONSHIP

The Engineer will be the OWNER's representative during construction. The duties, responsibilities and limitations of authority of the Engineer as the OWNER's Representative during construction are as set forth in the Contract Documents and shall not be extended or limited without written consent of the OWNER and Engineer. The Engineer will advise and consult with the OWNER, and all of OWNER's instructions to the CONTRACTOR shall be issued through the Engineer.

SP-33: PROFESSIONAL INSPECTION BY ENGINEER

The Engineer shall make periodic visits to the Site to familiarize himself/herself generally with the progress of the executed work and to determine if such work generally meets the essential performance and design features and the technical and functional engineering requirements of the Contract Documents; provided and except, however, that the Engineer shall not be responsible for making any detailed, exhaustive, comprehensive or continuous on-site inspection of the quality or quantity of the work or be in any way responsible, directly or indirectly, for the construction means, methods, techniques, sequences, quality, procedures, programs, safety precautions or lack of same incident thereto or in connection therewith.

Notwithstanding any other provision of this agreement or any other Contract Documents, the Engineer shall not be in any way responsible or liable for any acts, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR's or subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the work.

SP-34: COPIES OF PLANS AND SPECIFICATIONS FURNISHED

Four (4) sets of plans and specifications (not including the General Provisions) shall be furnished to the CONTRACTOR at no charge for construction purposes. Additional sets may be obtained from the Engineer at **\$ 50.00 per set**.

SP-35: VERIFICATION OF MEASUREMENTS

Before ordering any material or doing any work, the CONTRACTOR shall verify all measurements involved and shall be responsible for the correctness of these measurements. No extra charge or compensation will be allowed because of differences between actual dimensions and the dimensions shown on the drawings; any difference which may be found shall be called to the attention of the Engineer for consideration before proceeding with the work.

SP-36: PAY ITEMS - INCIDENTAL CONSTRUCTION

The CONTRACTOR shall be paid only for those items which are listed in the proposal or which are added to the job through a change order. All construction or removal considerations which are not listed as a separate pay item shall be considered as incidental construction. Cost for these items shall be considered in the most appropriate item listed in the schedule(s) of pay items.

SP-37: OMISSIONS

- (a) In the event that the specifications inadvertently omit some of the usual and customary work, auxiliary equipment or material required for the satisfactory installation and operation of all work, equipment or material, the CONTRACTOR shall provide these items as directed by the Engineer at his/her own expense. The CONTRACTOR will be assumed to be an experienced and qualified CONTRACTOR in this type of work, and to have studied the purpose of operation of the equipment and the results to be obtained, and is to furnish equipment suitable for the work to be done.
- (b) In the event that the specifications inadvertently fail to contain a specification for work to be done and material to be furnished, then the Standard Current Specification or Requirements of the A.W.W.A., A.S.T.M., A.S.C.E., A.S.E.E., A.S.M.E., N.B.F.U., N.E.C., N.E.M.A., O.S.H.A., NCTCOG "Standard Specifications for Public Works Construction" or TxDOT "Standard Specifications for Construction of Highways, Streets and Bridges" shall apply. Should the above specifications not apply, then the work done, equipment or material furnished shall be as directed by the Engineer.

SP-38: MINIMUM WAGE RATES

For the work required of this project, the CONTRACTOR and all sub-contractors shall pay his/her employees the prevailing wage rates in accordance with the Texas Government Code, Chapter 2258. The prevailing wage rates determined applicable for this project are the current prevailing wage rate schedules of the United States Department of Labor adopted in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a, et. seq.) and its subsequent amendments. These prevailing wage rates can be obtained from the following web page: www.access.gpo.gov/davisbacon/tx.html (Tarrant County).

A CONTRACTOR or sub-contractor who does not pay his/her employees in accordance with these prevailing wages shall pay \$ 60.00 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in these prevailing wage rates to the CITY.

SP-39: LOSSES FROM NATURAL CAUSES

Unless otherwise specified, all loss or damage to the CONTRACTOR arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the CONTRACTOR at his/her own cost and expense.

SP-40: EXPLOSIVES, BLASTING, ETC.

Neither explosives nor blasting shall be allowed or used on this project.

SP-41: WORK WITH OWN FORCES

The CONTRACTOR shall perform with his own forces work of a value of not less than fifty percent (50%) of the contract amount.

SP-42: PROJECT NAME CONSTRUCTION SIGNS

The CONTRACTOR shall install one (1) Project Name Construction Sign at LB-1 Bank. 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:

TRIBUTARY CB-1 BANK RESTORATION

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

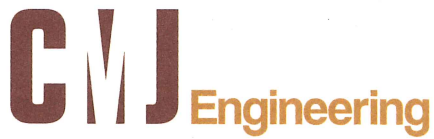
GEOTECHNICAL REPORT

**GEOTECHNICAL ENGINEERING STUDY
CHANNEL REPAIRS
COTTON BELT TRAIL, SOUTHWEST OF
MID CITIES BOULEVARD
NORTH RICHLAND HILLS, TEXAS**

Presented To:
City of North Richland Hills

June 2023

PROJECT NO. 245-23-16



June 27, 2023
Report No. 245-23-16

City of North Richland Hills – Public Works
4301 City Point Drive
North Richland Hills, Texas 76180

Attn: Ms. Caroline Waggoner, P.E.

**GEOTECHNICAL ENGINEERING STUDY
CHANNEL REPAIRS
COTTON BELT TRAIL, SOUTHWEST OF
MID CITIES BOULEVARD
NORTH RICHLAND HILLS, TEXAS**

Dear Ms. Waggoner:

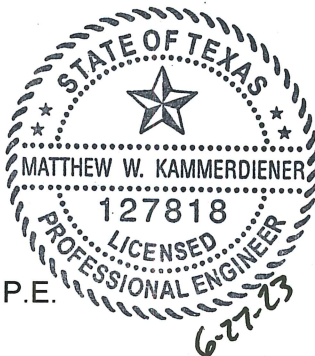
Submitted here are the results of a geotechnical engineering study for the referenced project. This study was performed in general accordance with CMJ Estimate 23-9086 (Revised) dated April 7, 2023. The geotechnical services were authorized on April 10, 2023 by Mr. Mark Hindman, City Manager.

Engineering analyses and recommendations are contained in the text section of the report. Results of our field and laboratory services are included in the appendix of the report. We would appreciate the opportunity to be considered for providing the materials engineering and geotechnical observation services during the construction phase of this project.

We appreciate the opportunity to be of service to the city of North Richland Hills and their consultants. Please contact us if you have any questions or if we may be of further service at this time.

Respectfully submitted,
CMJ ENGINEERING, INC.
TEXAS FIRM REGISTRATION NO. F-9177

Matthew W. Kammerdiener, P.E.
Project Engineer
Texas No. 127818



James P. Sappington IV, P.E.
President
Texas No. 97402

copies submitted: (2) Ms. Caroline Waggoner, P.E.; City of North Richland Hills (by mail and email)

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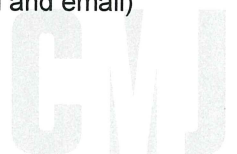


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APPENDIX A

	<u>Plate</u>
Plan of Borings -----	A.1
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Key to Classification and Symbols -----	A.3
Logs of Borings -----	A.4 – A.6
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Direct Shear Test Reports-----	A.9 – A.12

1.0 INTRODUCTION

1.1 General

The project, as currently planned, will consist of repairing the distress concrete-lined channel along the southeast side of Cotton Belt Trail, extending from the box culverts at Mid Cities Boulevard to the southwest in North Richland Hills, Texas. The existing channel has 1H:1V sideslopes and height on the order of 8 feet. An approximate 2-foot tall berm is present at the top of the channel along the northwest side. Channel distress is typically exhibited by significant cracking along both sides of the channel sidewalls occurring near the lower third to midpoint. The channel section of greatest distress occurs approximately 100 feet southwest of Mid Cities Boulevard, along the southeast channel bank. The concrete sidewall toe has dislodged into the channel, with resulting translational movement of the bank soils. The failure area is approximately 150 feet in length. It is anticipated a new retaining wall system will be designed for the repairs. This investigation focuses only on that 150-foot long portion of the channel which has experienced the greatest distress/failure. Wall heights of 10 feet or less are anticipated, thus global slope stability analyses are not included in this investigation. Plate A.1, Plan of Borings, depicts the project site and location of the exploration borings.

1.2 Purpose and Scope

The purpose of this geotechnical engineering study has been to determine the general subsurface conditions, evaluate the engineering characteristics of the subsurface materials encountered, and provide recommendations and geotechnical design parameters for refurbishing measures to be designed by others.

To accomplish its intended purposes, the study has been conducted in the following phases: (1) drilling sample borings to determine the general subsurface conditions and to obtain samples for testing; (2) performing laboratory tests on appropriate samples to determine pertinent engineering properties of the subsurface materials; and (3) performing engineering analyses, using the field and laboratory data, to develop geotechnical recommendations for the proposed construction.

The design is currently in progress and the locations and/or elevations of the structures could change. Proposed wall geometries had not been established at the time of this report; once available this office should be contacted for additional review and analyses as necessary. Furthermore, once the final designs are near completion (80-percent to 90-percent stage), it is

recommended that CMJ Engineering, Inc. be retained to review those portions of the construction documents pertaining to the geotechnical recommendations, as a means to determine that our recommendations have been interpreted as intended.

1.3 Report Format

The text of the report is contained in Sections 1 through 7. All plates and large tables are contained in Appendix A. The alpha-numeric plate and table numbers identify the appendix in which they appear. Small tables of less than one page in length may appear in the body of the text and are numbered according to the section in which they occur.

