

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

**TOWN OF ADDISON, TEXAS
PUBLIC WORKS AND ENGINEERING SERVICES
BID NUMBER 21-69**

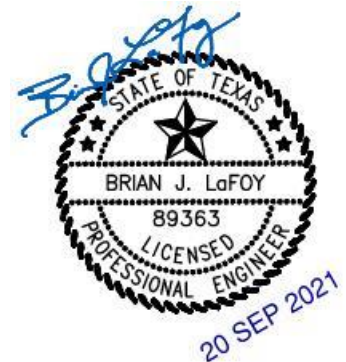
SEPTEMBER 2021

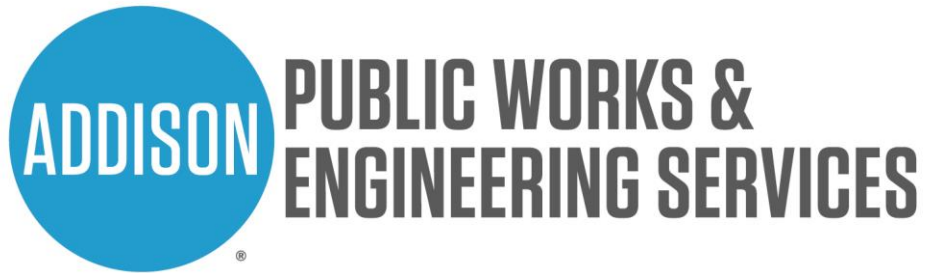
PREPARED BY

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TOWN OF ADDISON, TEXAS

MAYOR

Joe Chow

MAYOR PRO TEM:

Guillermo Quintanilla

DEPUTY MAYOR PRO TEM:

Paul Walden

COUNCIL MEMBERS

Tom Braun

Lori Ward

Kathryn Wheeler

Marlin Willesen

CITY MANAGER

Wesley S. Pierson

DIRECTOR OF PUBLIC WORKS AND ENGINEERING SERVICES

Shannon Hicks, P.E.

TABLE OF CONTENTS

Section AB	Advertisement for Bids
Section IB	Instructions to Bidders
Section PF	Proposal Form
Section BB	Bid Bond
Section BQS	Bidder Qualification Statement
Section CA	Contract Agreement
Section PrB	Performance Bond
Section PyB	Payment Bond
Section MB	Maintenance Bond
Section BP	Contractor's Affidavit of Bills Paid
Section GP	General Provisions <i>Standard Specifications for Public Works Construction – North Central Texas (5th Edition, 2017)</i>
Section SP	Special Provisions
Section PS	Project Sign
Section TS	Technical Specifications <i>Special Specification 7076: Grouting of Water Mains</i>
Section IS	Additional Insurance Requirements, Town of Addison

Appendix A

Geotechnical Study

*Alpha Road Connector – Vitruvian Phase IV (Report:
20212439.001A/DFW20R119268)*

SECTION AB

ADVERTISEMENT FOR BIDS

ADVERTISEMENT FOR BIDS

1. The Town of Addison is requesting bids for the Bid of the Bella Lane South Extension and Alpha Road Connector. **Bids will be accepted until 2:00 p.m., Thursday, October 21, 2021** at the Finance Building, 5350 Belt Line Rd., Dallas, Texas 75254 – Attention Purchasing Department, at which time responders names and bids will be publicly read aloud. Late bids will not be considered. The plans, specifications, quantities, pre-bid time and date, and other information are available on www.civcastusa.com. The plans, specifications, and quantities for the work to be done are also on file with Public Works & Engineering Services Department, Town of Addison, 16801 Westgrove Drive, Addison, Texas 75001, and such plans, specifications, and quantities may be examined without charge. The Town of Addison reserves the right to waive any formalities, to reject any and all bids, and to select the proposal deemed most advantageous to the Town of Addison.

2. The Contractor shall identify his bid on the outside of the envelope by writing the words **PUBLIC WORKS AND ENGINEERING SERVICES BID NUMBER 21-69, BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR**.

PAPER BIDS SHALL BE REQUIRED. AN ELECTRONIC COPY OF THE BID SHALL BE INCLUDED IN THE ENVELOPE WHEN THE PAPER BID IS SUBMITTED. A USB DRIVE IS PREFERRED.

3. Bids shall be accompanied by a bid bond in the same amount from a reliable surety company licensed by the State of Texas to act as a Surety and be listed on the current U.S. Treasury Listing of Approved Sureties, or a Binder of Insurance executed by a surety company licensed by the State of Texas to act as a surety or its authorized agent as a guarantee that the bidder will enter into a contract and execute a Performance Bond within ten (10) days after notice of award of contract to him.

4. Plans, specifications and bidding documents may be downloaded from www.civcastusa.com. The Town of Addison is a "free buyer", meaning that prospective bidders need only a free registration to sign up for plan updates. Bidders assume all risk for acquiring specs and/or plans from third party sites and plan rooms, as only www.civcastusa.com will be directly updated by Addison.

5. The right is reserved by the Mayor and the City Council as the interests of the City may require to reject any or all bids and to waive any formality in bids received and to select the proposal deemed most advantageous to the City.

6. The Bidder (Proposer) must supply all the information required by the Proposal Form.

7. A Performance Bond, Labor and Material Payment Bond, and Maintenance Bond will be required by the Owner; each Bond shall be in the amount of 100% of the total contract amount. Bonds shall be issued by a surety company licensed by the State of Texas to act as a Surety and be listed on the current U.S. Treasury Listing of Approved Sureties.

8. The Bidder (Proposer) must supply all the information required by the Bidder Qualification Statement.

9. **An optional pre-bid meeting will be held on Thursday, October 7, 2021 at 2:00pm in the The Town of Addison Service Center 16801 Westgrove Drive, Addison, Texas 75001 A site visit will follow this meeting.**

10. For information on bidding or work to be performed, please submit all questions on www.civcastusa.com. All questions must be received by 5:00pm on Wednesday, October 13, 2021. All questions received by this deadline will be answered by 5:00pm on Monday, October 18, 2021.

11. The project consists of constructing the extension of Bella Lane South from Vitruvian Park to Windmill Circle and connection to Alpha Road from Farmers Branch Creek. The improvements include, but are not limited to, subgrade preparation, concrete pavement, storm sewer pipe, storm sewer structure, water line, bridge construction, and detention pond construction.

SECTION IB

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

- A. PROJECT:** BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR, in the Town of Addison. The bids will be evaluated as stated in Section "O" of these Instructions to Bidders.
- B. PROJECT DESCRIPTION:** The project consists of constructing the extension of Bella Lane South from Vitruvian Park to Windmill Circle and connection to Alpha Road from Farmers Branch Creek. The improvements include, but are not limited to, subgrade preparation, concrete pavement, storm sewer pipe, storm sewer structure, water line, bridge construction, and detention pond construction.
- C. PROPOSALS:** Proposals must be in accordance with these instructions in order to receive consideration.
- D. DOCUMENTS:** Reference the Contract Agreement for a listing of Contract Documents to be included for this project.
- E. EXAMINATION OF DOCUMENTS AND SITE:** Bidders shall carefully examine the Bidding Documents and the construction site to obtain firsthand knowledge of the scope and the conditions of the Work. Each Contractor, Subcontractor and Sub-subcontractor, by submitting a proposal to perform any portion of the Work, represents and warrants that he has examined the Contract Documents and the site of the Work, and from his own investigation has satisfied himself as to the scope, accessibility, nature and location of the Work; the character of the equipment and other facilities needed for the performance of the Work; the character and extent of other work to be performed; the local conditions; labor availability, practices and jurisdictions; and other circumstances that may affect the performance of the Work. No additional compensation will be allowed by the Owner for the failure of such Contractor, Subcontractor or Sub-subcontractor to inform himself as to conditions affecting the Work.
- F. INTERPRETATION OF DOCUMENTS:** If any person contemplating submitting a bid for the proposed Contract is in doubt as to the meaning of any part of the Drawings, Specifications (Project Manual) or other proposed Contract Documents, he may submit questions to the Town of Addison, no later than 5:00pm on Wednesday, October 13, 2021. All questions received by this deadline will be answered by 5:00pm on Monday, October 18, 2021. Bidders should act promptly and allow sufficient time for a reply to reach them before preparing their bids. Any interpretation or clarification will be in the form of an Addendum duly issued. No alleged verbal interpretation or ruling will be held binding upon the Owner.
- G. SUBSTITUTIONS:** Conditions governing the submission of substitutions for specific materials, products, equipment and processes are in the Special Provisions. Requests for substitutions must be received by the Town of Addison seven (7) calendar days prior to the established bid date.
- H. ADDENDA:** Interpretations, clarifications, additions, deletions and modifications to the Documents during the bidding period will be issued in the form of Addenda and a copy of

such Addenda will be released through www.civcastusa.com. It will be the responsibility of each person who has been issued a set of bid documents to secure all Addenda from www.civcastusa.com. Addenda will be a part of the Bidding Documents and the Contract Documents, and receipt of them shall be acknowledged in the Bid Form. All such interpretations and supplemental instructions will be in the form of written addenda to the contract documents which, if issued, will be released through www.civcastusa.com not later than three (3) calendar days prior to the date fixed for the opening of bids. If any bidder fails to acknowledge the receipt of such addenda in the space provided in the bid form, his bid will nevertheless be construed as though the receipt of such addenda had been acknowledged.

- I. The Town may consider more factors than just price in awarding a the contract in accordance with the requirements for competitive bidding under the Local Government Code Section 252.043. The criteria that will be considered are:
- the price;
 - the offeror's experience and reputation;
 - the quality of the offeror's goods or services;
 - the impact on the ability of the Town to comply with rules relating to historically underutilized businesses;
 - the offeror's safety record;
 - the offeror's proposed personnel;
 - whether the offeror's financial capability is appropriate to the size and scope of the project; and
 - any other relevant factor specifically listed in the request for bids, proposals, or qualifications
- J. **COMPLETION TIME:** The selected contractor shall use the time period between the awarding of the contract at Town Council and the date of Notice to Proceed to submit materials and shop drawings for approval by **Kimley-Horn and Associates**. **Kimley- Horn** shall review and return these submittals in the most expedient manner possible to accommodate immediate material ordering.
- a. Upon receiving Notice to Proceed, the selected contractor shall have **330 calendar days** to construct the project and achieve substantial completion. Substantial completion for this project includes the following items:
 - i. Preliminary Punchlist walk-through with the Town performed.
 - b. After substantial completion is reached, the contractor shall have **an additional 20 calendar days to** achieve 100% final completion. Final completion for this project shall include:
 - i. Punchlist items completed and approved by the Town;
 - ii. Site clean-up;
 - iii. Submittal of Record Drawings; and
 - iv. Execution of Maintenance Bond.

- K. PREPARATION OF BIDS:** Prices quoted shall include all items of cost, expense, taxes, fees and charges incurred by, or arising out of, the performance of the work to be performed under the Contract. Bids shall be submitted in duplicate and shall be signed in ink. Any bid on other than the required form will be considered informal and may be rejected. Erasures or other changes in a bid must be explained or noted over the initials of the bidder. Bids containing any conditions, omissions, unexplained erasures and alterations, or irregularities of any kind may be rejected as informal. The prices should be expressed in words and figures or they may be deemed informal and may be rejected. In case of discrepancy between the price written in the bid and that given in the figures, the price in writing will be considered as the bid. In the case of a discrepancy between a unit price and its extension, the unit price will govern. Failure to submit all requested information will make a bid irregular and subject to rejection. Bids shall be signed with name typed or printed below signature, and, if a partnership, give full name of all partners. Where bidder is a corporation, bids must be signed with the legal name of the corporation followed by the name of the state of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.
- L. SUBMITTAL OF BIDS:** Sealed proposals will be received at the time, date and place stated in the Advertisement for Bids. Proposals shall be made on unaltered Proposal Forms furnished by the Town of Addison. Bidders shall submit proposals in an opaque, sealed envelope addressed to the Owner and plainly mark on the outside of the envelope the name and address of the bidder. The envelopes shall also be marked with the following project description:

PUBLIC WORKS AND ENGINEERING SERVICES BID NUMBER 21-69

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

An electronic copy of the bid shall be included in the envelope when the paper copy bid is submitted. A USB drive is preferred.

The Bid Bond must be completed and signed by each bidder and submitted with the bid. Submit Bids by mail or in person prior to the time for receiving bids set forth in the Advertisement for Bids issued by the Town.

Electronic bidding on www.civcastusa.com will not be considered for this project. The Town of Addison uses www.civcastusa.com to distribute bids and proposals. There will be NO COST to the contractor for the use of www.civcastusa.com.

- M. MODIFICATION AND WITHDRAWAL OF BIDS:** Prior to the time set for bid opening, bids may be withdrawn or modified. Bids may be modified only on the official bid form and must be signed by a person legally empowered to bind the bidder. No bidder shall modify, withdraw, or cancel his bid or any part thereof for sixty (60) calendar days after the time agreed upon for the receipt of bids.
- N. DISQUALIFICATION:** The Owner reserves the right to disqualify proposals, before or after the opening, upon evidence of collusion with intent to defraud or other illegal practices relating to this proposal upon the part of the bidder.
- O. SUBMISSION OF POST-BID INFORMATION:** Upon notification of acceptance, the selected bidder shall, within twenty-four (24) hours, submit the following:

1. A designation of the portions of the Work proposed to be performed by the bidder with his own force.
2. A list of names of the Subcontractors or other persons or organizations, including those who are to furnish materials and equipment fabricated to a special design proposed for such portions of the Work as may be designated in the Bidding Documents or as may be requested by the Town of Addison. The bidder will be required to establish to the satisfaction of the Owner the reliability and responsibility of the proposed Subcontractors and suppliers to furnish and perform the Work.
3. Other information as required.

P. AWARD: The Owner reserves the right to accept any or to reject any bids without compensation to bidders and to waive irregularities and informalities. The Town of Addison Public Works & Engineering Services Department, in making its recommendation, will consider the following elements:

1. Whether the bidder is a contractor with experience in the type of work involved.
2. Whether the bidder has adequate plant, equipment and personnel to perform the work properly and expeditiously.
3. Whether the bidder has a suitable financial status and reputation for meeting obligations incident to work of the kind specified.
4. Whether the bidder has complied with the terms and conditions.

Alternate items may or may not be awarded. Addition or deletion of other items or schedules will be governed by the *Standard Specifications for Public Works Construction – North Central Texas, November 2017, 5th Edition*, (hereinafter called SSPWC) Item 104.2 "Change or Modification of Contract".

Q. EXECUTION OF THE CONTRACT: The successful bidder will be required to enter into a contract with the Owner within ten (10) days of notice by the Owner that his bid has been accepted. Failure to enter into a contract within the established time limit shall be considered grounds for forfeiture of the bid bond.

R. CONSTRUCTION SCHEDULE: It is the Owner's desire to have the project completed and operational in as short a time as possible. The number of calendar days for completion of the project will begin with the date specified in the Notice to Proceed. The Notice to Proceed will be issued in a manner to facilitate a smooth construction of the project. The Contractor shall begin construction within ten (10) calendar days of the issuance of the Notice to Proceed.