Units used in the report are based on the English system and may include tons per square foot (tsf), kips (1 kip = 1,000 pounds), kips per square foot (ksf), pounds per square foot (psf), pounds per cubic foot (pcf), and pounds per square inch (psi).

2.0 FIELD EXPLORATION AND LABORATORY TESTING

2.1 Field Exploration

Subsurface materials at the project site were explored by three (3) vertical soil borings drilled to a depth of 35 feet. The borings were drilled at the top of the existing channel with a truck-mounted drilling rig using continuous flight augers at the approximate locations shown on the Plan of Borings, Plate A.1. The boring logs are included on Plates A.4 through A.6 and keys to classifications and symbols used on the logs are provided on Plates A.2 and A.3.

Undisturbed samples of cohesive soils were obtained with nominal 3-inch diameter thin-walled (Shelby) tube samplers at the locations shown on the logs of borings. The Shelby tube sampler consists of a thin-walled steel tube with a sharp cutting edge connected to a head equipped with a ball valve threaded for rod connection. The tube is pushed into the soil by the hydraulic pulldown of the drilling rig. The soil specimens were extruded from the tube in the field, logged, tested for consistency with a hand penetrometer, sealed, and packaged to limit loss of moisture.

The consistency of cohesive soil samples was evaluated in the field using a calibrated hand penetrometer. In this test a 0.25-inch diameter piston is pushed into the relatively undisturbed sample at a constant rate to a depth of 0.25 inch. The results of these tests, in tsf, are tabulated at

respective sample depths on the logs. When the capacity of the penetrometer is exceeded, the value is tabulated as 4.5+.

To evaluate the relative density and consistency of the harder formations, a modified version of the Texas Cone Penetration test was performed at selected locations. Texas Department of Transportation (TXDOT) Test Method Tex-132-E specifies driving a 3-inch diameter cone with a 170-pound hammer freely falling 24 inches. This results in 340 foot-pounds of energy for each blow. This method was modified by utilizing a 140-pound hammer freely falling 30 inches. This results in 350 foot-pounds of energy for each hammer blow. In relatively soft materials, the penetrometer cone is driven 1 foot and the number of blows required for each 6-inch penetration is tabulated at respective test depths, as blows per 6 inches on the log. In hard materials (rock or rock-like), the penetrometer cone is driven with the resulting penetrations, in inches, recorded for the first and second 50 blows, a total of 100 blows. The penetration for the total 100 blows is recorded at the respective testing depths on the boring logs.

2.2 Laboratory Testing

Laboratory soil tests were performed on selected representative samples recovered from the borings. In addition to the classification tests (liquid limits, plastic limits, and gradations), moisture content, unconfined compressive strength, and unit weight tests were performed. Results of the laboratory classification tests, moisture content, unconfined compressive strength, and unit weight tests conducted for this project are included on the boring logs. Gradation test results are presented on Plates A.7 and A.8.

Direct shear tests with associated residual direct shear tests were performed within the overburden soils. The shear tests were performed in order to obtain strength parameters of the soils in their existing state. The results of the direct shear tests are presented on Plates A.9 through A.12.

The above laboratory tests were performed in general accordance with applicable ASTM procedures, or generally accepted practice.

3.0 SUBSURFACE CONDITIONS

3.1 Soil Conditions

Specific types and depths of subsurface strata encountered at the boring locations are shown on the boring logs in Appendix A. The generalized subsurface stratigraphy encountered in the borings is discussed below. Note that depths on the borings refer to the depth from the existing grade or ground surface present at the time of the investigation, and the boundaries between the various soil types are approximate.

Soils encountered in the borings consist of dark brown, brown, light brown, and olive brown clays, silty clays, shaly clays, and silty shaly clays. The surficial clays encountered in Borings B-1 and B-3 were noted as fill or possible fill to depths of 2 to 3 feet. The various clayey soils often contain ironstone nodules, calcareous nodules, and pebbles, and occasionally contain iron stains.

The various clayey soils encountered in the borings had tested Liquid Limits (LL) of 46 to 73 with Plasticity Indices (PI) of 29 to 51 and classify as CL and CH according to the USCS. The various clayey soils were generally stiff to hard (soil basis) in consistency with pocket penetrometer readings of 2.25 to over 4.5 tsf with the exception of the clay soils in Borings B-1 and B-2 above depths of 2 to 3 feet, which were soft to firm (soil basis) in consistency with pocket penetrometer readings of 0.75 to 1.5 tsf. Tested unit weight values ranged from 99 to 120 pcf and tested unconfined compressive strength values were 1,600 to 20,130 psf.

Gray shaly limestone is next present in Borings B-1 through B-3 at depths of 26½ to 28 feet and continues through boring termination at a depth of 35 feet. The gray shaly limestone contains limestone seams and layers and is moderately hard (rock basis), with Texas Cone Penetrometer (THD) test values of 2¼ to 2¾ inches per 100 blows.

3.2 Ground-water Observations

The borings were advanced using continuous flight augers to check the relative elevation of water in the boreholes during and at completion of drilling operations. All borings were dry during drilling and at the completion of drilling operations.

Fluctuations of the ground-water level can occur due to seasonal variations in the amount of rainfall; site topography and runoff; hydraulic conductivity of soil strata; and other factors not

evident at the time the borings were performed. Ground-water can flow through more permeable zones, joints in the clays, or atop the gray shaly limestones, and should be considered when developing the design and construction plans for the project.

Water traveling through the soil (subsurface water) is often unpredictable. This could be due to seasonal changes in ground water and due to the unpredictable nature of ground-water paths. Therefore, it is necessary during construction for the contractor to be observant for ground-water seepage in excavations in order to assess the situation and take appropriate action.

4.0 FOUNDATION RECOMMENDATIONS

4.1 Expansive Soil Movements

The expansive soils encountered at this site can shrink and swell considerably as the soil moisture content fluctuates during seasonal wet and dry cycles. Additionally, the site environment is impacted by grading and drainage, landscaping, ground water conditions, paving and many other factors which affect the structure during and after construction. Therefore, the amount of soil movement is difficult to determine due to the many unpredictable variables involved.

Estimates of soil movements for this site have been performed using data from the Texas Department of Transportation (TxDOT) procedure TEX-124-E for estimating Potential Vertical Rise (PVR) and using engineering judgment and experience. Vertical soil movements on the order of 3¾ inches have been estimated for the soils encountered, as the soils undergo moisture changes. For approximate planned wall elevations/depth, movements on the order of 2 inches are estimated.

4.2 Retaining Structures

4.2.1 General Retaining Wall Considerations

Five geotechnical design criteria must be satisfied in the selection of the type and configuration of the retaining walls. These criteria are; the wall must have an acceptable factor of safety with respect to (1) overturning failure, (2) a sliding (translation) failure, (3) a bearing capacity failure, and (4) a global (deep-seated) slope failure. In addition, (5) the deformation of the wall caused by deflection from earth pressure, and from settlement or heave of the foundation soils or backfill soils, must be within tolerable limits during the functional life of the structure.

4.2.2 Foundations

The most positive foundation system for the proposed retaining wall(s) would be situated below the zone of most significant seasonal moisture variations. A deep foundation system transferring column loads to a suitable bearing stratum is considered the most positive foundation system. This office should be contacted for additional recommendations should a deep foundation system be desired, with straight drilled shafts penetrating the gray shaly limestone. However, if differential movements are acceptable as discussed above, the retaining wall foundations may be founded atop natural soils using shallow spread or continuous footings.

For walls within the channel, footings should be founded a minimum of 2 feet below the lowest existing grade or below the thalweg of the channel within very stiff to hard shaly clays or silty shaly clays. The retaining wall foundations situated at this depth and within these materials may be designed for an allowable bearing pressure of 3.0 ksf. A minimum footing dimension of 2 feet is recommended. This bearing value assumes that the excavation base is dry and little to no disturbance of the soils is allowed. A deep foundation system as discussed above would be necessary if higher loading carrying capacity is required. Under no circumstances should wall foundations be placed atop existing fill (if encountered).

Proper identification of the bearing material by qualified geotechnical personnel during construction is paramount; therefore, the foundation bearing depth may be deeper, depending on materials encountered. Depending on weather conditions and stream flows at the time of construction, excavation for the footing base may need to incorporate dewatering to keep the excavation free of excess water. In addition, the water table should be lowered to a depth of 2 feet below the proposed excavation. The design of any dewatering system is the responsibility of the contractor. If disturbance occurs, the excavation should be deepened to undisturbed, natural materials and the foundation placed upon a minimum 1-foot thick crushed stone pad with a geotextile "separator" fabric below the stone pad.

It should be noted that retaining wall foundations are typically subjected to non-uniform pressure across the foundation, and possibly negative pressure (separation of foundation from soil) under a portion of the foundation, due to the overturning moment induced by the lateral earth pressures. The allowable foundation pressures given above are for the maximum pressure induced by the foundation loads, and not the average pressure under the foundation base.

Soils existing in a soft to firm state should be evaluated on a case-by-case basis. Close inspection of soils strength should be conducted by a geotechnical engineer to allow designation and removal of very soft soils not meeting the bearing capacity stated above. The base of all excavated footings should be inspected by a geotechnical engineer or geotechnician under his or her supervision to assure that the bottom is firm, level and free of loose soil material and/or debris.

The horizontal bases of the footings will develop resistance to sliding by means of a combination of friction and adhesion (for cohesive foundation materials). Given the nature of the foundation materials, an adhesion of 400 psf may be used for earth formed footings. An ultimate friction factor of 0.3 may be used to calculate sliding resistance of the footings bearing on site soils. Passive earth pressure resistance should be neglected for walls in the channel.

Foundations for the retaining walls designed in accordance with these recommendations will have a minimum factor of safety of 3 with respect to a bearing capacity failure, and should experience a total settlement of 1 inch or less and a differential settlement of ½ inch or less, after construction.

4.2.3 Foundation Construction

Mat type or spread foundation construction should be monitored by a representative of the geotechnical engineer to observe, among other things, the following items:

- Identification of bearing material
- Adequate penetration of the foundation excavation into the bearing layer
- The base and sides of the excavation are clean of loose cuttings
- When seepage is encountered, whether it is sufficient amount to require the use of excavation dewatering methods

Precautions should be taken during the placement of reinforcing steel and concrete to prevent loose, excavated soil from falling into the excavation. Concrete should be placed as soon as practical after completion of the excavating, cleaning, reinforcing steel placement and observation. Excavation for a shallow foundation should be filled with concrete before the end of the workday, or sooner if required, to prevent deterioration of the bearing material. Prolonged exposure or inundation of the bearing surface with water will result in changes in strength and compressibility characteristics. If delays occur, the excavation should be deepened as necessary and cleaned, in order to provide a fresh bearing surface. If more than 24 hours of exposure of the bearing surface is anticipated in the excavations, a "mud slab" should be used to protect the bearing surfaces. If a mud slab is used, the foundation excavations should initially be over-excavated by approximately 4

inches and a lean concrete mud slab of approximately 4 inches in thickness should be placed in the bottom of the excavations immediately following exposure of the bearing surface by excavation. The mud slab will protect the bearing surface, maintain more uniform moisture in the subgrade, facilitate dewatering of excavations if required, and provide a working surface for the placement of formwork and reinforcing steel.

The concrete should be placed in a manner that will prevent the concrete from striking the reinforcing steel or the sides of the excavation in a manner that would cause segregation of the concrete.

4.3 Lateral Earth Pressure

4.3.1 Equivalent Fluid Pressures

Lateral earth pressures on retaining walls will depend on a variety of factors, including the type of soils behind the wall, the condition of the soils, and the drainage conditions behind the wall. Recommended lateral earth pressures expressed as equivalent fluid pressures, per foot of wall height, are presented in Table 4.3.1-1 for a wall with level grades behind the top of the wall and Table 4.3.1-2 for a wall with a 4H:1V sloped backfill behind the top of the wall. The equivalent fluid pressure for an undrained condition should be used if a drainage system is not present to remove water trapped in the backfill and behind the wall. Pressures are provided for at-rest and active earth pressure conditions. In order to allow for an active condition the top of the wall(s) must deflect on the order of 0.4 percent.

For the select fill or free draining granular backfill these values assume that a “full” wedge of the material is present behind the wall. The wedge is defined where the wall backfill limits extend outward at least 2 feet from the base of the wall and then upward on a 1H:2V slope. For narrower backfill widths of granular or select fill soils, the equivalent fluid pressures for the on-site soils should be used.

TABLE 4.3.1-1 Equivalent Fluid Pressures for Level Grades Behind the Top of the Wall				
Backfill Material	At-Rest Equivalent Fluid Pressure (pcf)		Active Equivalent Fluid Pressure (pcf)	
	Drained	Undrained	Drained	Undrained
Excavated on-site clay or clay fill material	100	110	85	95
Select fill, flowable fill, or excavated on-site soils meeting material specifications	75	100	55	90
Free draining granular backfill material	55	90	35	80

TABLE 4.3.1-2 Equivalent Fluid Pressures for Sloped Backfill at 4H:1V				
Backfill Material	At-Rest Equivalent Fluid Pressure (pcf)		Active Equivalent Fluid Pressure (pcf)	
	Drained	Undrained	Drained	Undrained
Excavated on-site clay or clay fill material	125	135	105	118
Select fill, flowable fill, or excavated on-site soils meeting material specifications	90	110	70	105
Free draining granular backfill material	75	105	55	100

4.3.2 Additional Lateral Pressures

The location and magnitude of permanent surcharge loads (if present) should be determined, and the additional pressure generated by these loads such as the weight of construction equipment and vehicular loads that are used at the time the structures are being built must also be considered in the design. The effect of this or any other surcharge loading may be accounted for by adding an additional uniform load to the full depth of the side walls equivalent to one-half of the expected vertical surcharge intensity for select backfill materials, or equal to the full vertical surcharge intensity for clay backfill. The equivalent fluid pressures, given here, do not include a safety factor. Analysis of surcharge loads (if any) should be performed on a case-by-case basis. This is not included in the scope of this study. These services can be provided as additional services upon request.

4.3.3 Wall Backfill Material Requirements

Free Draining Granular Wall Backfill: All free draining granular wall backfill material should be a crushed stone, sand/gravel mixture, or sand/crushed stone mixture. The material should have less than 3 percent passing the No. 200 sieve and less than 30 percent passing the No. 40 sieve. The minus No. 40 sieve material should be non-plastic. Granular wall backfill should not be water jetted during installation.

Select Fill: All wall select backfill should consist of clayey sand and/or sandy clay material with a plasticity index of 16 or less, with a liquid limit not exceeding 35. The select fill should be placed in maximum 8-inch lifts and compacted to between 95 and 100 percent of Standard Proctor density (ASTM D 698) within a moisture range of plus to minus 3 percentage points of the optimum moisture. Compaction within five feet of the walls should be accomplished using hand compaction equipment and should be compacted between 90 and 95 percent of the Standard Proctor Density.

On-Site Soil Backfill: For wall backfill areas with site-excavated materials or similar imported materials, all oversized fragments larger than four inches in maximum dimension should be removed from the backfill materials prior to placement. The backfill should be free of all organic and deleterious materials, and should be placed in maximum 8-inch compacted lifts at a minimum of 95 percent of Standard Proctor density (ASTM D 698) within a moisture range of plus to minus 3 percentage points of optimum moisture. Compaction within five feet of the walls should be accomplished using hand compaction equipment, and should be between 90 and 95 percent of the Standard Proctor Density.

Flowable Backfill: Item 401, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2014 Edition.

4.3.4 Wall Backfill Settlement

Settlement of the wall backfill should be anticipated. Piping and conduits through the fill should be designed for potential soil loading due to fill settlement. On-grade slabs, sidewalks, and pavements over fills also may settle. Backfill compacted to the density recommended above is anticipated to settle on the order of 0.2 to 0.5 percent of the fill thickness.

4.3.5 Below-Grade Drainage Requirements

The design recommendations presented above assume hydrostatic pressure will not develop behind the retaining walls. In order to achieve the “drained” condition for lateral earth pressure for low-permeability walls (concrete, masonry, etc.), a vertical drainage blanket or geocomposite drainage member must be installed adjacent to the wall on the backfill side. Drainage could be provided using a collector pipe or weep holes near the base of the retaining wall. Drains should be properly filtered to minimize the potential for erosion through these drains, and /or the plugging of drain lines. Design or specific recommendations for drainage members is beyond the scope for this study. These services can be provided as an additional service upon request. In order to achieve the “drained” condition, the entire backfill material must be free draining. It is recommended that the backfill-wall geometry be such that the backfill will not become saturated from rainfall, ground water, adjacent water courses, or other sources.

4.4 Permanent Anchors

Additional lateral support for the planned wall structures can be provided by permanent anchors if necessary. Anchors may be active (post-tensioned), or passive (unstressed). It should be noted that, if passive anchors are used, some lateral movement of the structure will be necessary to develop pullout resistance within the anchors.

The anchors should consist of threaded, high-strength steel bars installed in pre-drilled holes and grouted throughout their full length. The anchor holes should be dry and free of all cuttings prior to installation of the bars. All components of the anchor system, including bars, anchor plates and locking nuts, should be provided with adequate corrosion protection. Each anchor should be equipped with centralizers spaced at regular-intervals throughout its full length. A minimum hole diameter of six inches is recommended to provide adequate grout coverage of the bars.

The anchors should be installed at an angle between 15 and 45 degrees as measured from the horizontal plane. Bending moments can be limited by installing the anchors at a horizontal angle in the upstream direction. The optimum horizontal angle should be determined by the structural engineer, but should not exceed 30 degrees from the vertical plane perpendicular to the retaining structure.

Loads on the anchors should be transferred to the shaly clays or underlying gray shaly limestone. It is recommended that the rock anchors be unbonded for a minimum distance of 10 feet, or 2 feet

beyond the “active” zone, whichever is greater. The unbonded length can be created by means of a bond breaker such as a grease-filled PVC sleeve.

Considering shaly clay, the load-carrying portion of the anchors (bonded length) should be designed based on an estimated pull-out resistance of 0.3 ksf. Considering gray shaly limestone, the load-carrying portion of the rock anchors (bonded length) should be designed based on an estimated pull-out resistance of 4.0 ksf, applicable within the gray shaly limestone. These values are applicable considering straight-shaft, tremie-grouted anchors, and incorporates a minimum factor of safety of three against pull-out. A minimum bonded length of 5 feet is recommended for permanent anchors.

The anchor shafts should be dry and free of all cuttings and deleterious materials prior to grout placement. Close coordination of anchor shaft excavation and grout placement should limit the need for ground water control. In no case should anchor shaft excavations remain open for more than eight hours prior to grout placement.