S. COST PLUS TIME BIDDING: N/A

T. FORM OF CONTRACT: The contract for the construction of the project will be drawn up by the Owner. A sample form of agreement is included in the Contract Agreement Section.

U. BONDS: A Performance Bond, a Labor and Material Payment Bond and a Maintenance Bond will be required by the Owner. The Performance Bond and Payment Bond shall name the Town of Addison, and others as directed by the Town, as joint obligees. Sample forms have

been included in the Performance Bond, Payment Bond, and Maintenance Bond sections. (Contractor shall confirm the legal names of obligees prior to execution of Bonds.)

- V. BID SECURITY:** Bids shall be accompanied by a bid bond in the same amount from a surety company licensed to do business in the State of Texas as a guarantee that the bidder will enter into a contract and execute a Performance Bond and Payment Bond within ten (10) calendar days after notice of award of contract to him. Such bid bonds will be returned to all except the three lowest bidders within three (3) days after the opening of bids, and the remaining bid bonds will be returned promptly after the Owner has made an award of contract, or, if no award has been made within thirty (30) calendar days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.
- W. RESOLUTIONS:** If the bidder is a corporation, a copy of the resolution empowering the person submitting the bid to bind the bidder must be included with the bid.
- X. CONSTRUCTION STAKING:** Construction staking and re-staking will not be provided by the Owner. Benchmarks and Horizontal Control are shown on the plans. There is no separate bid item for staking, therefore, the contractor must include value for staking in the various bid items as subsidiary to the contract. Any staking or re-staking that is required shall be the responsibility of the Contractor and shall be at no cost to the Owner.
- Y. FINAL PAYMENT:** The general provisions for Final Payment shall be as stated in Item 109.5.4 of the SSPWC including all Amendments and Additions. Prior to final payment the Contractor shall provide the Owner with the following items:
1. A Contractor's Affidavit of Bills Paid in accordance with Section BP.
 2. A Consent of Surety Company to Final Payment.
 3. A complete set of record plans which indicate all construction variations from the original construction documents in accordance with the Special Provisions.
 4. A Two (2) years Maintenance Bond in accordance with Section MB.
 5. Acknowledgement that the project has been reviewed and accepted by TDLR.
- Z. PREVAILING WAGE RATES:** Wage rates paid on this project shall not be less than specified in the schedule of general prevailing rates of per diem wages as attached in the Special Provisions.
- AA. PRIORITY OF CONTRACT DOCUMENTS:** Reference the Contract Agreement for information regarding the priority of Contract Documents.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - STREET IMPROVEMENTS					
P1	MOBILIZATION (5% MAX)	1	LS		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P2	BARRICADES, SIGNS, AND TRAFFIC HANDLING	1	LS		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P3	PROJECT SIGN	2	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P4	GENERAL SITE PREPARATION	1	LS		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P5	REMOVE EX HEADWALL	1	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P6	REMOVAL OF EX 54" RCP	5	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P7	REMOVE EXISTING CONCRETE SIDEWALK/RAMPS	425	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P8	REMOVE EXISTING ASPHALT PAVEMENT	480	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P9	REMOVE EXISTING TREES	116	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P10	UNCLASSIFIED STREET EXCAVATION	1	LS		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P11	BORROW AND SPOIL (ROADWAY)	1	LS		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P12	MOISTURE TREATED SUBGRADE	7,180	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
P13	6" LIME STABILIZED SUBGRADE	1,145	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P14	HYDRATED LIME	25	TON		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P15	4" TYP B HMAC (TXDOT)	30	TON		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P16	8" REINFORCED CONCRETE PAVEMENT (STREET)	6,615	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P17	10" PORTLAND CEMENT CONC PAVEMENT W/ 6" MONO CURB)	1,050	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P18	6" CURB AND GUTTER	875	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P19	REINFORCED CONCRETE STREET HEADERS	540	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P20	5" CONCRETE SIDEWALK	3,100	SY		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P21	ACCESSIBLE RAMP	12	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P22	RAIL (HANDRAIL) (TY F)	35	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P23	INSTALL NEW SIGN AND SIGN POST ASSEMBLY	20	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P24	REFL PAV MRKG TY I & TY II (W) 4" SOLID	3,300	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
P25	REFL PAV MRKG TY I & TY II (Y) 4" SOLID	3,050	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P26	REFL PAV MRKG TY I & TY II (Y) 4" BROKEN	140	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P27	REFL PAV MRKG TY I & TY II (W) ARROW	3	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P28	REFL PAV MRKG TY I & TY II (W) 24" STOP BAR MARKING	31	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P29	REFL PAV MRKG TY I & TY II (W) 5' X 8' CROSSWALK WITH 5' SPACE	3	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P30	REFL PAV MRKG TY I & TY II (W) 24"X 8" CROSSWALK WITH 4' SPACE	15	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P31	REFL PAV MRKG TY I (W) 24" TRIANGLE	21	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P32	REMOVE AND RELOCATE EX GATE	1	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
P33	ONCOR DUCT CROSSING COORDINATION	1	LS		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$

TOTAL AMOUNT BID-BASE BID - STREET IMPROVEMENTS

 (Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BRIDGE OVER FARMERS BRANCH CREEK					
B1	FLOWABLE BACKFILL	443	CY		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B2	DRILL SHAFT (18 IN)	148	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B3	DRILL SHAFT (36 IN)	296	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B4	CL C CONC (ABUT) (HPC)	100	CY		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B5	REINF CONC SLAB (HPC)	2,648	SF		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B6	BRIDGE SIDEWALK (HPC)	490	SF		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B7	APPROACH SLAB (HPC)	83	CY		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B8	PRESTR CONC I-GIRDER (TX40)	329	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B9	RIPRAP (CONC) (CL B) (RR8&RR9)	76	CY		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B10	RIPRAP (STONE PROTECTION) (24 IN)	1,470	CY		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B11	ELASTOMERIC BEARING (LAMINATED)	8	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				
B12	STR STEEL (MISCELLANEOUS BRIDGE) (BS-EJCP)	186	LB		
	Complete in Place, for the Sum of				
	_____ Dollars and			\$	\$
	_____ Cents per unit				

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
B13	RAIL (TY C221) (HPC)	238	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
B14	SEALED EXPANSION JOINT (4 IN) (SEJ - M)	51	LF		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
B15	MTL BEAM GD FEN TRANS (THRIE-BEAM)	3	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$
B16	TERMINAL ANCHOR SECTION	3	EA		
	Complete in Place, for the Sum of				
	_____ Dollars and				
	_____ Cents per unit			\$	\$

TOTAL AMOUNT BID-BRIDGE OVER FARMERS BRANCH CREEK

 (Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - STORM SYSTEM IMPROVEMENTS					
D1	18" RCP CLASS III	490	LF		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D2	24" RCP CLASS III	285	LF		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D3	30" RCP CLASS III	80	LF		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D4	6' CURB INLET	4	EA		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D5	CONCRETE HEADWALL (CHFW-0)	3	EA		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D6	18" RCP 2:1 SET TY II HEADWALL	1	EA		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D7	18" RCP 6:1 SET TY II HEADWALL	4	EA		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D8	24" RCP 6:1 SET TY II HEADWALL	4	EA		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D9	RIPRAP (STONE PROTECTION) (12 IN) (CHFW-0 HEADWALL)	12	CY		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				
D10	TRENCH EXCAVATION PROTECTION (STORM SYSTEM)	855	LF		
	Complete in Place, for the Sum of				
	Dollars and			\$	\$
	Cents per unit				

TOTAL AMOUNT BID-BASE BID - STORM SYSTEM IMPROVEMENTS

\$ _____
 (Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - DETENTION POND IMPROVEMENTS					
H1	UNCLASSIFIED POND AND CREEK EXCAVATION	1	LS		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
H2	BORROW AND SPOIL (DETENTION POND AND CREEK)	1	LS		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
H3	BORROW AND SPOIL (DETENTION POND AND CREEK) (SELECT FILL)	1	LS		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
H4	RIPRAP (CONC) (CL B) (RR8&RR9) (DETENTION POND)	7	CY		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
H5	RIPRAP (STONE PROTECTION) (24 IN) (DETENTION POND)	910	CY		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
H6	CONCRETE OUTFALL STRUCTURE	7	CY		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$

TOTAL AMOUNT BID-BASE BID - DETENTION POND IMPROVEMENTS

\$ _____ -
 (Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - LANDSCAPE IMPROVEMENTS AND EROSION CONTROL					
L1	HYDRAULIC MULCHING WITH 4" TOPSOIL	43,868	SY		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
L2	SEDIMENT CONTROL FENCE (INSTALL/MAINTAIN/REMOVE)	7,475	LF		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
L3	STABILIZED CONSTRUCTION EXIT/ENTRANCE	180	SY		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
L4	INLET PROTECTION (INSTALL/MAINTAIN/REMOVE)	4	EA		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
L5	ROCK CHECK DAM	65	LF		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$
L6	STORM WATER POLLUTION PREVENTION PLAN	1	LS		
	Complete in Place, for the Sum of				
	Dollars and				
	Cents per unit			\$	\$

TOTAL AMOUNT BID-TOTAL AMOUNT BID-BASE BID - DETENTION POND IMPROVEMENTS

\$ _____ -

(Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - WATER IMPROVEMENTS					
W1	8" PVC WATER LINE	355	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W2	12" PVC WATER LINE	575	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W3	8 " GATE VALVE	2	EA		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W4	12" GATE VALVE	2	EA		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W5	FIRE HYDRANT ASSEMBLY	1	EA		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W6	REMOVE EXISTING 12" AC WATER LINE	8	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W7	ABANDON EXISTING ASBESTOS PIPE IN PLACE	500	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W8	WATER TESTING	1	LS		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
W9	TRENCH EXCAVATION PROTECTION (WATER SYSTEM)	930	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$

TOTAL AMOUNT BID-BASE BID - WATER IMPROVEMENTS \$ _____
 (Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - SANITARY SEWER IMPROVEMENTS					
SS1	8" PVC SSWR LINE	315	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
SS2	4' STANDARD MANHOLE	1	EA		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
SS3	CEMENT STABILIZED SAND ENCASEMENT (MIN. 10% CEMENT/CY)	20	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
SS4	SANITARY SEWER CCTV INSPECTION	1	LS		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$
SS5	TRENCH EXCAVATION PROTECTION (SANITARY SEWER IMPROVEMENTS)	315	LF		
	Complete in Place, for the Sum of				
	Dollars and Cents per unit			\$	\$

TOTAL AMOUNT BID-BASE BID - SANITARY SEWER IMPROVEMENTS

\$ _____ -
 (Total Amount Bid, Numerical Value)

and _____ Dollars
 _____ Cents

*The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.

Item No.	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
BASE BID - OWNER'S CONTIGENCY					
O1	OWNER'S CONTIGENCY	1	LS		
	Complete in Place, for the Sum of				
	Eighty Five Thousand Dollars and				
	Zero Cents per unit			\$ 85,000.00	\$ 85,000.00

TOTAL AMOUNT BID-BASE BID - OWNER'S CONTIGENCY

\$ 85,000.00
(Total Amount Bid, Numerical Value)

and _____ Dollars
_____ Cents

***The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.**

TOTAL AMOUNT OF BASE BID (ITEMS P1 THROUGH O1)

\$ _____ -

(Total Amount Bid,
Numerical Value)

_____ Dollars

and _____

_____ Cents

(Total Amount Bid in Words)

***The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.**

- NOTES:
1. All items, labor, materials, equipment, facilities, incidentals and work required for construction of the project are to be provided and installed by the Contractor as part of the project and payment for the cost of such shall be included in the price bid for the construction of the project.
 2. Prices must be shown in words and figures for each item listed in the Proposal. In the event of discrepancy, the words shall control.
 3. Materials, which are "tax exempt", are those items which are physically incorporated into the facilities constructed for the Town of Addison, as set forth in the Special Provisions. Materials include, but are not limited to purchased items such as water pipe, sanitary sewer pipe, storm drain pipe, etc.

Services, which are "not tax exempt", are those items which are used by the Contractor but are not physically incorporated into the Town of Addison's facility and/or items which are consumed by construction, as set forth in the Special Provisions. Services include, but are not limited to, items such as supplies, tools, skill and labor, the purchase, rental or lease of equipment, etc.

Name of Person Signing Bid

Signature of Person Signing Bid

Address

Telephone No.

Fax No.

T.I.N. (Tax Identification or Employer's Number)

If BIDDER is:

AN INDIVIDUAL

By _____ (Individual's Name) (Seal)

doing business as _____

Business address: _____

Phone No. _____

A PARTNERSHIP

By _____ (Firm Name) (Seal)

_____ (General Partner)

doing business as _____

Business address: _____

Phone No. _____

A CORPORATION

By _____
(Corporation Name)

(State of Incorporation)

By _____
(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest _____
(Secretary)

Business address: _____

Phone No. _____



A JOINT VENTURE

By _____
(Name)

(Address)

By _____
(Name)

(Address)

(Each joint venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

SECTION PF-1

PROPOSAL FORM

PROPOSAL FORM

_____, 2021

TO: The Honorable Mayor and Town Council
Town of Addison, Texas

Gentlemen:

The undersigned bidder, having examined the plans, specifications and contract documents, and the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all equipment and to perform labor and work necessary for completion of the work described by and in accordance with the Plans, Specifications and Contract for the following prices, to wit:

Signed by: _____

ACKNOWLEDGMENT OF ADDENDA:

The Bidder acknowledges receipt of the following addenda:

Addendum No. 1 _____

Addendum No. 2 _____

Addendum No. 3 _____

The following pages contain all bid items for:

BID SCHEDULE – BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR
BID NUMBER 21-69

TOTAL AMOUNT OF BASE BID (ITEMS P1 THROUGH O1)

\$ _____ -
(Total Amount Bid,
Numerical Value)

Dollars

and

Cents

(Total Amount Bid in Words)

***The Owner reserves the right to delete any bid items or portions thereof. If the Owner elects to delete any portions of the PROJECT from the contract, then the contract can be awarded on that basis.**

- NOTES:
1. All items, labor, materials, equipment, facilities, incidentals and work required for construction of the project are to be provided and installed by the Contractor as part of the project and payment for the cost of such shall be included in the price bid for the construction of the project.
 2. Prices must be shown in words and figures for each item listed in the Proposal. In the event of discrepancy, the words shall control.
 3. Materials, which are "tax exempt", are those items which are physically incorporated into the facilities constructed for the Town of Addison, as set forth in the Special Provisions. Materials include, but are not limited to purchased items such as water pipe, sanitary sewer pipe, storm drain pipe, etc.

Services, which are "not tax exempt", are those items which are used by the Contractor but are not physically incorporated into the Town of Addison's facility and/or items which are consumed by construction, as set forth in the Special Provisions. Services include, but are not limited to, items such as supplies, tools, skill and labor, the purchase, rental or lease of equipment, etc.