5.0 EARTHWORK

5.1 Site Preparation & Field Testing

The subgrade should be firm and able to support the construction equipment without displacement. Soft or yielding subgrade should be corrected and made stable before construction proceeds. The subgrade should be proof rolled to detect soft spots, which if exist, should be excavated to provide a firm and otherwise suitable subgrade. Proof rolling should be performed using a heavy pneumatic tired roller, loaded dump truck, or similar piece of equipment. The proof rolling operations should be observed by the project geotechnical engineer or his/her representative. Prior to fill placement, the subgrade should be scarified to a minimum depth of 6 inches, its moisture content adjusted, and recompacted to the moisture and density recommended for fill.

The on-site soils are suitable for use in general site grading. Imported fill material should be clean soil with a Liquid Limit less than 60 and no rock greater than 4 inches in maximum dimension. The fill materials should be free of vegetation and debris.

Fill material should be placed in loose lifts not exceeding 8 inches in uncompacted thickness. The uncompacted lift thickness should be reduced to 4 inches for structure backfill zones requiring

hand-operated power compactors or small self-propelled compactors. The fill material should be uniform with respect to material type and moisture content. Clods and chunks of material should be broken down and the fill material mixed by disking, blading, or plowing, as necessary, so that a material of uniform moisture and density is obtained for each lift. Water required for sprinkling to bring the fill material to the proper moisture content should be applied evenly through each layer.

Fill material should be compacted to at least 95 percent of the maximum dry density determined by the Standard Proctor test, ASTM D 698. In conjunction with the compacting operation, the fill material should be brought to the proper moisture content. The moisture content for earth fill should range from 2 percentage points below optimum to 5 percentage points above optimum (-2 to +5). These ranges of moisture contents are given as maximum recommended ranges. For some soils and under some conditions, the contractor may have to maintain a more narrow range of moisture content (within the recommended range) in order to consistently achieve the recommended density.

Field density tests should be taken as each lift of fill material is placed. As a guide, one field density test per lift for each 5,000 square feet of compacted area is recommended. For small areas or critical areas the frequency of testing may need to be increased to one test per 2,500 square feet. A minimum of 2 tests per lift should be required. The earthwork operations should be observed and tested on a continuing basis by an experienced geotechnical working in conjunction with the project geotechnical engineer. Field testing is a critical element in controlling the compaction of fill to limit settlement.

Each lift should be compacted, tested, and approved before another lift is added. The purpose of the field density tests is to provide some indication that uniform and adequate compaction is being obtained. The actual quality of the fill, as compacted, should be the responsibility of the contractor and satisfactory results from the tests should not be considered as a guarantee of the quality of the contractor's filling operations.

5.2 Excavation

The side slopes of excavations through the overburden soils should be made in such a manner to provide for their stability during construction. Existing structures, pipelines or other facilities, which are constructed prior to or during the currently proposed construction and which require excavation, should be protected from loss of end bearing or lateral support.

Temporary construction slopes and/or permanent embankment slopes should be protected from surface runoff water. Site grading should be designed to allow drainage at planned areas where erosion protection is provided, instead of allowing surface water to flow down unprotected slopes.

Trench safety recommendations are beyond the scope of this report. The contractor must comply with all applicable safety regulations concerning trench safety and excavations including, but not limited to, OSHA regulations.

5.3 Trench Backfill

Trench backfill for pipelines or other utilities should be properly placed and compacted. Overly dense or dry backfill can swell and create a mound along the completed trench line. Loose or wet backfill can settle and form a depression along the completed trench line. Distress to overlying structures, pavements, etc. is likely if heaving or settlement occurs. On-site earth fill material is recommended for trench backfill. Care should be taken not to use loose granular material, to prevent the backfilled trench from becoming a french drain and piping surface or subsurface water beneath structures, pipelines, or pavements. If a higher class bedding material is required for the pipelines, a lean concrete bedding will limit water intrusion into the trench and will not require compaction after placement. The density and moisture content should be as recommended for fill in Section 5.1 of this report. A minimum of one field density test should be taken per lift for each 150 linear feet of trench, with a minimum of 2 tests per lift.

5.4 Erosion and Sediment Control

All disturbed areas should be protected from erosion and sedimentation during construction, and all permanent slopes and other areas subject to erosion or sedimentation should be provided with permanent erosion and sediment control facilities. All applicable ordinances and codes regarding erosion and sediment control should be followed.

Plates A.7 and A.8 present sieve/hydrometer grain size analyses for typical onsite soils. The following table provides grain size for erosion analyses.

Table 5.5-1 Grain Size Values			
Boring No.	Depth (Ft.)	Grain Size (mm)	
		D₅₀	D₉₅
B – 1	4 – 5	0.0013	0.0784
B – 2	2 – 3	0.0016	0.1003

6.0 CONSTRUCTION OBSERVATIONS

In any geotechnical investigation, the design recommendations are based on a limited amount of information about the subsurface conditions. In the analysis, the geotechnical engineer must assume the subsurface conditions are similar to the conditions encountered in the borings. However, quite often during construction anomalies in the subsurface conditions are revealed. Therefore, it is recommended that CMJ Engineering, Inc. be retained to observe earthwork and foundation installation and perform materials evaluation during the construction phase of the project. This enables the geotechnical engineer to stay abreast of the project and to be readily available to evaluate unanticipated conditions, to conduct additional tests if required and, when necessary, to recommend alternative solutions to unanticipated conditions. Until these construction phase services are performed by the project geotechnical engineer, the recommendations contained in this report on such items as final foundation bearing elevations, proper soil moisture condition, and other such subsurface related recommendations should be considered as preliminary.

It is proposed that construction phase observation and materials testing commence by the project geotechnical engineer at the outset of the project. Experience has shown that the most suitable method for procuring these services is for the owner or the owner's design engineers to contract directly with the project geotechnical engineer. This results in a clear, direct line of communication between the owner and the owner's design engineers and the geotechnical engineer.

7.0 REPORT CLOSURE

The boring logs shown in this report contain information related to the types of soil encountered at specific locations and times and show lines delineating the interface between these materials. The logs also contain our field representative's interpretation of conditions that are believed to exist in those depth intervals between the actual samples taken. Therefore, these boring logs contain both

factual and interpretive information. Laboratory soil classification tests were also performed on samples from selected depths in the borings. The results of these tests, along with visual-manual procedures were used to generally classify each stratum. Therefore, it should be understood that the classification data on the logs of borings represent visual estimates of classifications for those portions of each stratum on which the full range of laboratory soil classification tests were not performed. It is not implied that these logs are representative of subsurface conditions at other locations and times.

With regard to ground-water conditions, this report presents data on ground-water levels as they were observed during the course of the field work. In particular, water level readings have been made in the borings at the times and under conditions stated in the text of the report and on the boring logs. It should be noted that fluctuations in the level of the ground-water table can occur with passage of time due to variations in rainfall, temperature and other factors. Also, this report does not include quantitative information on rates of flow of ground water into excavations, on pumping capacities necessary to dewater the excavations, or on methods of dewatering excavations. Unanticipated soil conditions at a construction site are commonly encountered and cannot be fully predicted by mere soil samples, test borings or test pits. Such unexpected conditions frequently require that additional expenditures be made by the owner to attain a properly designed and constructed project. Therefore, provision for some contingency fund is recommended to accommodate such potential extra cost.

The analyses, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our field investigation and further on the assumption that the exploratory borings are representative of the subsurface conditions throughout the site; that is, the subsurface conditions everywhere are not significantly different from those disclosed by the borings at the time they were completed. If, during construction, different subsurface conditions from those encountered in our borings are observed, or appear to be present in excavations, we must be advised promptly so that we can review these conditions and reconsider our recommendations where necessary. If there is a substantial lapse of time between submission of this report and the start of the work at the site, if conditions have changed due either to natural causes or to construction operations at or adjacent to the site, or if structure locations, structural loads or finish grades are changed, we urge that we be promptly informed and retained to review our report to determine the applicability of the conclusions and recommendations, considering the changed conditions and/or time lapse.

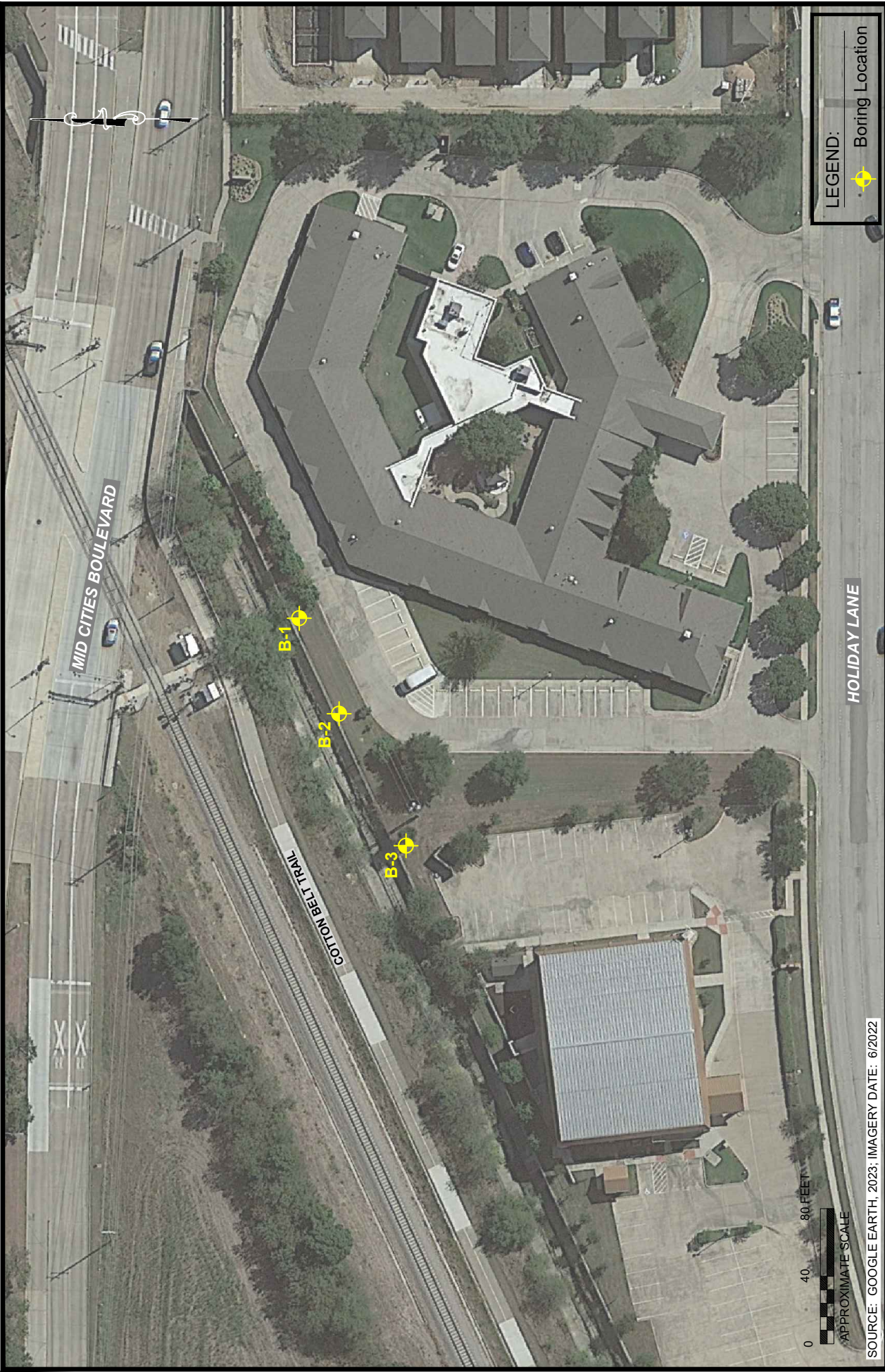
Further, it is urged that CMJ Engineering, Inc. be retained to review those portions of the plans and specifications for this particular project that pertain to earthwork and foundations as a means to determine whether the plans and specifications are consistent with the recommendations contained in this report. In addition, we are available to observe construction, particularly the compaction of structural fill, or backfill and the construction of foundations as recommended in the report, and such other field observations as might be necessary.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, ground water or air, on or below or around the site.

This report has been prepared for use in developing an overall design concept. Paragraphs, statements, test results, boring logs, diagrams, etc. should not be taken out of context, nor utilized without a knowledge and awareness of their intent within the overall concept of this report. The reproduction of this report, or any part thereof, supplied to persons other than the owner, should indicate that this study was made for design purposes only and that verification of the subsurface conditions for purposes of determining difficulty of excavation, trafficability, etc. are responsibilities of the contractor.

This report has been prepared for the exclusive use of the City of North Richland Hills and their consultants for specific application to design of this project. The only warranty made by us in connection with the services provided is that we have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended.

* * * *





CMJ ENGINEERING, INC.
CMJ PROJECT NO. 245-23-16

PLAN OF BORINGS
CHANNEL REPAIRS
NORTH RICHLAND HILLS, TEXAS

PLATE
A.1

Date: 04/18/23

Major Divisions			Grp. Sym.	Typical Names	Laboratory Classification Criteria				
Coarse-grained soils (more than half of the material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel from grain size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent.....GW, GP, SW, SP More than 12 percent.....GM, GC, SM, SC 5 to 12 percent.....Borderline cases requiring dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4: $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3			
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW			
		Gravels with fines (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures		Liquid and Plastic limits below "A" line or P.I. greater than 4	Liquid and plastic limits plotting in hatched zone between 4 and 7 are borderline cases requiring use of dual symbols		
			GC	Clayey gravels, gravel-sand-clay mixtures		Liquid and Plastic limits above "A" line with P.I. greater than 7			
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines		$C_u = \frac{D_{60}}{D_{10}}$ greater than 6: $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3			
			SP	Poorly graded sands; gravelly sands, little or no fines		Not meeting all gradation requirements for SW			
		Sands with fines (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures		Liquid and Plastic limits below "A" line or P.I. less than 4	Liquid and plastic limits plotting between 4 and 7 are borderline cases requiring use of dual symbols		
			SC	Clayey sands, sand-clay mixtures		Liquid and Plastic limits above "A" line with P.I. greater than 7			
		Fine-grained soils (More than half of material is smaller than No. 200 sieve)	Silts and clays (Liquid limit less than 50)	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity			
				CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, and lean clays			
OL	Organic silts and organic silty clays of low plasticity								
Silts and clays (Liquid limit greater than 50)	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts						
	CH		Inorganic clays of high plasticity, fat clays						
	OH		Organic clays of medium to high plasticity, organic silts						
	Pt		Peat and other highly organic soils						
Highly Organic soils									

UNIFIED SOIL CLASSIFICATION SYSTEM

PLATE A.2

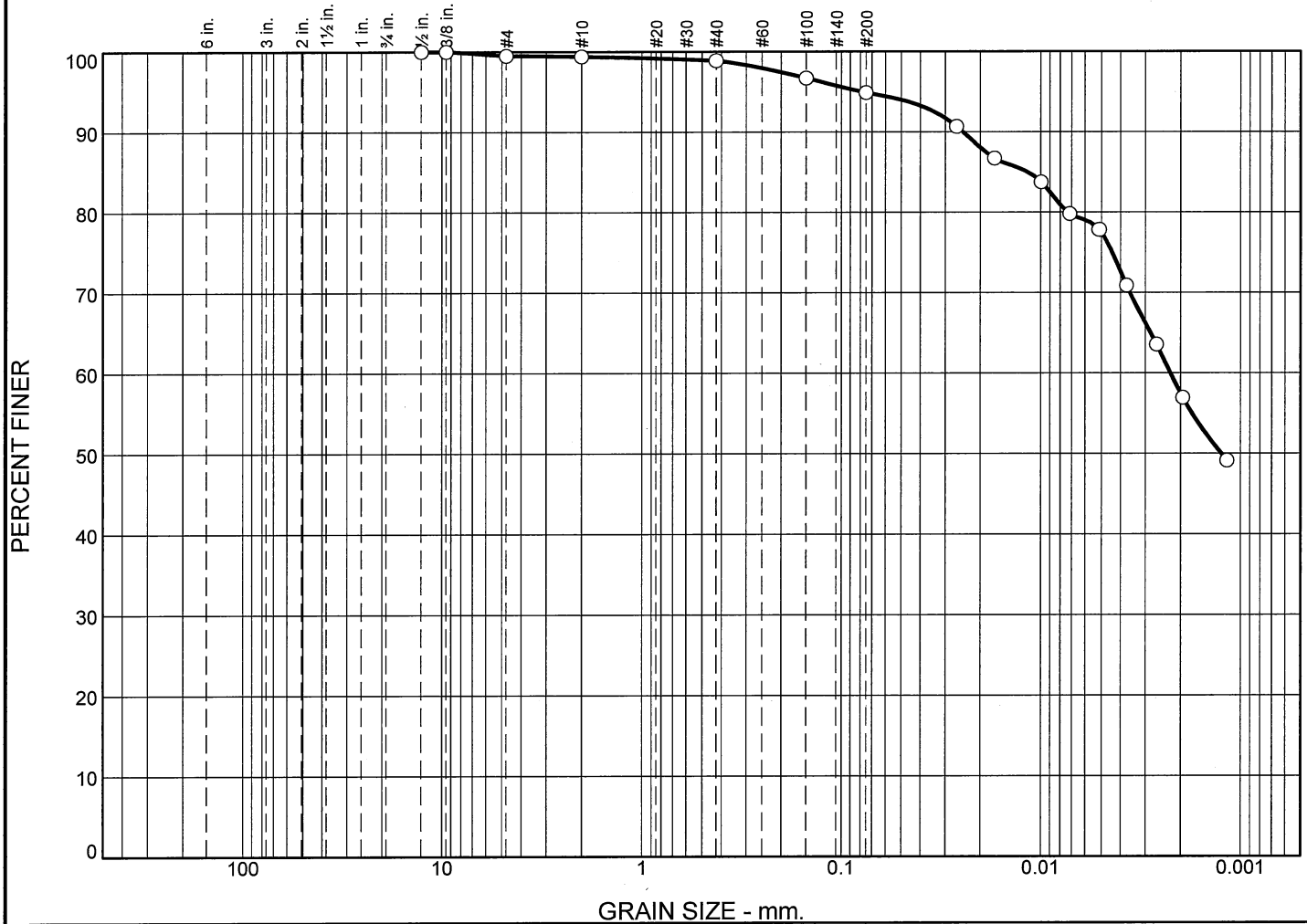
SOIL OR ROCK TYPES											
	GRAVEL		LEAN CLAY		LIMESTONE						
	SAND		SANDY		SHALE						
	SILT		SILTY		SANDSTONE						
	HIGHLY PLASTIC CLAY		CLAYEY		CONGLOMERATE	Shelby Tube	Auger	Split Spoon	Rock Core	Cone Pen	No Recovery
TERMS DESCRIBING CONSISTENCY, CONDITION, AND STRUCTURE OF SOIL											
Fine Grained Soils (More than 50% Passing No. 200 Sieve)											
Descriptive Item		Penetrometer Reading, (tsf)									
Soft		0.0 to 1.0									
Firm		1.0 to 1.5									
Stiff		1.5 to 3.0									
Very Stiff		3.0 to 4.5									
Hard		4.5+									
Coarse Grained Soils (More than 50% Retained on No. 200 Sieve)											
Penetration Resistance		Descriptive Item		Relative Density							
(blows/foot)											
0 to 4		Very Loose		0 to 20%							
4 to 10		Loose		20 to 40%							
10 to 30		Medium Dense		40 to 70%							
30 to 50		Dense		70 to 90%							
Over 50		Very Dense		90 to 100%							
Soil Structure											
Calcareous		Contains appreciable deposits of calcium carbonate; generally nodular									
Slickensided		Having inclined planes of weakness that are slick and glossy in appearance									
Laminated		Composed of thin layers of varying color or texture									
Fissured		Containing cracks, sometimes filled with fine sand or silt									
Interbedded		Composed of alternate layers of different soil types, usually in approximately equal proportions									
TERMS DESCRIBING PHYSICAL PROPERTIES OF ROCK											
Hardness and Degree of Cementation											
Very Soft or Plastic		Can be remolded in hand; corresponds in consistency up to very stiff in soils									
Soft		Can be scratched with fingernail									
Moderately Hard		Can be scratched easily with knife; cannot be scratched with fingernail									
Hard		Difficult to scratch with knife									
Very Hard		Cannot be scratched with knife									
Poorly Cemented or Friable		Easily crumbled									
Cemented		Bound together by chemically precipitated material; Quartz, calcite, dolomite, siderite, and iron oxide are common cementing materials.									
Degree of Weathering											
Unweathered		Rock in its natural state before being exposed to atmospheric agents									
Slightly Weathered		Noted predominantly by color change with no disintegrated zones									
Weathered		Complete color change with zones of slightly decomposed rock									
Extremely Weathered		Complete color change with consistency, texture, and general appearance approaching soil									
KEY TO CLASSIFICATION AND SYMBOLS										PLATE A.3	