Name of Person Signing Bid

Signature of Person Signing Bid

Address

Telephone No.

Fax No.

T.I.N. (Tax Identification or Employer's Number)

If BIDDER is:

AN INDIVIDUAL

By _____ (Individual's Name) (Seal)

doing business as _____

Business address: _____

Phone No. _____

A PARTNERSHIP

By _____ (Firm Name) (Seal)

_____ (General Partner)

doing business as _____

Business address: _____

Phone No. _____

A CORPORATION

By _____
(Corporation Name)

(State of Incorporation)

By _____
(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest _____
(Secretary)

Business address: _____

Phone No. _____



A JOINT VENTURE

By _____
(Name)

(Address)

By _____
(Name)

(Address)

(Each joint venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

SECTION PF-1

PROPOSAL FORM

PROPOSAL FORM

_____, 2021

TO: The Honorable Mayor and Town Council
Town of Addison, Texas

Gentlemen:

The undersigned bidder, having examined the plans, specifications and contract documents, and the location of the proposed work, and being fully advised as to the extent and character of the work, proposes to furnish all equipment and to perform labor and work necessary for completion of the work described by and in accordance with the Plans, Specifications and Contract for the following prices, to wit:

Signed by: _____

ACKNOWLEDGMENT OF ADDENDA:

The Bidder acknowledges receipt of the following addenda:

Addendum No. 1 _____

Addendum No. 2 _____

Addendum No. 3 _____

The following pages contain all bid items for:

**BID SCHEDULE – BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR
BID NUMBER 21-69**

SECTION BB
BID BOND

BID BOND

Bidder shall submit a bid bond equal to five percent (5%) of the bid price. Failure to submit a bid bond when required may deem the bid non-responsive. Bid Bonds may be submitted electronically with the executed original provided immediately upon request.

SECTION BQS

BIDDER QUALIFICATION STATEMENT

SECTION BQS

ALL BIDDERS ARE NOTIFIED THAT THE FOLLOWING QUALIFICATION STATEMENT MUST BE COMPLETED AND SUBMITTED WITH THE BID PROPOSAL

CONTRACTOR'S QUALIFICATIONS

The Contractor shall show that he has experience with similar projects that require working on concrete pavement, water, storm sewer, detention pond, and bridge construction in close proximity to many physical features (such as: fences, carports, utility poles, guy lines, gas lines and meters, water lines, sewer manholes and cleanouts, etc.) which will require the Contractor to plan his work efforts and equipment needs with these limitations in mind. The Contractor shall submit a complete list of ALL Municipal and Similar Non-Municipal current and completed projects for the past three (3) years for review. This list shall include the names of supervisors and type of equipment used to perform this work.

BIDDERS QUALIFICATION STATEMENT

INFRASTRUCTURE AND DEVELOPMENT SERVICES BID NUMBER 21-69, BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Contractor: _____

Indicate One: _____ Sole Proprietor _____ Partnership _____ Other
 _____ Corporation _____ Joint Venture

Name: _____ Partner: _____

Title: _____ Title: _____

Address: _____ Address: _____

City: _____ City: _____

State & Zip: _____ State & Zip: _____

Phone: _____ Phone: _____

State and Date of Incorporation, Partnership, Ownership, Etc. _____

Location of Principal Office: _____

Contact and Phone at Principal Office: _____

Liability Insurance Provider and Limits of Coverage: _____

Workers Compensation Insurance Provider: _____

Surety (Performance and Payment): _____

Address: _____

Contact and Phone: _____

Superintendent and Backup Superintendent: (Work Resume - attach additional sheets.) (Safety Record – attached additional sheets; if needed show all verified safety violations.) The superintendent shall be able to communicate in English and not operate any equipment and have not had any verified job safety violations in the past five years. Any variations shall be reviewed by the OWNER for approval or denial. A job site shall be shut down if proper supervision is not provided.

Superintendent Name

Backup Superintendent Name

Safety Record – List ALL Verified Violations for Superintendent and Backup Superintendent with explanation, date and action taken to correct future safety violations:

Superintendent

Backup Superintendent

Total Number of Employees to be Associated with this Job: _____

Managerial _____ Administrative _____ Professional _____

Skilled _____ Semi-Skilled _____ Other _____

Percentage of work to be done by Bidder's Employees (Based on Dollars Bid): _____

Type(s) of work to be done by Bidder's Employees (examples: concrete paving, structural concrete, waterlines, sanitary sewer lines, storm pipe, storm inlets, excavation, lime, bridge fencing, etc.)

Access to Tools and Equipment: Percent Owned ____ Percent Rented ____

Number of Years in Business as a Contractor on Above Types of Works: _____

Type(s) of Work to be done by Sub-Contractors

Include Name, Address, and Phone Number of Sub-Contractor.

Use additional sheets if needed.

Type of Work

Sub-Contractor

List Equipment to be used on this project (Make/Model/Age of Major Equipment) Any Equipment not listed shall be reviewed by the OWNER for approval or rejection prior to use of Equipment on this project. (Use additional sheets if necessary)

Type of Equipment

Make

Model

Age (years)

List of ALL Municipal and Similar Non-Municipal current and completed projects for the past three (3) years. (Use additional sheets if necessary.)

1. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

2. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

3. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

4. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

5. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

6. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

7. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

8. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

9. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

10. Project: _____

Current Status: _____

Any Litigation Issues: Yes or No (Circle One) If Yes, explain: _____

Any Verified Safety Violations: Yes or No (Circle One) If Yes, explain: _____

Project Description: _____

Owner/Agency: _____

Year Built: _____ Contract Price: _____

Contact Person: _____ Phone: _____

Trade references (List Company, Address, Contact Person, and Phone):

Bank References (List Institution, Address, Contact Person, and Phone)

Claims and Suits (if the answer to any of the following questions is yes, please attached details):

1. Has your organization ever failed to complete any work awarded to it? _____
2. Are there any judgments, claims, arbitration proceedings, or suits pending or outstanding against your organization or officers? _____
3. Has your organization filed any lawsuits or requested arbitration with regard to construction contracts within the last five years? _____
4. Within the last five (5) years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? _____

I, _____, being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Date this _____ day of _____, 20____.

Name of

Organization: _____

By: _____

Title: _____

STATE OF TEXAS

COUNTY OF DALLAS

BEFORE ME the undersigned authority, on this day personally appeared _____, known to me to be the person whose name subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and considerations therein expressed.

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

Notary Public in and for _____ County, Texas

SECTION CA

CONTRACT AGREEMENT

CONTRACT AGREEMENT

STATE OF TEXAS

COUNTY OF DALLAS

THIS AGREEMENT is made and entered into this _____ day of _____, 2021, by and between the Town of Addison, of the County of Dallas and State of Texas, acting through its City Manager, thereunto duly authorized so to do, Party of the First Part, hereinafter termed the OWNER, and _____, of the City of _____, County of _____, State of _____, Party of the Second Part, hereinafter termed CONTRACTOR.

WITNESSETH: That for and in consideration of the payment and agreement hereinafter mentioned, to be made and performed by the OWNER, the said CONTRACTOR hereby agrees with the said OWNER to commence and complete construction of certain improvements as follows:

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

PUBLIC WORKS AND ENGINEERING SERVICES BID NUMBER 21-69

and all extra work in connection therewith, under the terms as stated in the General and Specific Conditions of the AGREEMENT; and at his own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance and other accessories and services necessary to complete the said construction, in accordance with the conditions and prices stated in the Proposal attached hereto and in accordance with the ~~Advertisement for Bids, Instructions to Bidders, General Provisions, Special Provisions, Plans, and other drawings and printed or written explanatory matter thereof, and the Technical Specifications and Addenda thereto Contract Documents, as prepared by the OWNER, each of which has been identified by the endorsement of the CONTRACTOR and the OWNER thereon, together with the CONTRACTOR's written Proposal and the General Provisions, all of which are made a part hereof and collectively evidence and constitute the entire AGREEMENT.~~

The Contract Documents shall consist of the following documents:

1. this Contract Agreement;
2. properly authorized change orders;
3. any listed and numbered addenda;
4. the Special Provisions;
5. Technical Specifications & Construction Drawings;
6. the OWNER's Standard Construction Details;
7. the October 2017 5th Edition of the Public Works Construction Standards - North Central Texas as amended and published by the North Central Texas Council of Governments, as amended by the Owner (collectively, the "NCTCOG Specifications ");
8. the OWNER's written notice to proceed to the CONTRACTOR;

- 9. the Contractor's Bid Proposal;
- 10. the Performance, Payment, and Maintenance Bonds; and,
- 11. any other bid materials distributed by the Owner that relate to the Project.

These Contract Documents are incorporated by reference into this Construction Agreement as if set out here in their entirety. The Contract Documents are intended to be complementary; what is called for by one document shall be as binding as if called for by all Contract Documents. It is specifically provided, however, that in the event of any inconsistency in the Contract Documents, the inconsistency shall be resolved by giving precedence to the Contract Documents in the order in which they are listed herein above. If, however, there exists a conflict or inconsistency between the Technical Specifications and the Construction Drawings it shall be the Contractor's obligation to seek clarification as to which requirements or provisions control before undertaking any work on that component of the project. Should the Contractor fail or refuse to seek a clarification of such conflicting or inconsistent requirements or provisions prior to any work on that component of the project, the Contractor shall be solely responsible for the costs and expenses - including additional time - necessary to cure, repair and/or correct that component of the project.

The CONTRACTOR hereby agrees to commence work within ten (10) calendar days after the date of written notice to do so shall have been given to him, to complete the work within three hundred and thirty (330) calendar days, after he commences work, subject to such extensions of time as are provided by the General Provisions.

The OWNER agrees to pay the CONTRACTOR _____ Dollars (\$ _____) in current funds for the performance of the Contract in accordance with the Proposal submitted thereof, subject to additions and deductions, as provided in the General Provisions, and to make payments of account thereof as provided therein.

IN WITNESS WHEREOF, the parties of these presents have executed this AGREEMENT in the year and day first above written.

TOWN OF ADDISON, TEXAS (OWNER)

ATTEST:

By: _____
City Manager

By: _____

(CONTRACTOR)

ATTEST:

By: _____

By: _____

The following to be executed if the CONTRACTOR is a corporation:

I, _____ certify that I am the secretary of the corporation named as CONTRACTOR herein; that _____, who signed this Contract on behalf of the CONTRACTOR is the _____ (official title) of said corporation; that said Contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Signed: _____

Corporate Seal

SECTION PrB
PERFORMANCE BOND

PERFORMANCE BOND

STATE OF TEXAS }
COUNTY OF DALLAS }

WHEREAS, _____ as principal ("Contractor") and _____, a corporation organized under the laws of _____ and being duly authorized to do business in the State of Texas, as surety ("Surety")(whether one or more), do hereby expressly acknowledge themselves to be held and bound to pay to the Town of Addison, Texas, a home-rule municipality organized and operating under the Constitution and laws of the State of Texas (the "Town"), its successors and assigns, and to all persons, firms, subcontractors and corporations who may furnish materials or labor under the contract as more fully described below, the sum of _____ Dollars in the lawful currency of the United States of America (\$) for the payment of which Contractor and Surety are liable to the Town, jointly and severally; and

WHEREAS, Contractor has this day entered into a written contract with the Town to build and construct _____

_____ which contract and the plans and specifications therein mentioned (collectively referred to hereinafter as the "Contract") are hereby expressly incorporated into and made a part hereof as though set forth at length; and

WHEREAS, this bond is given pursuant to Chapter 2253 of the Texas Government Code;

NOW, THEREFORE, if Contractor shall well, truly and faithfully perform all of the undertakings, duties, terms, conditions and agreements of the Contract; shall satisfy all claims and demands incurred under the Contract; shall fully indemnify and hold the Town harmless; shall reimburse and repay the Town for any outlay or expense which the Town may incur in making good any default, and shall promptly make payment to all persons, firms, subcontractors and corporations who may furnish materials or labor under the Contract, then this obligation shall be void; otherwise to remain in full force and effect. The obligations of Contractor and Surety under this bond apply both to the original Contract and to any extension or modification of the Contract and Surety agrees that no change, extension of time, addition, expansion or other modification of the Contract, the work to be done under the Contract, or the plans and specifications which are a part of the Contract shall in any manner affect the obligations of Surety under this bond, and Surety waives notice of any such change, extension of time, addition, expansion or other modification. The obligations of Contractor and Surety under this bond are performable and payable in Dallas County, Texas such that exclusive venue for any legal action pertaining to this bond shall lie in Dallas County, Texas. By their signatures below, the persons signing this bond warrant and represent that they are, respectively, duly authorized to sign on behalf of Contractor and Surety.

EXECUTED this the ____ day of _____, 2____.

CONTRACTOR: _____ SURETY: 1
By: _____ By: _____
Title: _____ Title: _____

ACKNOWLEDGMENTS
[Contractor]

STATE OF TEXAS }
COUNTY OF DALLAS }

Before me _____ (insert the name of the officer) on this day _____ personally appeared _____ known to me (or proved to me on the oath of _____) or through _____ (description of identity card or other document) to be the person whose name is subscribed to the forgoing instrument and acknowledged to me that he/she executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office this _____ day of _____, 2____.

Notary Public in and for the State of Texas _____ Typed or Printed Name of Notary
My Commission Expires: _____

[Surety]

STATE OF TEXAS }
COUNTY OF DALLAS }

This instrument was acknowledged before me on the ____ day of _____, 2____ by _____ who is the _____ of the Surety, on behalf of Surety.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____ day of _____, 2____.

Notary Public in and for the State of Texas _____ Typed or Printed Name of Notary
My Commission Expires: _____

1 Please see attached contact sheet for Surety and the Texas Department of Insurance.

Payment and Performance Bond Contact Sheet

(1) Claims:

All notices of claims shall be sent to the surety at the following address:

(Name of surety)

(Mailing address)

(Physical address)

(Phone number)

(2) Texas Department of Insurance Contact Number:

The address and contact information of the surety may otherwise be obtained by contacting the Texas Department of Insurance at the following toll free telephone number:

1-800-252-3439.

SECTION PyB
PAYMENT BOND

PAYMENT BOND

STATE OF TEXAS }
COUNTY OF DALLAS }

WHEREAS, _____, as principal ("Contractor") and _____, a corporation organized under the laws of _____ and being duly authorized to do business in the State of Texas, as surety ("Surety")(whether one or more), do hereby expressly acknowledge themselves to be held and bound to pay to the Town of Addison, Texas, a home-rule municipality organized and operating under the Constitution and laws of the State of Texas (the "Town"), its successors and assigns, and to all persons, firms, subcontractors and corporations who may furnish materials or labor under the contract as more fully described below, the sum of _____ Dollars in the lawful currency of the United States of America (\$) for the payment of which Contractor and Surety are liable to the Town, jointly and severally; and

WHEREAS, Contractor has this day entered into a written contract with the Town to build and construct _____

which contract and the plans and specifications therein mentioned (collectively referred to hereinafter as the "Contract") are hereby expressly incorporated into and made a part hereof as though set forth at length; and

WHEREAS, this bond is given pursuant to Chapter 2253 of the Texas Government Code;

NOW, THEREFORE, if Contractor shall promptly make payment to all persons, firms, subcontractors and corporations who may furnish materials or labor under the Contract, then this obligation shall be void; otherwise to remain in full force and effect. The obligations of Contractor and Surety under this bond apply both to the original Contract and to any extension of time or modification of the Contract and Surety agrees that no change, extension of time, addition, expansion or other modification of the Contract, the work to be done under the Contract, or the plans and specifications which are a part of the Contract shall in any manner affect the obligations of Surety under this bond, and Surety waives notice of any such change, extension of time, addition, expansion or other modification. The obligations of Contractor and Surety under this bond are performable and payable in Dallas County, Texas such that exclusive venue for any legal action pertaining to this bond shall lie in Dallas County, Texas. By their signatures below, the persons signing this bond warrant and represent that they are, respectively, duly authorized to sign on behalf of Contractor and Surety.

EXECUTED this the _____ day of _____, 2_____.

CONTRACTOR:

SURETY: 1

By: _____

By: _____

Title: _____

Title: _____

ACKNOWLEDGMENTS
[Contractor]

STATE OF TEXAS }
COUNTY OF DALLAS }

Before me _____ (insert the name of the officer) on this day _____ personally appeared _____ known to me (or proved to me on the oath of _____) or through _____ (description of identity card or other document) to be the person whose name is subscribed to the forgoing instrument and acknowledged to me that he/she executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office this _____ day of _____, 2_____.

Notary Public in and for the State of Texas
My Commission Expires: _____

Typed or Printed Name of Notary

[Surety]

STATE OF TEXAS }
COUNTY OF DALLAS }

This instrument was acknowledged before me on the _____ day of _____, 2_____ by _____ who is the _____ of the Surety, on behalf of Surety.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 2_____.

Notary Public in and for the State of Texas
My Commission Expires: _____

Typed or Printed Name of Notary

1 Please see attached contact sheet for Surety and the Texas Department of Insurance

Payment and Performance Bond Contact Sheet

(1) Claims:

All notices of claims shall be sent to the surety at the following address:

(Name of surety)

(Mailing address)

(Physical address)

(Phone number)

(2) Texas Department of Insurance Contact Number:

The address and contact information of the surety may otherwise be obtained by contacting the Texas Department of Insurance at the following toll free telephone number:

1-800-252-3439.

SECTION MB
MAINTENANCE BOND

MB 1

MAINTENANCE BOND – TWO YEAR

STATE OF TEXAS

COUNTY OF DALLAS

WHEREAS, _____, as principal ("Contractor") and _____, a corporation organized under the laws of _____ and being duly authorized to do business in the State of Texas, as surety ("Surety")(whether one or more), do hereby expressly acknowledge themselves to be held and bound to pay to the Town of Addison, Texas, a home-rule municipality organized and operating under the Constitution and laws of the State of Texas (the "Town"), its successors and assigns the sum of _____ Dollars in the lawful currency of the United States of America (\$) for the payment of which Contractor and Surety are liable to the Town, jointly and severally; and

WHEREAS, Contractor has this day entered into a written contract with the Town to build and construct which contract and the plans and specifications therein mentioned (collectively referred to hereinafter as the "Contract") are hereby expressly incorporated into and made a part hereof as though set forth at length; and

WHEREAS, under the Contract it is provided that the Contractor will maintain and keep in good repair all work to be performed and done under the Contract for a period of two (2) years from and after its date of final completion and written acceptance by the Town, and to do and perform all necessary work and repair any defective condition, it being understood that the purpose of this maintenance bond is to insure all warranties, express or implied, made or given by the Contractor to the Town and to cover all defective, inadequate or non-conforming conditions arising by reason of any materials or labor installed, provided, constructed or performed by the Contractor and in case the Contractor shall fail to correct any such conditions it is agreed that the Town may make such corrections and charge the cost of making those corrections against the Contractor and the Surety on this obligation, and the Contractor and Surety shall be subject to the liquidated damages provided in the contract, the plans and the specifications for each day's failure on its part to comply with the terms and provisions of the Contract;

NOW, THEREFORE, if the Contractor shall keep and perform its obligation to maintain the work and keep the work in repair for the full maintenance period of two (2) years as herein provided, then these presents shall be null and void and have no further effect, but if default shall be made by Contractor in the performance of its obligations, then these presents shall have full force and effect, and the Town shall have and recover from the Contractor and its Surety damages in the premises as provided and it is further understood and agreed that this obligation shall be a continuing one against the Contractor and the Surety and that successive recoveries may be had hereon for successive breaches until the full amount of this bond shall have been exhausted; and it is further understood that the obligation under this bond to maintain the work shall continue throughout the maintenance period and shall not be changed, diminished, or in any other manner affected during the term of this bond. The obligations of Contractor and Surety under this bond apply both to the original Contract and to any extension or modification of the Contract and Surety agrees that no change, extension of time, addition, expansion or other modification of the Contract, the work to be done under the Contract, or the plans and specifications which are a part of the Contract shall in any manner affect the obligations of Surety under this bond, and Surety waives notice of any such change, extension of time, addition, expansion or other modification. The obligations of Contractor and Surety under this bond are performable and payable in Dallas County, Texas such that exclusive venue for any legal action pertaining to this bond shall lie in Dallas County, Texas. By their signatures below, the persons signing this bond warrant and represent that they are, respectively, duly authorized to sign on behalf of Contractor and Surety.

EXECUTED this the _____ day of _____, 2_____.
CONTRACTOR: _____ SURETY: _____

By: _____ By: _____
Printed Name: _____ Printed Name: _____
Title: _____ Title: _____

Address of Principal: _____ Address of Surety: _____

ACKNOWLEDGMENTS
[Contractor]

STATE OF TEXAS
COUNTY OF DALLAS

Before me _____ (insert the name of the officer) on this day _____ personally appeared _____ known to me (or proved to me on the oath of _____) or through _____ (description of identity card or other document) to be the person whose name is subscribed to the forgoing instrument and acknowledged to me that he/she executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office this _____ day of _____, 2_____.
Notary Public in and for the State of Texas _____ Typed or Printed Name of Notary
My Commission Expires: _____
[Surety]

STATE OF TEXAS
COUNTY OF DALLAS

This instrument was acknowledged before me on the ___ day of _____, 2____ by _____ who is the _____ of the Surety, on behalf of Surety.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 2_____.
Notary Public in and for the State of Texas _____ Typed or Printed Name of Notary
2-4-13 2 yr

SECTION BP

CONTRACTOR'S AFFIDAVIT OF BILLS PAID

CONTRACTOR'S AFFIDAVIT OF BILLS PAID

STATE OF TEXAS

COUNTY OF DALLAS

Personally, before me the undersigned authority, on this day appeared _____ who, being
duly sworn, on oath, says that he is a legal representative of _____

(full name of Contractor as in contract)

and that the contract for the construction of the project, designated as

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

INFRASTRUCTURE AND DEVELOPMENT SERVICES BID NUMBER 21-69

has been satisfactorily completed and that all bills for materials, apparatus, fixtures, machinery and labor used in connection with the construction of this project have, to the best of my knowledge and belief, been fully paid.

Signature

Title

Sworn to and subscribed before me this _____ day of _____, 202_.

Notary Public in and for

County, Texas

Instructions:

If the contractor is an individual, he shall sign the affidavit. If the contractor is a partnership, any partner may sign the affidavit. If the contractor is a corporation, a person authorized by the by-laws or by the Board of Directors shall sign the affidavit. If the Contractor is a joint-venture of individuals, any of the individuals may sign the affidavit. If the Contractor is a joint-venture of partnerships, or of individuals and partnerships, the affidavit may be signed by the individual or any partner of any partnership. If the contractor is a joint-venture in which a corporation is a party, separate affidavits must be executed in the name of the joint-venture: one by each corporation and one by each individual or partnership. Signatures for corporations should be by a duly authorized officer. If signature is by another, a showing of authority to sign must accompany the affidavit.

SECTION GP

GENERAL PROVISIONS

GENERAL PROVISIONS

The General Provisions of the Contract shall be as stated in the *Standard Specifications for Public Works Construction – North Central Texas, 5th Edition (2017)*, under Division 100, "General Provisions," Items 101.1 through 109.6 inclusive, as amended or supplemented and except as modified by the Special Provisions or Instructions to Bidders.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

SECTION SP

SPECIAL PROVISIONS

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

SPECIAL PROVISIONS

1. **SCOPE OF WORK:** The Work to be performed under the provisions of these Contract Documents shall consist of furnishing all materials, labor, equipment, supplies and appurtenances; providing all construction, plant, equipment and tools; performing all necessary labor and supervision; and the construction complete, including all Work appurtenant thereto, the proposed improvements for: **BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR.**
2. **GENERAL:** This Work shall conform to the requirements of the Contract Documents as listed in the Contract Agreement. These Contract Documents are intended to be complementary. The Contractor shall do all work as provided in the Contract Documents shall do such additional Extra work as may be considered necessary to complete the work in a satisfactory and acceptable manner. The Contractor shall furnish all labor, tools, materials, machinery, equipment, and incidentals necessary to the satisfactory prosecution and completion of the Work.
3. **EXAMINATION OF SITE:** The Contractor acknowledges that he has investigated and satisfied itself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, or similar physical conditions at the site, conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the Work. The Contractor acknowledges that he has inspected the site of the Work and is familiar with the soil conditions to be encountered. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The Town of Addison assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Town and the Engineer of Record (**Kimley-Horn and Associates, Inc.**).
4. **SPECIFICATIONS:** Construction improvements shall be governed by the following published specifications and details (except as modified by these Special Provisions):

Standard Specification for Construction and Maintenance of Highways, Streets, and Bridges, Texas Department of Transportation (November 2014); Standard Specifications for Public Works Construction, North Central Texas - North Central Texas Council of Governments (5th edition, 2017); Town of Addison Standard Construction Details;

The Contractor shall keep copies of applicable Specifications on the Project site at all times.

Where reference is made to specifications compiled by other agencies, organizations or departments, such referenced specifications are hereby made a part of the Project Specifications.

Portions of TxDOT standards and specifications, latest editions, shall be incorporated into this contract by specific reference in the contract plans and specifications. In the event of

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

conflict with other documents, TxDOT standards and specifications shall govern for construction materials and methods. In the event of conflict with other documents, Town of Addison contract documents shall govern for contract procedures and measurement and payment.

5. **SUBSURFACE INVESTIGATION:** Subsurface exploration to ascertain the nature of soils, including the amount of rock, if any, is the responsibility of any and all prospective Bidders. It shall be the responsibility of the Bidders to make such subsurface investigations as he deems necessary to determine the nature of the material to be encountered. Some preliminary subsurface exploration has been performed by the Town of Addison and the Engineer, and is provided to the Contractor in the Contract Documents. This information is provided only as preliminary and all bids shall be based on information obtained by the Contractor. The Town of Addison and the Engineer disclaim any responsibility for the accuracy, true location and extent of the soils information that has been prepared by others. They further disclaim responsibility for interpretation of that data by Bidders, as in projecting soil bearing values, rock profiles, soils stability and the presence, level and extent of underground water.
6. **HISTORICAL, SCIENTIFIC AND ARCHAEOLOGICAL DISCOVERIES:** Contractor shall immediately give an oral and written report to the Town of Addison of the discovery of any articles of historical, scientific, or archaeological significance. Contractor shall take all necessary steps to preserve the article and shall cease operations, which would affect the find until otherwise directed by the Town of Addison but continue with all other unaffected operations. The future operations of Contractor with respect to the discovery, including disposition of the articles, shall be decided by the Town of Addison. The Town of Addison shall have sole and exclusive title to any discovered articles.

The Town of Addison shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in Contractor's cost of, or the time required for performing any part of the work under the Contract, whether or not changed as a result of conditions, an equitable adjustment will be made and the Contract modified in writing accordingly.

No request by Contractor for an equitable adjustment to the Contract under this Section shall be allowed unless Contractor has given the written notice required. No request by Contractor for an equitable adjustment of the Contract for differing site conditions will be allowed or shall be made after final payment under the Contract.

ENVIRONMENTAL REQUIREMENTS: In addition to requirements set forth in other sections of the Contract, including the Plans and Specifications, Contractor shall ensure that the requirements of this Section are fulfilled and incorporated into its procedures and processes as well as those of any Subcontractors. All materials utilized by Contractor on the Project shall comply with all applicable local, state and federal laws and regulations.

A. Contractor is responsible for compliance with any requirements included in the Contract Documents regarding Hazardous Materials. If Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by Contractor, Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Town of Addison in writing.

1. The term “Hazardous Materials” means any substance or compound, whether solid, liquid or gaseous: (i) which is listed, defined or regulated as a “hazardous substance”, “hazardous waste”, “extremely hazardous waste”, “solid waste”, “toxic substance”, “hazardous substance”, “hazardous material” or “regulated substance” or otherwise classified as hazardous or toxic, in or pursuant to any Environmental Law; or (ii) which is or contains asbestos, radon, any polychlorinated biphenyl, urea formaldehyde foam insulation, explosive or radioactive material, lead, or motor fuel or other volatile organic compounds; or (iii) which causes or poses a threat to cause a contamination or nuisance on the Project Site or any adjacent property, or (iv) which causes or poses a threat to cause a hazard to the environment or to the health, safety or welfare of persons on or about the Project Site.

2. The term “Environmental Law” means any federal, state or local law, statute, guidance or policy statement, ordinance, code, rule, regulation, license, authorization, decision, order, injunction or decree, which pertains to health, safety or the environment (including, but not limited to, ground, air, water or noise pollution or contamination, and underground or aboveground tanks) and shall include without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, the Resource Conservation and Recovery Act of 1976, as amended, the Occupational Health and Safety Act, the Toxic Substances Control Act, the Texas Water Code and the Texas Solid Waste Disposal Act and any other state or federal environmental statutes.

B. If the material or substance was on the site prior to the issuance of the Notice to Proceed, the Town of Addison shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by Contractor and, in the event such material or substance is found to be present, to verify that it has been remediated to levels required by the Texas Commission on Environmental Quality. When the material or substance has been remediated, Work in the affected area shall resume upon written direction of the Town of Addison.

C. Except as provided in Subparagraph B., Contractor (with the Town of Addison’s prior written approval of the laboratory) shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by Contractor and, in the event such material or substance is found to be present, the Town of Addison shall determine whether Contractor or the Town of Addison shall have the substance remediated to levels required by the Texas Commission on Environmental Quality. When the material or substance has been remediated, Work in the affected area shall resume upon written direction of the Town of Addison. The Contract time shall not be extended and the Contract Price shall not be increased, unless the material or substance to be remediated

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

were not introduced to the Work Site by Contractor, and Contractor shall then pay for (or reimburse the Town of Addison for) the testing and remediation.