Project No. 245-23-16		Boring No. B-3		Project Channel Repairs - Cotton Belt Trail North Richland Hills, TX												
Location See Plate A.1				Water Observations Dry during drilling; dry at completion												
Completion Depth 35.0'		Completion Date 4-27-23														
Depth, Ft.	Symbol	Samples	Surface Elevation		Type B-47 w/ CFA		REC %	RQD %	Blows/Ft. or Pen Reading, T.S.F.	Passing No 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Unit Dry Wt. Lbs./Cu. Ft.	Unconfined Compression Pounds/Sq. Ft.
			Stratum Description													
					<u>CLAY</u> , dark brown, w/ ironstone nodules, calcareous nodules, and pebbles, stiff (FILL) - very stiff to hard below 1'				2.25					19		
									4.25		60	23	37	22		
									4.5+					16		
					<u>SHALY CLAY</u> , light brown, w/ ironstone nodules, calcareous nodules, and pebbles, hard - stiff above 3'				2.0					21	105	2180
5									4.5+					18		
									4.5+					15		
									4.5+					15	120	
10																
									4.5+		52	18	34	18	113	12580
15																
									4.5+					19		
20																
									4.5+					17		
25																
					<u>SHALY LIMESTONE</u> gray, w/ limestone seams and layers, moderately hard to hard				100/2.75"							
30																
									100/2.25"							
35																

LOG OF BORING NO. B-3

PLATE A.6

Particle Size Distribution Report



	% +3"		% Gravel		% Sand			% Fines		
			Coarse	Fine	Coarse	Medium	Fine	Silt	Clay	
○	0.0		0.0	0.5	0.1	0.5	4.0	17.4	77.5	
×	LL	PL	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
○	51	18	0.0116	0.0022	0.0013					
MATERIAL DESCRIPTION								TEST DATE	USCS	NM
○									CH	

Project No. 245-23-16 **Client:** City of North Richland Hills
Project: Channel Repairs-Cotton Belt Trl.-NRH, TX

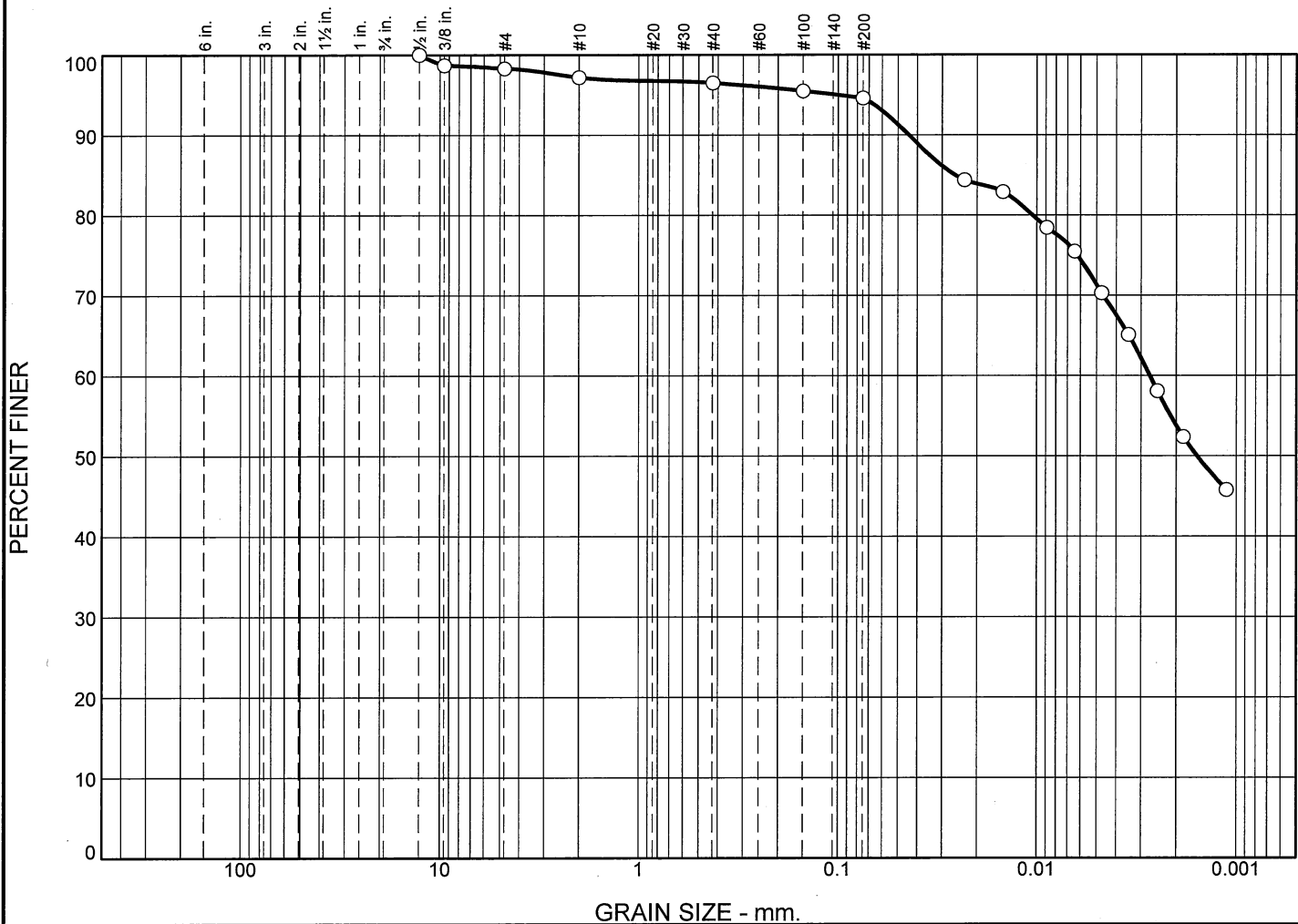
○ **Depth:** 4-5 **Sample Number:** B-1

CMJ ENGINEERING, INC.

Fort Worth, Texas

Remarks:

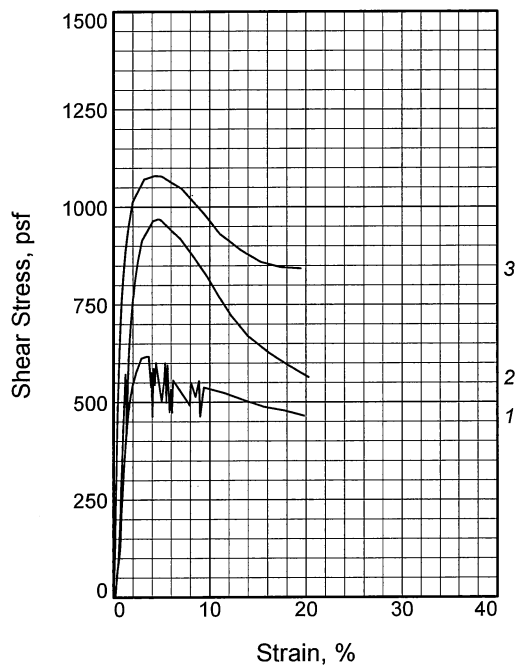
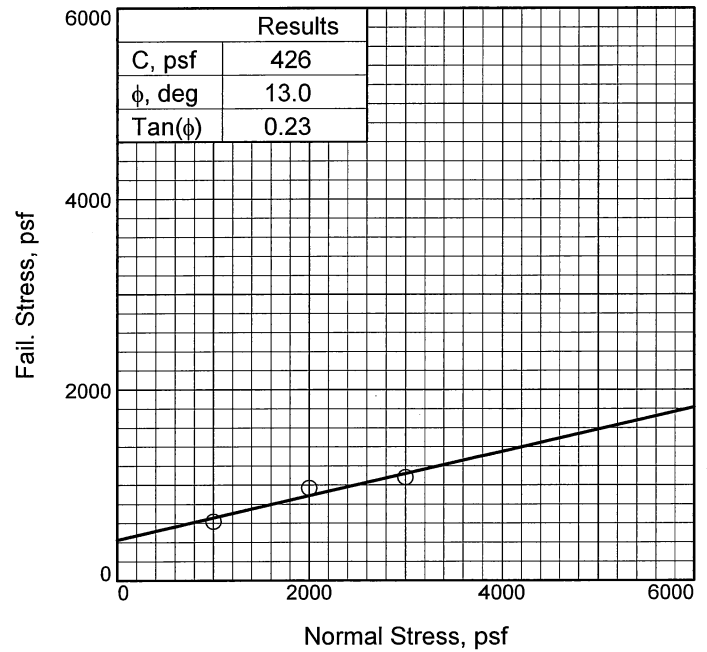
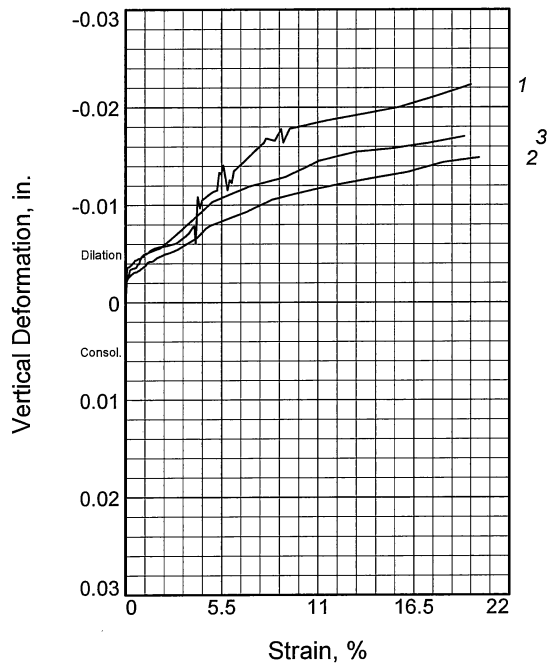
Particle Size Distribution Report



	% +3"		% Gravel		% Sand			% Fines		
			Coarse	Fine	Coarse	Medium	Fine	Silt		Clay
○	0.0		0.0	1.7	1.1	0.7	1.9	23.3		71.3
⊗	LL	PL	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
○	48	18	0.0259	0.0027	0.0016					

MATERIAL DESCRIPTION							TEST DATE	USCS	NM
○								CL	

<p>Project No. 245-23-16 Client: City of North Richland Hills</p> <p>Project: Channel Repairs-Cotton Belt Trl.-NRH, TX</p> <p>○ Depth: 2-3 Sample Number: B-2</p>	Remarks:
<p>CMJ ENGINEERING, INC.</p> <p>Fort Worth, Texas</p>	



Sample No.		1	2	3
Initial	Water Content, %	12.6	12.6	12.6
	Dry Density, pcf	116.9	116.0	114.4
	Saturation, %	80.2	78.3	74.8
	Void Ratio	0.4157	0.4257	0.4459
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.96	0.96	0.96
At Test	Water Content, %	15.4	16.0	16.8
	Dry Density, pcf	116.9	116.0	114.4
	Saturation, %	98.3	99.5	99.8
	Void Ratio	0.4157	0.4257	0.4459
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.96	0.96	0.96
Normal Stress, psf		1000	2000	3000
Fail. Stress, psf		617	969	1080
Strain, %		3.5	4.6	4.3
Ult. Stress, psf				
Strain, %				
Strain rate, in./min.		0.001	0.001	0.001

Sample Type:

Description:

LL= 57 PL= 17 PI= 40

Assumed Specific Gravity= 2.65

Remarks:

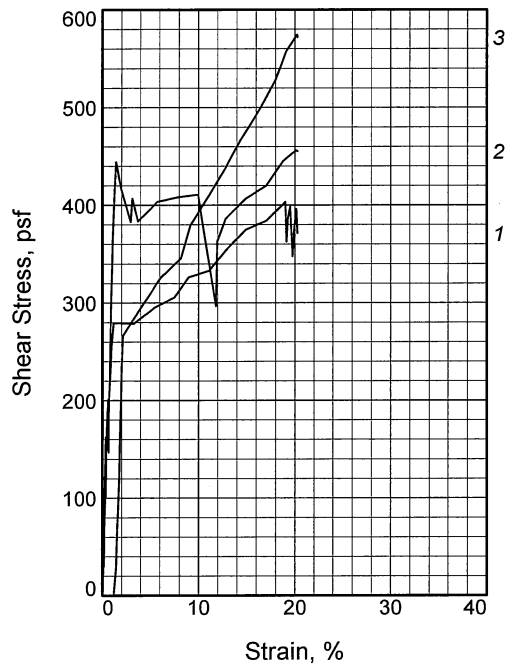
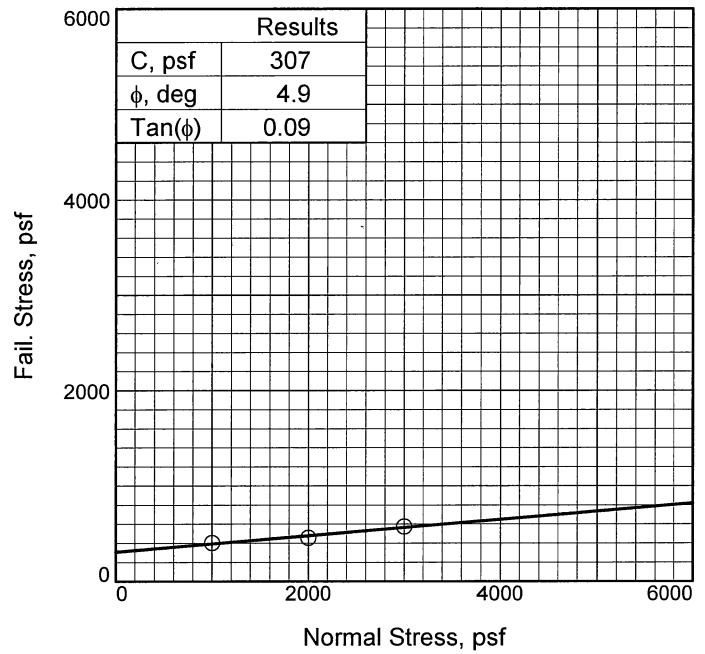
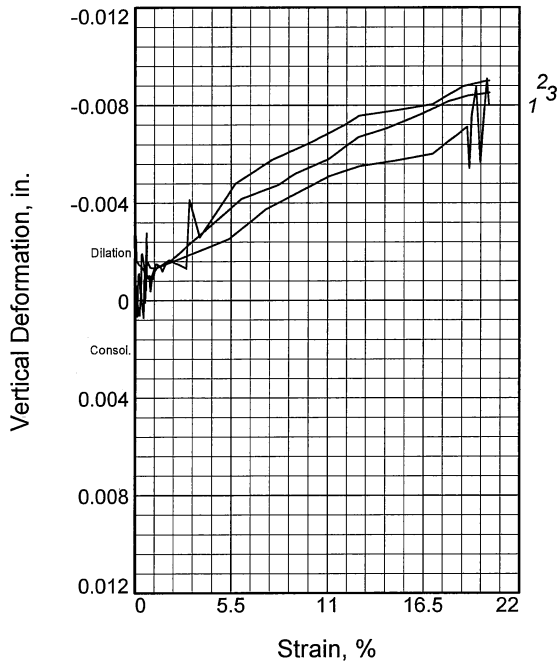
Client: City of North Richland Hills

Project: Channel Repairs-Cotton Belt Trl.-NRH, TX

Sample Number: B-1 **Depth:** 2-3

Proj. No.: 245-23-16

DIRECT SHEAR TEST REPORT
CMJ ENGINEERING, INC.
Fort Worth, Texas



Sample No.		1	2	3
Initial	Water Content, %	12.6	12.6	12.6
	Dry Density, pcf	116.9	116.0	114.4
	Saturation, %	80.2	78.3	74.8
	Void Ratio	0.4157	0.4257	0.4459
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.96	0.96	0.96
At Test	Water Content, %	15.4	16.0	16.8
	Dry Density, pcf	116.9	116.0	114.4
	Saturation, %	98.3	99.5	99.8
	Void Ratio	0.4157	0.4257	0.4459
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.96	0.96	0.96
Normal Stress, psf		1000	2000	3000
Fail. Stress, psf		403	456	574
Strain, %		19.0	20.1	20.2
Ult. Stress, psf				
Strain, %				
Strain rate, in./min.		0.025	0.025	0.025

Sample Type:

Description:

LL= 57 PL= 17 PI= 40

Assumed Specific Gravity= 2.65

Remarks:

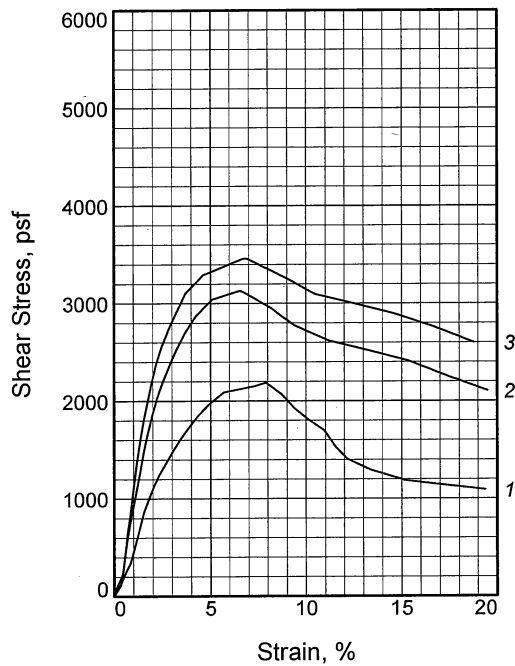
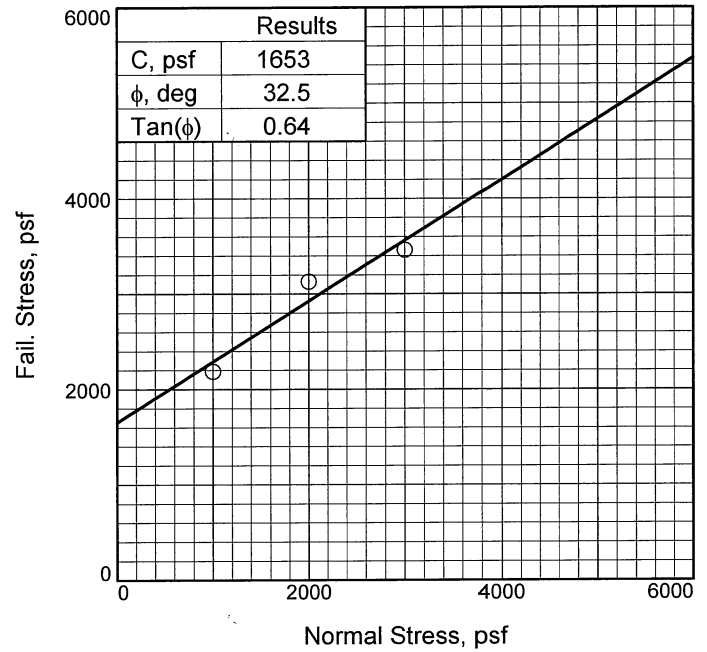
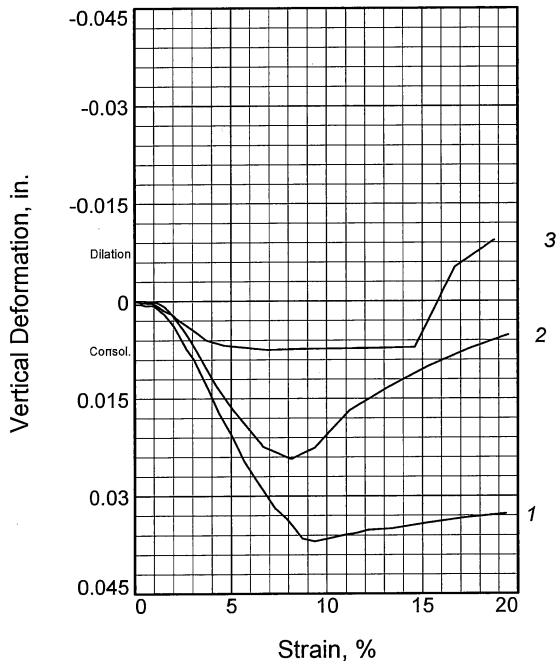
Client: City of North Richland Hills

Project: Channel Repairs-Cotton Belt Trl.-NRH, TX

Sample Number: B-1 **Depth:** 2-3 RES

Proj. No.: 245-23-16

DIRECT SHEAR TEST REPORT
CMJ ENGINEERING, INC.
Fort Worth, Texas



Sample No.		1	2	3
Initial	Water Content, %	15.7	15.7	15.7
	Dry Density, pcf	116.1	116.2	116.5
	Saturation, %	98.1	98.3	99.3
	Void Ratio	0.4249	0.4240	0.4196
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.97	0.97	0.97
At Test	Water Content, %	16.0	16.0	15.8
	Dry Density, pcf	116.1	116.2	116.5
	Saturation, %	99.8	99.8	99.6
	Void Ratio	0.4249	0.4240	0.4196
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.97	0.97	0.97
Normal Stress, psf		1000	2000	3000
Fail. Stress, psf		2187	3129	3460
Strain, %		7.9	6.6	6.8
Ult. Stress, psf				
Strain, %				
Strain rate, in./min.		0.001	0.001	0.001

Sample Type:

Description:

LL= 46 PL= 17 PI= 29

Assumed Specific Gravity= 2.65

Remarks:

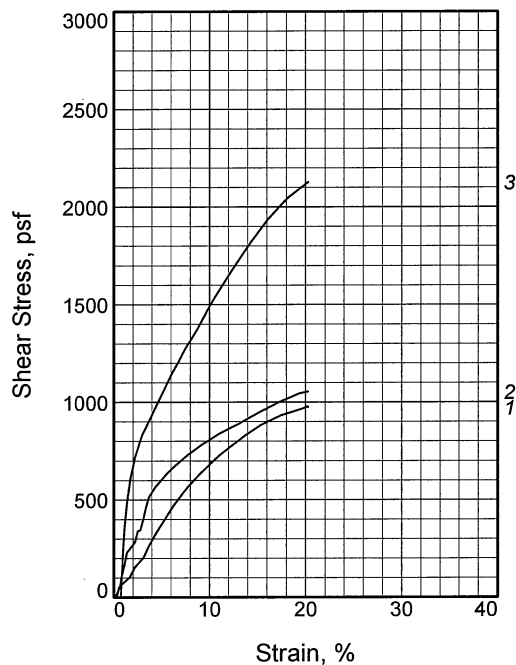
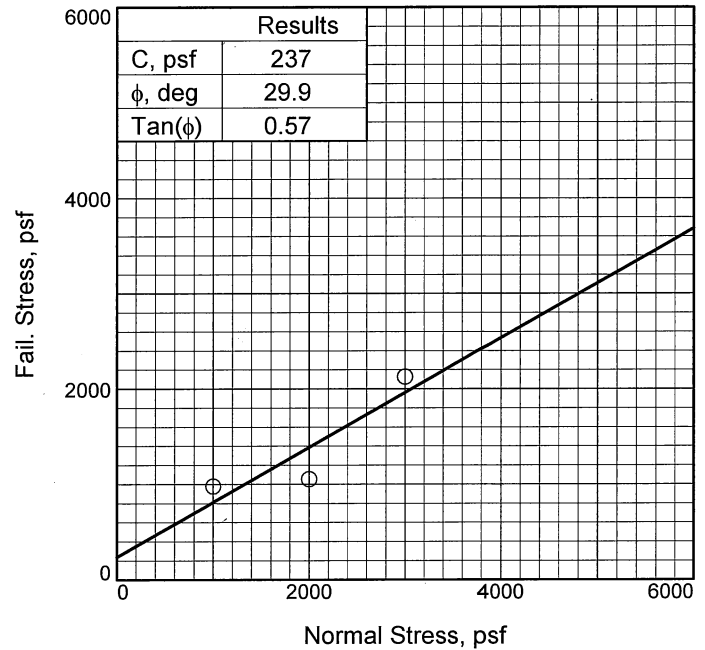
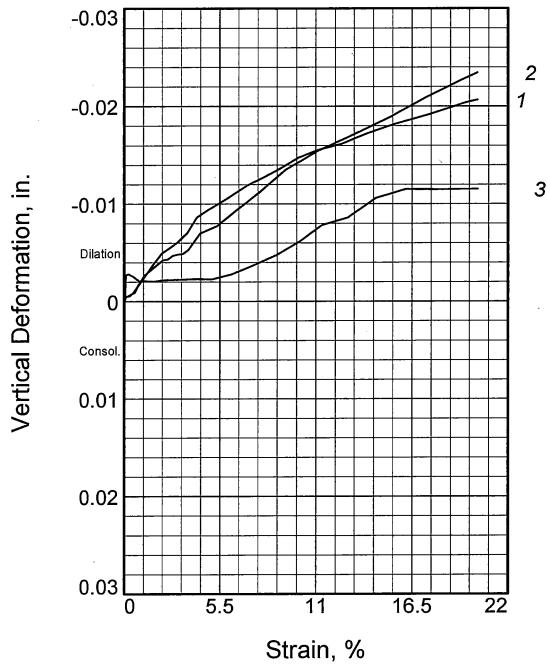
Client: City of North Richland Hills

Project: Channel Repairs-Cotton Belt Trl.-NRH, TX

Sample Number: B-2 **Depth:** 7-8

Proj. No.: 245-23-16

DIRECT SHEAR TEST REPORT
CMJ ENGINEERING, INC.
Fort Worth, Texas



Sample No.		1	2	3
Initial	Water Content, %	15.7	15.7	15.7
	Dry Density, pcf	116.1	117.1	116.5
	Saturation, %	98.1	98.3	99.3
	Void Ratio	0.4249	0.4288	0.4196
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.97	0.97	0.97
At Test	Water Content, %	16.0	16.0	15.8
	Dry Density, pcf	116.1	117.1	116.5
	Saturation, %	99.8	99.8	99.6
	Void Ratio	0.4249	0.4288	0.4196
	Diameter, in.	2.47	2.47	2.47
	Height, in.	0.97	0.97	0.97
Normal Stress, psf		1000	2000	3000
Fail. Stress, psf		978	1054	2127
Strain, %		20.2	20.2	20.3
Ult. Stress, psf				
Strain, %				
Strain rate, in./min.		0.025	0.025	0.025

Sample Type:

Description:

LL= 46 PL= 17 PI= 29

Assumed Specific Gravity= 2.65

Remarks:

Client: City of North Richland Hills

Project: Channel Repairs-Cotton Belt Trl.-NRH, TX

Sample Number: B-2 **Depth:** 7-8 RES

Proj. No.: 245-23-16

DIRECT SHEAR TEST REPORT
CMJ ENGINEERING, INC.
Fort Worth, Texas