D. The Town of Addison shall not be responsible under this Section for materials or substances Contractor brings or introduces to the Project Site. Contractor shall be responsible for the fault or negligence in the use and handling of materials or substances of Contractor, Subcontractor, Sub-subcontractor, or anyone directly or indirectly employed by any of them.

E. Contractor shall indemnify the Town of Addison and its affiliates for any and all damages incurred by the Town of Addison as a result of Contractor's actions with respect to all applicable state and federal environmental laws related to materials or substances Contractor brings to the Project Site, including but not limited to fines, penalties, costs of remediation and reasonable attorney's fees. No time extension shall be granted for breach of this provision.

F. Contractor agrees that it shall not transport to, use, generate, dispose of, or install at the Project Site any Hazardous Materials, except in accordance with applicable environmental laws. Further, in performing the Work, Contractor shall not cause any release of Hazardous Materials into, or contamination of, the environment, including the soil, the atmosphere, any water course or ground water unless required by the Contract Documents. In the event Contractor engages in any of the activities prohibited in this Section or fails to stop Work as provided in this Section, to the fullest extent permitted by law, Contractor hereby indemnifies and holds the Town of Addison, its affiliates and their respective officers, agents, employees and tenants harmless from and against any and all claims, damages, losses, causes of action, suits and liabilities of every kind, including but not limited to, expenses of litigation, court costs, punitive damages and attorneys' fees, arising out of, incidental to or resulting from the activities prohibited in this Section or Contractor's failure to stop Work as required. Contractor shall obtain from manufacturers and furnish to the Town of Addison Materials Safety Data Sheets (OSHA Form 20) for all materials incorporated into the Project by Contractor. The Town of Addison hereby agrees that, as between the Town of Addison and Contractor, the Town of Addison will be responsible for Hazardous Materials on site which existed prior to Contractor performing Work on the Project Site or which are introduced to the Project Site by the Town of Addison, except as provided in this Section. Contractor will not be considered the generator of Hazardous Materials on site which existed prior to Contractor performing Work on the Work Site or which are introduced to the Project Site by the Town of Addison. If the Hazardous Materials were on the Project Site prior to Contractor's presence on the Project Site or were introduced to the Project Site by the Town of Addison, then, if appropriate, the Town of Addison will make an equitable adjustment to the Contract.

G. Include in all construction subcontracts exceeding \$100,000, the following requirement: "Contractor is responsible for compliance with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act, Section 505 of the Clean Water Act, Executive Order 11738, and Environmental Protection Agency regulations."

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

H. No request by Contractor for an equitable adjustment to the Contract under this Section shall be allowed unless Contractor has given the written notice required.

I. No request by Contractor for an equitable adjustment of the Contract for Hazardous Materials will be allowed or shall be made after final payment under the Contract.

7. **COMPLIANCE WITH LAWS:** The Contractor shall familiarize himself with the nature and extent of the Specifications, Plans, Project Site conditions, traffic and safety requirements, and shall fully comply with all local, state and federal laws, including all codes, ordinances, rules and regulations applicable to this Contract and the Work to be done hereunder, which exist or which may be enacted later by governmental bodies having jurisdiction or authority for such enactment. The Contractor shall comply with all federal, state and local laws, rules and regulations of every kind and nature applicable to the performance of its Work hereunder, and shall hold the Town of Addison and the Engineer harmless therefrom. No plea of ignorance or misunderstanding thereof will be considered.
8. **PERMITS, LICENSES. AND REGULATIONS:** Permits and licenses for the prosecution of the Work shall be secured and paid for by the Contractor. Any required permit fees will still be paid by the Contractor. Wherever the Work under this contract requires the obtaining of permits from the Town of Addison or other public authorities, duplicate copies of such permits shall be furnished to the Engineer by the Contractor hereunder before the Work covered thereby is started. **NO WORK WILL BE ALLOWED TO PROCEED BEFORE SUCH PERMITS ARE OBTAINED.**
9. **RIGHTS-OF-WAY AND EASEMENTS:** Rights-of-way and permanent easements, dedicated to the Town of Addison, will be secured for this Project and made a part of thereto. The Contractor shall obtain a right-of-way permit from the Town of Addison prior to beginning Work. When working within the public rights-of-way and easements, the Contractor shall at all times observe and comply with all Federal and State Laws, and Town of Addison ordinances and regulations which in any way affect the conduct of the Work or its operations, and shall observe and comply with all orders, laws, ordinances and regulations which exist or which may be enacted later by bodies having jurisdiction or authority for such enactment. No plea of misunderstanding or ignorance thereof will be considered. The Contractor and his Sureties shall indemnify and save harmless the Town of Addison, the Engineer and all of their officers, agents, and employees against any and all claims or liability arising from or based on the violation of any such law, ordinance, regulation, or order, whether it be by itself or its employees.

It shall be the responsibility of the Contractor, prior to the initiation of construction on easements through private property, to inform the property owner of its intent to begin construction. Before beginning construction in areas of public dedication, the Contractor shall inform the agency having jurisdiction in the area forty-eight (48) hours prior to initiation of the Work. All easements shall be cleaned up after use and restored to their original conditions or better.
10. **RESTRICTED WORK HOURS:** Per the Town of Addison Building Regulations, "It shall be unlawful for a person, firm or corporation to excavate, erect, build, construct,

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

alter, repair or demolish any building or structure which has been issued or which is required to be issued a building permit by the Town of Addison between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday, and between the hours of 7:00 p.m. and 8:00 a.m. on Saturday and Sunday, if such activity is performed within a residential, apartment, or townhouse zoned area, or within three hundred (300) feet of an occupied residence, except in cases of urgent necessity or in the interest of public safety and convenience, and then only by permit of the City Manager.”

11. **COMPLIANCE WITH IMMIGRATION LAWS:** Contractor shall take all steps necessary to ensure that all of the Contractor’s employees are authorized to work in the United States as required by the Immigration Reform and Control Act of 1986.
12. **NON-DISCRIMINATION POLICY:** It is the policy of the Town of Addison to afford all people an equal opportunity to bid on any contract being let by the Town. The Town of Addison has a policy that prohibits discrimination against any person because of race, color, sex, or national origin, in the award or performance of any contract. The Town of Addison will require its employees, agents, and Contractors to adhere to this policy.
13. **ANTITRUST LAWS:** The Contractor hereby assigns to the Town of Addison any and all claims for overcharges associated with this contract which arise under the antitrust laws of the United States 15 U.S.C.A. Sec. 1, et seq. (1973).
14. **ABANDONMENT:** The Town of Addison reserves the right to abandon, without obligation to the Contractor, any part of the Project, or the entire Project, at any time before the Contractor begins any construction Work authorized by the Town of Addison. In case of total abandonment of the Project, the Contract becomes void. The Town of Addison may abandon portions of the Project at any time during the Project duration. In case of such partial abandonment, the Contractor shall not be due any payment for lost or unrealized profits on the abandoned portions of the Project.
15. **DISCREPANCIES:** If the Contractor, in the course of the Work, finds any discrepancy between the Contract Documents and the physical conditions of the Project, or any errors or omissions in Plans or in the layout as given by survey points and instructions, or if it appears that any Plan, Specification or other Contract Document is or may not be in compliance with any building code or other requirement of any governmental body, he shall immediately inform the Town of Addison and the Engineer in writing, and the Town of Addison and the Engineer shall promptly verify the same. Any Work done after such discovery, until authorized, will be done at the Contractor’s risk.
16. **PREPARATION OF STORM WATER POLLUTION PREVENTION PLAN:** A Storm Water Pollution Prevention Plan (SW3P) will be required for this project, the area disturbed on this project during construction exceed 1 acre.

This specification is not all inclusive of the requirements for an SW3P. The Contractor shall comply with all requirements of the TCEQ TPDES permit and the local authorities’ storm water ordinance and/or regulations.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

17. **ADDENDA:** Bidders desiring further information, or interpretation of the Plans and Specifications, must make written request for such information to the Engineer (not later than four (4) working days prior to the date set for the Bid opening. The ability to ask questions will close at **5:00 PM, Wednesday, October 13, 2021**. Answers to all such requests will be issued in the form of Addenda and a copy of such Addenda will be released through www.civcastusa.com. It will be the responsibility of each person who has been issued as set of Bidding Documents to secure all Addenda from www.civcastusa.com. Addenda will be bound with and 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 omissions from, the Plans, Specifications or Contract Documents, or should it be in doubt as to their meaning, it shall at once notify the Engineer in writing in order that a written addendum may be sent to all Bidders.
18. **PAY ITEMS:** Pay items provided are intended to be all-inclusive of the Work required on this Project. Work required by the Plans or Specifications but not provided with a specific pay item shall be considered incidental to other items of Work. Final payment to the construction Contractor shall not be made until all Work has been finally completed and verified in accordance with the construction contract, Plans and Specifications and have been finally accepted by the Town of Addison.
19. **QUANTITIES:** The quantities in the Bid Items are approximate and may represent quantities in excess of those actually installed. Final Payment will be based on the actual quantities installed and paid in accordance with the applicable Specifications.

Bid Items descriptions

Bid Item No. P1 - MOBILIZATION (5% MAX)

This item shall cover the lump sum cost for all charges for labor and for moving supplies, construction equipment and materials to the project site at the beginning of the project and for removing the same equipment and related supplies upon completion of the project, and for site cleanup. **See Special Provisions No. 25 for details for payment for this line Item.**

Bid Item No. P2 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

This item shall include the lump sum cost for installation, maintenance, relocation, and removal of all traffic signs (street name, directional, informational or regulatory), barricades, temporary signs, temporary pavement markings (except those identified in the permanent pavement marking bid items), traffic control plan and all other traffic control measures necessary to provide for the safe travel of vehicles and pedestrians through, along, or around the construction site and for the protection of the workers on the project. All barricades and warning signs will conform to those sections of the Texas Manual on Uniform Traffic Control Devices, latest edition, as amended by the Texas Department of Transportation. **See Special Provisions No. 50 and 51 for additional information.**

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Partial payment of the Lump Sum bid shall be limited as follows:

1. When 5% of the *adjusted contract amount is earned, 25% of the Lump Sum bid shall be paid.
2. When 25% of the *adjusted contract amount is earned, 50% of the Lump Sum bid shall be paid. Previous payments under this item will be deducted from this amount.
3. When 50% of the *adjusted contract amount is earned, 75% of the Lump Sum bid shall be paid. Previous payments under this item will be deducted from this amount.
4. When all work under the contract is completed by the Contractor and accepted by the City, 100% of the Lump Sum bid shall be paid.
5. An overrun of the contract quantity will not be allowed under any circumstances unless the quantity is added by an approved change order.

Additional Notes - If the Contractor fails to provide properly maintain barricades, signs, and traffic control devices in compliance with the specifications, the Contractor will be considered in non-compliance with this item and payment may be delayed for this item.

Bid Item No. P3 - PROJECT SIGN

This item shall consist of the installation of a project sign in the locations approved by the OWNER. Each sign shall be constructed in accordance with the details found in Section PS of the Specification, details and notes, including NCTCOG Item 107.21.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P4 - GENERAL SITE PREPARATION

This work includes the preparing the jobsite within the project limits requiring such work, unless otherwise noted. This includes work within the right-of-way and any adjacent property that is necessary to complete the work as shown on the construction plans or as determined by the ENGINEER in accordance with the appropriate details and specifications, including NCTCOG Item 203.1. All vegetation within the paving limits shall be removed.

This work may also include, but not be limited to:

- (a) The removal of existing pavement markings and traffic buttons;
- (b) The removal or relocation of any existing barricades or signage;
- (c) The removal of any existing driveway/roadway;
- (d) The removal and relocation of any fencing and gates within the proposed right of way as specified within the construction plans;

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

- (e) The removal of existing rock rip rap;
- (f) The removal of a portion of the existing retaining wall at the locations shown in the construction plans;
- (g) The removal of landscape edging;
- (h) The removal of mailboxes;
- (i) Any grading activities (excavation or fill) deemed necessary to prepare the proposed grades of the subgrade prior to pavement, unless separate bid items are provided for excavation or embankment;
- (j) The removal and salvage of any existing regulatory, school or informational signs;
- (k) The removal of all trees, stumps, bushes, vegetation, roots and shrubs not specified and are within the limits of work;
- (l) Adjusting water vaults to finished grade as indicated on the plans;
- (m) Protection and replacement of existing irrigation equipment.
- (n) Dewatering of site for access.

These items of work will not be paid for directly but shall be considered subsidiary to this pay item. Any item indicated in the plans to be removed (directly called out or implied) for which there is no specific pay item shall be considered subsidiary to this pay item.

Measurement and payment for work performed and materials furnished related to general site and/or right of way preparation, as provided herein, shall be made on the basis of the price bid per lump sum (LS) and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. P5 - REMOVE EX HEADWALL

This item shall consist of the removal and disposal of the existing headwall(s) at the locations shown in the drawings. Existing headwall shall be removed in accordance with appropriate specifications, details, and notes, including NCTCOG Item 701.2.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P6 - REMOVAL OF EX 54" RCP

This item shall consist of the removal and disposal of existing 54" reinforced concrete pipe at the locations shown in the drawings. Existing 54" reinforced concrete pipe shall be removed in accordance with appropriate specifications, details, and notes, including NCTCOG Item 701.2.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P7 - REMOVE EXISTING CONCRETE SIDEWALK/RAMPS

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This item shall consist of the removal and disposal of existing concrete sidewalks and curb ramps at the locations shown in the drawings. Existing concrete sidewalks and curb ramps shall be removed in accordance with appropriate specifications, details, and notes, including NCTCOG Item 701.2.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P8 - REMOVE EXISTING ASPHALT PAVEMENT

This item shall consist of the removal and disposal of asphalt pavement at the locations shown in the drawings. Existing asphalt pavement shall be removed in accordance with appropriate specifications, details, and notes, including NCTCOG Item 701.2.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P9 - REMOVE EXISTING TREES

This item shall consist of the removal and disposal of existing trees at the locations shown in the drawings. Existing trees shall be removed in accordance with appropriate specifications, details, and notes, including NCTCOG Item 204.1

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P10 - UNCLASSIFIED STREET EXCAVATION

This work consists of all the required excavation within the limits of the right-of-way and adjacent areas to establish the roadway cross-section, grade, drainage ditches and profile as shown on the plans. All excavation is considered unclassified and shall be performed to the lines & grades shown on the construction plans or as directed by the ENGINEER, in accordance with the appropriate specifications, details and notes, including NCTCOG Item 203.2, 203.4 & 203.5.

This item also includes temporary stockpiling, placement, and compaction of excavated or borrow material required for this project, in accordance with the appropriate specifications. Fill shall be placed and compacted (minimum 95% of maximum dry density) in accordance with the specifications, details, notes, and geotechnical report.

This is a "Plans Quantity" item and will not be measured unless there are revisions to the scope of work. Payment for work performed and materials furnished related to the unclassified excavation and embankment, as provided herein, shall be made on the basis of the price bid per lump sum (LS) for unclassified excavation and shall be total compensation for furnishing and/or

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. P11 - BORROW AND SPOIL (ROADWAY)

This work consists of all the require fill within the limits of the right-of-way and adjacent areas to establish the roadway cross-section, grade, drainage ditches and profile as shown on the plans. All fill is considered unclassified and shall be performed to the lines & grades shown on the construction plans or as directed by the ENGINEER, in accordance with the appropriate specifications, details and notes, including NCTCOG Item 203.2, 203.4 & 203.5.

This item also includes temporary stockpiling, placement, and compaction of excavated or borrow material required for this project, in accordance with the appropriate specifications. Fill shall be placed and compacted (minimum 95% of maximum dry density) in accordance with the specifications, details, notes, and geotechnical report.

This is a "Plans Quantity" item and will not be measured unless there are revisions to the scope of work. Payment for work performed and materials furnished related to the unclassified fill, as provided herein, shall be made on the basis of the price bid per lump sum (LS) for unclassified fill and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. P12 - MOISTURE TREATED SUBGRADE

This item shall consist of the moisture treatment of the roadway subgrade to the limits shown and locations shown in the drawings. The subgrade shall be treated in accordance with project specification, notes, and geotechnical report.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P13 - 6" LIME STABILIZED SUBGRADE

This item shall consist of lime stabilization of the roadway subgrade to the limits shown and locations shown in the drawings. The subgrade shall be stabilized in accordance with project specification, geotechnical report, and notes, including NCTCOG Item 301.2.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P14 - HYDRATED LIME

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This item shall consist of furnishing hydrate lime for the stabilization of the roadway subgrade to the limits shown and locations shown in the drawings. Hydrated lime shall be in accordance with project specification, geotechnical report, and notes, including NCTCOG Item 301.2.

Measurement and payment shall be made on the basis of price bid per ton (TON) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P15 - 4" TYP B HMAC (TXDOT)

This item shall consist of installation of type B hot mix asphalt concrete at the locations shown in the drawings. Hot mix asphalt concrete shall be installed in accordance with project specification, details, and notes, including TxDOT Item 340.

Measurement and payment shall be made on the basis of price bid per ton (TON) and shall be total compensation for furnishing all materials, seal coat, tack coat, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P16 - 8" REINFORCED CONCRETE PAVEMENT (STREET)

This item shall consist of installation of reinforced concrete pavement at the locations shown in the drawings. Concrete pavement shall be installed in accordance with project specification, details, and notes, including NCTCOG Item 303.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P17 - 10" PORTLAND CEMENT CONC PAVEMENT W/ 6" MONO CURB

This item shall consist of installation of reinforced concrete pavement with 6" mono curb at the locations shown in the drawings. Concrete pavement shall be installed in accordance with project specification, details, and notes, including NCTCOG Item 303.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P18 - 6" CURB AND GUTTER

This item shall consist of installation of 6" curb and gutter at the locations shown in the drawings. Concrete curb and gutter shall be installed in accordance with project specification, details, and notes, including NCTCOG Item 305.1.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P19 - REINFORCED CONCRETE STREET HEADERS

This item shall consist of installation of concrete street headers at the locations shown in the drawings. Concrete street headers and gutter shall be installed in accordance with project specification, details, and notes, including NCTCOG Item 305.4.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P20 - 5" CONCRETE SIDEWALK

This item shall consist of installation of 5" concrete sidewalks at the locations shown in the drawings. Concrete sidewalk shall be installed in accordance with project specification, details, and notes, including NCTCOG Item 305.2.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P21 – ACCESSIBLE RAMPS

This item shall consist of installation of curb ramps of the type shown at the locations shown in the drawings. Curb ramps shall be installed in accordance with project specification, details, and notes, including TxDOT Item 531.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P22 - RAIL (HANDRAIL) (TY F)

This item shall consist of installation of handrail of the type shown at the locations shown in the drawings. Handrail shall be installed in accordance with project specification, details, and notes, including TxDOT Item 450.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P23 - INSTALL NEW SIGN AND SIGN POST ASSEMBLY

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

This item shall consist of installation of new road signs, signposts and assemblies at the locations shown in the drawings. Signs, posts, and assemblies shall be installed in accordance with project specification, details, and notes, including TxDOT Item 644.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P24 - REFL PAV MRKG TY I & TY II (W) 4" SOLID

Bid Item No. P25 - REFL PAV MRKG TY I & TY II (Y) 4" SOLID

Bid Item No. P26 - REFL PAV MRKG TY I & TY II (Y) 4" BROKEN

Bid Item No. P28 - REFL PAV MRKG TY I & TY II (W) 24" STOP BAR MARKING

This item shall consist of installation of reflective pavement markings of the type shown at the locations shown in the drawings. Reflective pavement markings shall be installed in accordance with project specification, details, and notes, including TxDOT Item 666.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P27 - REFL PAV MRKG TY I & TY II (W) ARROW

Bid Item No. P29 - REFL PAV MRKG TY I & TY II (W) 5' X 8' CROSSWALK WITH 5' SPACE

Bid Item No. P30 - REFL PAV MRKG TY I & TY II (W) 24"X 8" CROSSWALK WITH 4' SPACE

Bid Item No. P31 - REFL PAV MRKG TY I (W) 24" TRIANGLE

This item shall consist of installation of reflective pavement markings of the type shown at the locations shown in the drawings. Reflective pavement markings shall be installed in accordance with project specification, details, and notes, including TxDOT Item 666.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P32 - REMOVE AND RELOCATE EX GATE

This item shall consist of removing and relocating existing swing gate at the locations shown in the drawings. Existing gate shall be removed and relocated in accordance with project specification, details, and notes.

Removal and relocation of existing post bollards, gate, gate posts, and gate spots shall be considered subsidiary to this item.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. P33 - ONCOR DUCT CROSSING COORDINATION

This item shall consist of the labor, equipment, and materials required for active coordination with Oncor during crossing of duct banks to be installed by others.

This work required for this item may include, but is not limited to:

- Active communication with Oncor of work progress
- Adequate notifications to Oncor of work adjacent to Oncor facilities
- Movement of equipment that may impede Oncor operations
- Protection of in-place work that could be damaged by others
- Constructing leave out of concrete pavement and sidewalk for Oncor to perform duct bank operations

Measurement and payment shall be made on the basis of price bid per lump sum (LS) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work. Coordination with Oncor and/or other utility companies related to other facilities shall be considered subsidiary to the cost of the project.

Bid Item No. B1 - FLOWABLE BACKFILL

This item shall consist of installation flowable backfill at the locations shown in the drawings. Flowable backfill shall be installed in accordance with project specification, details, and notes, including TxDOT Item 401.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B2 - DRILL SHAFT (18 IN)

Bid Item No. B3 - DRILL SHAFT (36 IN)

This item shall consist of construction of drilled shafts of the different sizes at the locations shown in the drawings. Drilled shaft shall be installed in accordance with project specification, details, and notes, including TxDOT Item 416.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B4 - CL C CONC (ABUT) (HPC)

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This item shall consist of construction of bridge abutment cap, wingwalls, and backwall at the locations shown in the drawings. Concrete abutment cap, wingwalls, and backwall shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 420.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B5 - REINF CONC SLAB (HPC)

This item shall consist of construction of bridge reinforced concrete slab at the locations shown in the drawings. Reinforced bridge deck shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 422.

Measurement and payment shall be made on the basis of price bid per square feet (SF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B6 – BRIDGE SIDEWALK (HPC)

This item shall consist of construction of bridge sidewalk at the locations shown in the drawings. Bridge sidewalk shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 422.

Measurement and payment shall be made on the basis of price bid per square feet (SF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B7 - APPROACH SLAB (HPC)

This item shall consist of construction of bridge approach slab at the locations shown in the drawings. Approach slab shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 422.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B8 - PRESTR CONC I-GIRDER (TX40)

This item shall consist of installation of prestressed concrete girders at the locations shown in the drawings. Prestressed concrete girders shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 425.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B9 - RIPRAP (CONC) (CL B) (RR8&RR9)

This item shall consist of installation of concrete riprap at the locations adjacent to the bridge as shown in the drawings. Concrete riprap shall be installed in accordance with project specification, details, and notes, including TxDOT Item 432.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B10 - RIPRAP (STONE PROTECTION) (24 IN)

This item shall consist of installation stone riprap at the locations adjacent to the bridge as shown in the drawings. Stone riprap shall be installed in accordance with project specification, details, and notes, including TxDOT Item 432.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B11 - ELASTOMERIC BEARING (LAMINATED)

This item shall consist of installation of elastomeric bearing pads at the locations shown in the drawings. Elastomeric bearing pads shall be installed in accordance with project specification, details, and notes, including TxDOT Item 434.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B12 - STR STEEL (MISCELLANEOUS BRIDGE) (BS-EJCP)

This item shall consist of installation of structural steel plate at the locations shown in the drawings. Structural steel shall be installed in accordance with project specification, details, and notes, including TxDOT Item 442.

Measurement and payment shall be made on the basis of price bid per pound (LB) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B13 - RAIL (TY C221) (HPC)

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This item shall consist of construction of combination rail of the type shown at the locations shown in the drawings. Combination rail shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 450.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B14 - SEALED EXPANSION JOINT (4 IN) (SEJ - M)

This item shall consist of installation of sealed expansion joint of the type shown at the locations shown in the drawings. Sealed expansion joint shall be installed in accordance with project specification, details, and notes, including TxDOT Item 454.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B15 - MTL BEAM GD FEN TRANS (THREE-BEAM)

This item shall consist of installation of metal beam guard fence transition of the type shown at the locations shown in the drawings. Metal beam guard fence transition shall be installed in accordance with project specification, details, and notes, including TxDOT Item 540.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. B16 - TERMINAL ANCHOR SECTION

This item shall consist of installation of metal beam guard fence terminal anchor section of the type shown at the locations shown in the drawings. Metal beam guard fence terminal anchor section shall be installed in accordance with project specification, details, and notes, including TxDOT Item 540.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D1 - 18" RCP CLASS III

Bid Item No. D2 - 24" RCP CLASS III

Bid Item No. D3 - 30" RCP CLASS III

This item shall consist of installation of reinforced concrete pipe of the type and size shown at the locations shown in the drawings. Reinforced concrete pipe shall be installed in accordance with project specification, details, and notes, including TxDOT Item 464.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

TV inspection of reinforced concrete pipe shall be considered subsidiary to this item.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D4 - 6' CURB INLET

This item shall consist of construction of curb inlets of the size shown at the locations shown in the drawings. Curb inlets shall be constructed in accordance with project specification, details, and notes, including NCTCOG 702.1.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D5 - CONCRETE HEADWALL (CHFW-0)

This item shall consist of installation of concrete headwall of the type shown at the locations shown in the drawings. Concrete headwall shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 466.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D6 - 18" RCP 2:1 SET TY II HEADWALL

This item shall consist of installation of safety end treatment of the type shown at the locations shown in the drawings. Safety end treatment shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 467.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D7 - 18" RCP 6:1 SET TY II HEADWALL

This item shall consist of installation of safety end treatment of the type shown at the locations shown in the drawings. Safety end treatment shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 467.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Bid Item No. D8 - 24" RCP 6:1 SET TY II HEADWALL

This item shall consist of installation of safety end treatment of the type shown at the locations shown in the drawings. Safety end treatment shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 467.

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D9 – RIPRAP (STONE PROTECTION) (12 IN) (CHFW-0 HEADWALL)

This item shall consist of installation stone riprap at the locations adjacent to CHFW-0 headwall as shown in the drawings. Stone riprap shall be installed in accordance with project specification, details, and notes, including TxDOT Item 432.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. D10 - TRENCH EXCAVATION PROTECTION (STORM SYSTEM)

This work includes preparing a job specific trench safety plan and installing the proper shoring and/or bracing to adequately provide a safe trench for all storm sewer improvements, in compliance with current regulations and requirements of the United States Department of Labor Occupational Safety and Health Administration (OSHA). The CONTRACTOR shall have a Trench Safety Plan prepared, signed, and sealed by a professional engineer and provided to the ENGINEER prior to the start of construction. The preparation of the trench safety plan, as required by these specifications, will not be paid for directly but shall be considered subsidiary to this pay item.

Measurement and payment for work performed and materials furnished related to the preparation of a trench safety plan and the installation of a trench safety systems, as provided herein, shall be made on the basis of the price bid per linear foot (LF) of trench exceeding a depth of 4-ft and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. H1 - UNCLASSIFIED POND AND CREEK EXCAVATION

This work consists of all the required excavation within the limits of the right-of-way and adjacent areas to grade detention pond and creek as shown on the plans. All excavation is considered unclassified and shall be performed to the lines & grades shown on the construction plans or as directed by the ENGINEER, in accordance with the appropriate specifications, details and notes, including NCTCOG Item 203.2, 203.4 & 203.5.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This item also includes temporary stockpiling, placement, and compaction of excavated or borrow material required for this project, in accordance with the appropriate specifications. Fill shall be placed and compacted (minimum 95% of maximum dry density) in accordance with the specifications, details, notes, and geotechnical report.

This is a “Plans Quantity” item and will not be measured unless there are revisions to the scope of work. Payment for work performed and materials furnished related to the unclassified excavation and embankment, as provided herein, shall be made on the basis of the price bid per lump sum (LS) for unclassified excavation and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. H2 - BORROW AND SPOIL (DETENTION POND AND CREEK)

This work consists of all the require fill within the limits of the right-of-way and adjacent areas to grade the detention pond and creek grading as shown on the plans. All fill is considered unclassified and shall be performed to the lines & grades shown on the construction plans or as directed by the ENGINEER, in accordance with the appropriate specifications, details and notes, including NCTCOG Item 203.2, 203.4 & 203.5.

This item also includes temporary stockpiling, placement, and compaction of excavated or borrow material required for this project, in accordance with the appropriate specifications. Fill shall be placed and compacted (minimum 94% of maximum dry density) in accordance with the specifications, details, notes, and geotechnical report.

This is a “Plans Quantity” item and will not be measured unless there are revisions to the scope of work. Payment for work performed and materials furnished related to the unclassified fill, as provided herein, shall be made on the basis of the price bid per lump sum (LS) for unclassified fill and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. H3 - BORROW AND SPOIL (DETENTION POND AND CREEK) (SELECT FILL)

This work consists of all the require select fill within the limits of the right-of-way and adjacent areas to grade bridge and creek grading as shown on the plans. The select fill shall be performed to the lines & grades shown on the construction plans or as directed by the ENGINEER, in accordance with the appropriate specifications, details and notes, including NCTCOG Item 203.2, 203.4 & 203.5.

This item also includes temporary stockpiling, placement, and compaction of excavated or borrow material required for this project, in accordance with the appropriate specifications. Fill shall be placed and compacted in accordance with the specifications, details, notes, and geotechnical report.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

This is a “Plans Quantity” item and will not be measured unless there are revisions to the scope of work. Payment for work performed and materials furnished related to the select fill, as provided herein, shall be made on the basis of the price bid per lump sum (LS) for select fill and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. H4 - RIPRAP (CONC) (CL B) (RR8&RR9) (DETENTION POND)

This item shall consist of installation of concrete riprap at the locations adjacent to the detention pond and outfall as shown in the drawings. Concrete riprap shall be installed in accordance with project specification, details, and notes, including TxDOT Item 432.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. H5 - RIPRAP (STONE PROTECTION) (24 IN) (DETENTION POND)

This item shall consist of installation stone riprap at the locations adjacent to the detention pond and outfall as shown in the drawings. Stone riprap shall be installed in accordance with project specification, details, and notes, including TxDOT Item 432.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. H6 - CONCRETE OUTFALL STUCTURE

This item shall consist of construction of concrete outfall structure at the detention pond as shown in the drawings. The outfall structure shall be constructed in accordance with project specification, details, and notes, including TxDOT Item 420.

Measurement and payment shall be made on the basis of price bid per cubic yard (CY) and shall be total compensation for furnishing all materials, grates, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. L1 - HYDRAULIC MULCHING WITH 4" TOPSOIL

This item includes all work, materials and incidentals necessary to restore parkways, yards or other areas that are disturbed to an equal or better condition than prior to construction, in accordance with the appropriate details and specifications, including NCTCOG Item 204. Disturbed areas along the length of the project shall be fine graded and cut to receive hydraulic mulching. A minimum of 4” of topsoil shall be placed to bring the site to grade.

Unless directed otherwise by the engineer, hydraulic mulching shall match the species (minimum of Bermuda sod) that existed prior to construction and/or the species adjacent to the disturbed

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

area shall be placed in all disturbed areas where improved lawn or established turf existed prior to construction. The contractor will be required to water, fertilize, mow and otherwise maintain restored areas to establish healthy growth, even distribution of vegetation and full coverage over the entire restored area. The contractor shall also maintain and protect these areas from damage and repair any damage that occurs, until completion and final acceptance of the project by the OWNER.

Measurement and payment for parkway and disturbed area restoration work performed and materials furnished complete and in place as provided herein shall be made on the basis of the price bid per square yard (SY) and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work, including watering, fertilizing, mowing and maintenance of the restored areas. Payment shall be made based on the quantity shown in the bid proposal, regardless if the amount installed in order to hydraulic mulching all disturbed areas exceeds the bid quantity. No more than 75% of this item will be paid until 100% turf coverage has been established in all areas disturbed, to the satisfaction of the OWNER.

Bid Item No. L2 - SEDIMENT CONTROL FENCE (INSTALL/MAINTAIN/REMOVE)

This item shall consist of installation, maintenance, and removal of sediment control fence at the locations shown in the drawings. Sediment control fence shall be constructed in accordance with project specification, details, and notes, including NCTCOG Item 202.5.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. L3 - STABILIZED CONSTRUCTION EXIT/ENTRANCE

This item shall consist of installation, maintenance, and removal of stabilized construction exit/entrance at the locations shown in the drawings. Construction exits/entrances shall be constructed in accordance with project specification, details, and notes, including NCTCOG Item 202.11.

Measurement and payment shall be made on the basis of price bid per square yard (SY) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. L4 - INLET PROTECTION (INSTALL/MAINTAIN/REMOVE)

This item shall consist of installation, maintenance, and removal of inlet protection at the locations shown in the drawings. Inlet protection shall be constructed in accordance with project specification, details, and notes, including NCTCOG Item 202.14.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Measurement and payment shall be made on the basis of price bid per each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. L5 – ROCK CHECK DAM

This item shall consist of installation, maintenance, and removal of rock check dam at the locations shown in the drawings. Rock check dam shall be constructed in accordance with project specification, details, and notes, including NCTCOG Item 202.9.

Measurement and payment shall be made on the basis of price bid per linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. L6 - STORM WATER POLLUTION PREVENTION PLAN

This pay item shall consist of furnishing, installing, maintaining and removing erosion controls throughout the duration of the project in accordance with the Texas Commission on Environmental Quality's (TCEQ) permitting procedures and requirements for construction projects that disturb five (5) or more acres. Under the Texas Pollution Discharge Elimination System (TPDES) general construction permit TXR 150000, the operator with control of construction plans and specifications (OWNER) and the operator with day-to-day operational control (CONTRACTOR) are required to obtain a permit for the discharge of storm water runoff. The CONTRACTOR shall be required to prepare and implement a single comprehensive site-specific Storm Water Pollution Prevention Plan (SWP3) for the entire construction site. The CONTRACTOR shall: (1) sign the SWP3, (2) submit an NOI for the Town of Addison & CONTRACTOR if required, and (3) post a site notice as part of the permit. The SWP3 must describe and ensure the implementation of best management practices that will be used to reduce, to the maximum extent possible, the pollutants and storm water discharges associated with the construction activity and ensure compliance with the terms and conditions of the permit. The SWP3 must clearly indicate which operator is responsible for satisfying each shared requirement of the SWP3. The SWP3 shall be subject to approval by the OWNER and must be retained on-site during the term of the construction. Notice must be posted if the SWP3 is retained off-site.

A Texas Registered Professional Engineer must sign and seal the Erosion Control Plan (ECP) submitted as part of the SWP3. The CONTRACTOR shall submit a Notice of Termination for Town of Addison and CONTRACTOR upon completion of the project if required.

This work shall also include the installation and maintenance of, unless specified otherwise:

- Silt fence;
- Rock check dam;
- Stabilized construction entrance;
- Staged inlet protection;
- Any additional erosion control measures required by the SWP3.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Measurement and payment shall be made on the basis of the price bid per lump sum (LS) for preparation and implementation of the SWP3. This includes any necessary revisions to the Erosion Control Plan throughout the term of construction and the installation, sequencing, and maintenance of structural control measures throughout the duration of construction and along its entire stretch. Payment shall be total compensation for furnishing all labor, materials, tools, and equipment necessary to complete the work. Payment shall be evenly prorated throughout the term of construction on a monthly basis, based on amount bid and time bid.

Bid Item No. W1 - 8" PVC WATER LINE

Bid Item No. W2 - 12" PVC WATER LINE

This work includes the furnishing and installation of 8", and 12" diameter PVC meeting the requirements of AWWA C900, at the locations shown in the plans as per NCTCOG items 501.14, 502, 503, 504, and 506 and the Town of Addison Standard Construction Details. Proposed water line shall comply with AWWA C900. Payment shall include furnishing, hauling and laying of pipe shown on the plans, trench excavation, and backfilling, including embedment material as specified, replacement of topsoil, protecting or replacing existing structures or utilities, testing, disposal of surplus materials, and cleaning up and maintenance. Payment shall include any and all extra precautions or construction requirements necessary to adequately protect and support existing utilities. Payment for the pipelines shall include all costs required to have utility companies repair any damage inflicted to their lines by the CONTRACTOR and any cleanup, property damages, fines, etc. resulting from damage inflicted to any utility line by the CONTRACTOR.

Embedment for water lines shall be per Town of Addison standard construction details.

All fittings associated with the proposed water line installation, as indicated in the plans, shall be considered incidental to this pay item.

This work shall also include the construction of temporary pavement repair necessary for traffic control and detours or as determined by the ENGINEER. Temporary pavement repair shall be constructed and maintained in water line installation areas as indicated in the construction plans that will be open to traffic prior to the construction of the final pavement. Temporary pavement repair, as required by these specifications, will not be paid for directly but shall be considered subsidiary to this pay item.

Measurement and payment shall be made on the basis of price bid per linear foot (LF) measured horizontally and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work, including all excavation, embedment and backfill.

Bid Item No. W3 - 8 " GATE VALVE

Bid Item No. W4 - 12 " GATE VALVE

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This work includes the furnishing and installation of 8", and 12" gate valves as shown on the plans or as determined by the ENGINEER, in accordance with NCTCOG Item 502.6 and the Town of Addison Standard Construction Details and Specifications. These pay items shall be inclusive of all items necessary to complete the installation.

Measurement and payment shall be made on the basis of the price per bid each (EA) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work, including curb identification markings, valve boxes, all excavation, embedment and backfill necessary to complete the work.

Bid Item No. W5 - FIRE HYDRANT ASSEMBLY

This pay item shall consist of the installation of new fire hydrant assemblies including connections and testing of the fire hydrants at locations indicated on the plans and in accordance with NCTCOG Item 502.3 and Town of Addison Construction Details and Specifications. The 6" PVC water line lead from water main to gate valve and the 6" gate valve required for fire hydrant installation are considered subsidiary to this item and shall not be paid for separately.

Fire hydrant assemblies shall be inclusive of all work necessary to install and connect the new fire hydrant to the water line. This includes all fittings, megalugs, water pipe from fire hydrant gate valve and water pipe for stack, blocking, etc. necessary to complete the construction.

Measurement and payment for work performed and materials furnished related to installing the fire hydrant and valve assembly, as provided herein, shall be made on the basis of the price bid per each (EA) and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work, including curb identification markings and any barrel extensions required.

Bid Item No. W6 - REMOVE EXISTING 12" AC WATER LINE

This work includes the removal and disposal of the existing 12" Asbestos Concrete Pipe water line at the locations shown in the drawings. The removal of the existing Asbestos Concrete Pipe shall be completed in accordance with NCTCOG Item 604.

Measurement and payment shall be made on the basis of the price per bid linear feet (LF) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. W7 - ABANDON EXISTING ASBESTOS PIPE IN PLACE

The work includes the grouting of existing various diameter water lines for the purpose of abandonment as indicated on the construction plans or as determined by the ENGINEER, in accordance with TxDOT Special Specification 7076, "Grouting of Water Mains" and NCTCOG Item 604. The CONTRACTOR shall verify that all services, meters, stub-outs, and other branch

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

water lines supplied from the existing water lines to be abandoned are transferred to other water lines as shown on the construction plans prior to pavement construction.

The existing water lines shall be abandoned as follows:

After each section of the existing water line is taken out of service, the abandoned section shall be completely drained, including pumping water from the system, as necessary.

Place grout/flowable fill using concrete or grout pumps capable of continuous delivery.

Any and all openings into the existing pipe will be closed by use of approved M.J. cast iron caps or plugs and blocking according to the plans, specifications and/or details governing such work.

Existing valves may be used to close the existing system, the pipe on the abandoned side shall not be left open, but shall be plugged and blocked.

Valve stacks shall be removed and backfilled with soil.

All grout/flowable fill shall conform to TxDOT Item 401, "Flowable Backfill" and TxDOT Special Specification 7076, "Grouting of Water Mains".

Existing Asbestos Concrete Pipe shall be handled in accordance with NCTCOG Item 604 and details governing such work.

Measurement and payment for work performed and materials furnished related to abandoning existing water line, as provided herein, shall be made on the basis of the price bid per linear feet (LF) and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. W8 - WATER TESTING

This work includes the testing of the water line in accordance with plans, specifications, details, and NCTCOG Item 506.

Measurement and payment shall be made on the basis of the price per bid lump sum (LS) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. W9 - TRENCH EXCAVATION PROTECTION (WATER SYSTEM)

This work includes preparing a job specific trench safety plan and installing the proper shoring and/or bracing to adequately provide a safe trench for all water improvements, in compliance with current regulations and requirements of the United States Department of Labor Occupational Safety and Health Administration (OSHA). The CONTRACTOR shall have a Trench Safety Plan prepared, signed, and sealed by a professional engineer and provided to the ENGINEER prior to the start of construction. The preparation of the trench safety plan, as required by these specifications, will not be paid for directly but shall be considered subsidiary to this pay item.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Measurement and payment for work performed and materials furnished related to the preparation of a trench safety plan and the installation of a trench safety systems, as provided herein, shall be made on the basis of the price bid per linear foot (LF) of trench exceeding a depth of 4-ft and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. SS1 - 8" PVC SSWR LINE

This work includes the installation of ASTM D3034 PVC sewer pipe and fittings at the locations and to the grades shown on the plans. Work shall be in accordance with NCTCOG Items 501, 502, 503, 504, 505, 507, 509 and Standard Construction Details. Payment shall include furnishing, hauling and laying of pipe shown on the plans, trench excavation, dry boring under existing utilities if necessary, and backfilling, including embedment material as specified, replacement of top soil, protecting or replacing existing structures or utilities, mandrel pulling, testing, disposal of surplus materials, general clean-up and maintenance. Payment shall include any and all extra precautions or construction requirements necessary to adequately protect and support existing utilities. Payment for the pipelines shall include all costs required to have utility companies repair any damage inflicted to their lines by the CONTRACTOR and any cleanup, property damages, fines, etc. resulting from damage inflicted to any utility line by the CONTRACTOR.

Embedment for sewer lines shall be per NCTCOG standard details, unless otherwise noted.

This item includes submittal of a plan and execution of the approved plan for any necessary bypass pumping.

This work shall also include the construction of temporary pavement repair necessary for traffic control and detours or as determined by the ENGINEER. Temporary pavement repair shall be constructed and maintained in sanitary sewer installation areas as indicated in the construction plans that will be open to traffic prior to the construction of the final pavement. Temporary pavement repair, as required by these specifications, will not be paid for directly but shall be considered subsidiary to this pay item.

Measurement and payment shall be made on the basis of price bid per linear foot (LF), regardless of depth, measured horizontally from center of manhole to center of manhole or cleanout without any deduction for the length of pipe through manholes and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work, including all excavation, embedment and backfill.

Bid Item No. SS2 - 4' STANDARD MANHOLE

This work includes the installation of 4' diameter standard sanitary manholes per NCTCOG item number 502.1 and Town of Addison Construction Details. Payment shall include excavation, castings, reinforcing steel, concrete, backfill, and other materials, and all appurtenances for a complete and functional unit. Both pre-cast and cast-in-place manholes are permitted for this project.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

This item includes submittal of a plan and execution of the approved plan for any necessary bypass pumping.

Measurement and payment shall be made on the basis of price bid per each (EA). There is no separate bid item for extra depth of manhole. The contract price shall be the total compensation for the furnishing of all labor, materials, tools, equipment, and incidentals necessary to complete the work, including curb identification markings, earth excavation, disposal of surplus materials and backfill.

Bid Item No. SS3 - CEMENT STABILIZED SAND ENCASEMENT (MIN. 10% CEMENT/CY)

This work includes the installation of Cement Stabilized Sand Encasement in the areas shown in the drawings. Work shall be completed in accordance with latest TCEQ requirements.

Unless otherwise noted the cement, stabilized sand shall have a minimum content of 10%, based on loose dry weight volume.

Measurement and payment shall be made on the basis of price bid per linear foot (LF), regardless of depth, and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. SS4 - SANITARY SEWER CCTV INSPECTION

This work includes the testing of the TV testing in accordance with plans, specifications, and details.

Cost for additional testing per NCTCOG requirements will not be paid for separately, but should be considered subsidiary to the various items.

Measurement and payment shall be made on the basis of the price per bid lump sum (LS) and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete the work.

Bid Item No. SS5 - TRENCH EXCAVATION PROTECTION (SANITARY SEWER IMPROVEMENTS)

This work includes preparing a job specific trench safety plan and installing the proper shoring and/or bracing to adequately provide a safe trench for all sanitary sewer improvements, in compliance with current regulations and requirements of the United States Department of Labor Occupational Safety and Health Administration (OSHA). The CONTRACTOR shall have a Trench Safety Plan prepared, signed, and sealed by a professional engineer and provided to the ENGINEER prior to the start of construction. The preparation of the trench safety plan, as

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

required by these specifications, will not be paid for directly but shall be considered subsidiary to this pay item.

Measurement and payment for work performed and materials furnished related to the preparation of a trench safety plan and the installation of a trench safety systems, as provided herein, shall be made on the basis of the price bid per linear foot (LF) of trench exceeding a depth of 4-ft and shall be total compensation for furnishing and/or operating all labor, materials, tools, equipment and other incidentals necessary to complete the work.

Bid Item No. 01 – OWNER’S CONTINGENCY

This item will be used at the Owner’s discretion to cover any unexpected costs associated with performing the work.

20. **SUBSIDIARY WORK:** Any and all Work specifically governed by documentary requirements for the Project, such as conditions imposed by the Plans or these Special Provisions, in which no specific item for bid has been provided for in the Proposal, shall be considered as a subsidiary item of Work, the cost of which shall be included in the various bid items in the Proposal. Costs of CCTV, permits, inspection fees, traffic control, construction staking, surface restoration and cleanup are general items of Work which fall in the category of subsidiary Work. Any repairs or replacement of items damaged during demolition or as a result of new construction will be considered subsidiary. Limits of all Work requiring repair will be determined by the Town of Addison staff or the inspector. Extreme care should be taken during all demolition and construction operations.
21. **QUALIFICATION OF BIDS:** The Town of Addison reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work, and the right to disregard all nonconforming, non-responsive, unbalanced, or conditional Bids. The Town reserves the right to reject the Bid of any Bidder if the Town believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the Town. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolve in favor of the correct sum.

To be considered responsive, the apparent two lowest Bidders are required to submit the Statement of Experience per Section BQS “Bidder Qualification Statement” within 5 days.

The apparent low two Bidders will be notified by the Engineer to request the information.

AWARD AND EXECUTION OF CONTRACT: For the purpose of award, each bid submitted shall consist of three parts whereby the correct summation of the products of the estimated quantities shown in the proposal, multiplied by their bid unit prices for the following parts:

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

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Bidders must fill bid proposal for all base bids and all additive alternates. The method of Award will be based on the lowest qualified bidder for all base bids plus any combination of the additive alternates depending on the availability of funds.

The Town reserves the right to accept whichever bid is determined to be in the best interest of the public and to reject all bids.

All payments will be based on actual quantities and bid unit prices.

22. **EXPLANATION OF CONTRACT TIME:** The term “Contract Time” as used in this Provision will mean the **330** calendar days (approx. 11 months) for substantial completion of the Work of the Contract from the date the Contract was executed. The term “calendar day” as used in this Article will mean every day shown on the calendar. Calendar days will be consecutively counted from commencement of Contract Time (issuance of a Notice to Proceed) regardless of weather, weekends, and holidays, suspensions of Contractor’s operations, delays or other events as described herein.

In the event of a catastrophic event (i.e., war, invasion, riot, declared state of emergency, national strike, or other situations as declared by the Town of Addison) directly and substantially affecting the Contractor’s operations on the Contract, the Contractor and the Town shall agree as to the number of calendar days to extend the Contract Time. In the event the Contractor and Town are unable to agree to the number of calendar days to extend the Contract Time, the Town shall unilaterally determine the number of calendar days to extend the Contract Time reasonably necessary and due solely to such catastrophic event and the Contractor shall have no right whatsoever to contest such determination, save and except that the Contractor establishes that the number of calendar days determined by the Town were arbitrary or without any reasonable basis.

Should the Contractor fail to complete the Contract on or before expiration of the Allowable Contract Time, as adjusted in accordance with the special provisions No. 78 of liquidated damage, the Town shall deduct from the moneys due the Contractor the Daily Value for each calendar day completion exceeds the Allowable Contract Time. The term “Allowable Contract Time” as used in this Article shall mean the Original Contract Time plus adjustments pursuant to the statements above. This deduction shall be the disincentive for the Contractor’s failing to timely complete the Contract. **This shall be strictly enforced.**

23. **COPIES OF PLANS FURNISHED:** One (1) copy of 24” x 36” and one (1) electronic copy of the Plans shall be furnished to the successful Contractor, at no charge, for construction purposes.
24. **PRE-CONSTRUCTION CONFERENCE:** The successful Contractor, Engineer, and Town of Addison shall meet for a pre-construction conference before any of the Work begins on this Project. At this time, details of sequencing of the Work, contact individuals

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

for each party, testing requirements, submittals, traffic control, time sensitive completion of the project and pay requests will be covered. Prior to the meeting, the Contractor shall prepare schedules showing the sequencing and progress of their Work and its effect on others. A final composite schedule will be prepared during this conference to allow an orderly sequence of Project construction.

Prior to the start of construction, Contractor shall video the construction area and property adjacent to construction in the presence of the City Inspector. The format shall be DVD. The video shall be narrated. The Contractor shall furnish the Town of Addison a copy of the video in DVD format prior to commencement of Project. This shall be subsidiary to Project.

25. **MOBILIZATION:** Mobilization and Demobilization includes the movement of all labor, equipment and supplies, establishment of facilities necessary for work, and other work and operations which must be performed and cost no directly attributable to other pay items, excluding bidding costs, which must be incurred in order to enable the Contractor to begin work on other contract items. And this item includes all work for removing all equipment and supplies and project site cleanup.

Payment

- Partial Payments of the Lump Sum bid for Mobilization shall be limited as follows:
 - When 1% of the *adjusted contract amount is earned, 50% of the Mobilization Lump Sum or 5% of the total contract amount shall be paid, whichever is less. Previous payments under this item will be deducted from this amount.
 - When 5% of the *adjusted contract amount is earned, 75% of the Mobilization Lump Sum or 10% of the total contract amount shall be paid, whichever is less. Previous payments under this item will be deducted from this amount.
 - When 10% of the *adjusted contract amount is earned, 100% of the Mobilization Lump Sum or 10% of the total contract amount shall be paid, whichever is less. Previous payments under this item will be deducted from this amount.
 - When all work under the contract is completed by the Contractor and accepted by the Town, 100% of the Mobilization Lump Sum will be paid
26. **GENERAL SEQUENCE OF CONSTRUCTION:** Prior to the start of Work, the Contractor shall develop a detailed construction and sequence of construction schedule using the critical path method (CPM) and submit to the Town of Addison and Engineer for approval. The CPM shall reflect all definable features of Work and activities that shall cause minimum interference with traffic along, across and adjacent to the Project during construction. If the schedule or sequence becomes unworkable or unsatisfactory as Work proceeds, adjustments shall be made. During all phases of construction access to all existing businesses must be maintained at all times unless otherwise authorized in writing

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

by the Town of Addison. Erosion control devices must be properly installed and maintained during all stages of construction.

1. The project schedule shall be prepared using Microsoft Project, Primavera P6 or other as approved by the OWNER. Electronic files in the scheduling software native format and PDF copies shall be included with all schedule submittals.
2. The Original Project Schedule submitted prior to construction and approved by the OWNER shall become the basis for measuring progress and evaluating whether the project is on schedule (Baseline schedule for the project). Once approved by the OWNER, the Original Project Schedule shall not be changed.
3. There shall be at a minimum one schedule Activity for each major bid item in the proposal. Many bid items will need to consist of multiple Activities.
4. The length of this project is such that many Activities or Sets of activities will be repeated for various stages of construction and segments of the roadway. Any repeated Activity must clearly identify the location and/or stage of construction.
5. The schedule must be based on clearly defined Activities, phases of construction and any project milestones. Schedule limits must be easily field verified.
6. All Activities must have Predecessor and Successor activities (except start and finish milestones). Independent or open-ended activities shall not be included.
7. The schedule must clearly identify relationship between Predecessor and Successor activities as “start-to-start”, “start-to-finish”, or “finish-to-finish”.
8. Negative lag times shall not be permitted.
9. Activities with a duration of twenty days or greater shall be broken into sub-activities. (For example, if the activity for “Install Water Line A” has a duration of 21 days, it should be divided into sub-activities such as “Install Water Line A, Sta 0+00 to 15+00”, etc.)
10. Monthly schedule updates shall include actual start and completion dates for completed and ongoing Activities. Original Project Schedule dates must be shown for tracking purposes.
11. For activities behind schedule, a Recovery Plan must be submitted detailing how project will be brought back within schedule. This may include such measures as adding work crews, leasing additional equipment, or engaging subcontractors. Fragments or copies of the revised schedule reflecting proposed changes shall be used to document proposed plan revisions and their schedule impacts. Any additional costs resulting from Recovery Plan measures shall be at the contractor’s sole expense.
12. Activity durations reflected in the original schedule cannot be reduced without a Recovery Plan description reflecting what additional resources or actions will be implemented justifying the schedule change.

The Contractor must comply with all work area restrictions as indicated in the Plans unless specifically authorized in writing by the Town of Addison.

27. **PROJECT REPRESENTATIVE:** The Town of Addison, the Engineer, the Contractor(s), and any applicable public utilities shall designate a single individual within

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

their organization to act as liaison for the Project. This individual shall be aware of the day to day activities on the Project, have authority to make decisions binding on the party, and serve as single point for coordination of activities with the other team members. The Contractor's representative must be available to meet and discuss construction related issues on site or at the Town's offices within 20 minutes of a request during working hours and throughout the entire construction period. Upon repeated failure of attendance at requested meetings, Contractor will be required to have a Project representative on-site at all times.

28. **COORDINATION WITH OTHERS:** In the event that other Contractors are doing Work in the same area simultaneously with this Project, the Contractor shall coordinate his proposed construction with that of the other Contractors. The Town of Addison and/or the Engineer shall mediate any disputes, and the Contractors shall comply with their decisions.
29. **INSURANCE:** Each insurance policy that the Contractor must furnish in accordance with these contract documents shall name the Town of Addison and the Engineer as additional insured. Contractor shall include in their bid package, a copy of their certificate of insurance showing compliance to the limits established by the Town of Addison.

1.0 The Contractor shall agree to furnish and maintain continuously during the period of this agreement, any renewals or extension, insurance coverage meeting all of the following requirements:

1.1 Commercial General Liability Insurance at minimum combined single limits of \$1,000,000 per occurrence and \$2,000,000 general aggregate for Bodily Injury and Property Damage, which coverage shall include Products/Completed Operations, and XCU Hazards. Coverage for product/completed operations must be maintained for at least two (2) years after the construction Work has been completed. Coverage must be amended to provide for an each-project aggregate limit of insurance. Contractual Liability must be included.

1.2 Workers Compensation Insurance at statutory limits, including employer's liability coverage at minimum limits of \$1,000,000 each occurrence-each accident, \$1,000,000 by disease-each occurrence and \$1,000,000 by disease aggregate

1.3 Commercial Automobile Liability Insurance at minimum combined single limits of \$1,000,000 per occurrence for bodily injury and property damage, including owned, non-owned, and hired car coverage.

1.4 Umbrella Liability at minimum limits of \$1,000,000 each-occurrence \$4,000,000 aggregate with respect to primary commercial general liability, automobile liability and employer's liability policies.

1.5 Any Subcontractor(s) hired by the Contractor shall maintain insurance coverage equal to that required by the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The Town accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

1.6 A comprehensive general liability insurance form may be used in lieu of a commercial general liability form. In this event, coverage must be written on an occurrence basis, at limits of \$1,000,000 each-occurrence, combined single limit and coverage must include a broad form comprehensive general liability endorsement, products/completed operations, XCU hazards and contractual liability.

2.0 With reference to the foregoing insurance requirements, Contractor shall specifically endorse applicable insurance policies as follows:

2.1 The Town shall be named as an additional insured with respect to general liability and automobile liability.

2.2 All liability policies shall contain no cross liability exclusions or insured versus insured restrictions.

2.3 A waiver of subrogation in favor of the Town of Addison shall be contained in the workers compensation and all liability policies.

2.4 All insurance policies shall be endorsed to require the insured to immediately notify the Town of Addison of any material changes in the insurance coverage.

2.5 All insurance policies shall be endorsed to the effect that the Town will receive at least thirty (30) days notice prior to cancellation or non-renewal of the insurance.

2.6 All certificates shall be mailed to Town of Addison, Purchasing Dept., P.O. Box 9010, Addison, Texas 75001 or emailed to purchasing@addisontx.gov.

2.7 All insurance policies, which name the Town as an additional insured, must be endorsed to read as primary coverage regardless of the application of other insurance.

2.8 Required limits may be satisfied by any combination of primary and umbrella liability insurances.

2.9 Contractor may maintain reasonable and customary deductibles, subject to approval by the Town.

3.0 All insurance shall be purchased from an insurance company who meets the following requirements:

3.1 Must be issued by a carrier, which is rated "A-" VII or better by A.M. Best's Key Rating Guide.

3.2 Licensed and admitted to do business in the State of Texas and is a subscriber to the Texas Guaranty Fund.

4.0 All insurance must be written on forms filed with and approved by the Texas State Board of Insurance. Certificates of insurance shall be prepared and executed by the insurance

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

company or its authorized agent and shall contain provisions representing and warranting the following:

4.1 Set forth all endorsements and insurance coverages according to requirements and instruction contained herein.

4.2 Shall specifically set forth the notice-of-cancellation or termination provisions to the Town.

5.0 Upon request, Contractor shall furnish the Town of Addison with certified copies of all insurance policies.

WORKERS' COMPENSATION INSURANCE COVERAGE:

A. Definitions.

Certificate of Coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self insure issued by the Texas Workers' Compensation Commission (the "TWCC"), or a coverage agreement (TWCC-81, TWCC-82, TWCC-83 or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a Project, for the duration of the Project.

Duration of the Project - includes the time from the beginning of the Work on the Project until the Contractor's/person's Work on the Project has been completed and accepted by the governmental entity.

Persons Providing Services on the Project ("Subcontractor" in Section 406.096 of the Texas Labor Code) - 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, Town-operators, employees of any such entity or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a Project. "Services" does not include activities unrelated to the Project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

B. The Contractor shall provide coverage, based on property reporting of classification codes and payroll amounts and filing of any coverage agreement, which meets the statutory requirements of Texas Labor Code, 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 Town of Addison 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

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

period, file a new certificate of coverage with the Town of Addison, showing that the coverage has been extended.

E. The Contractor shall obtain from each person providing services on the Project, and provide to the Town of Addison:

(1) a certificate of coverage, prior to that person beginning Work on the Project, so that the Town of Addison 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 on file for the duration of the Project and for one year thereafter.

G. The Contractor shall notify the Town of Addison in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.

H. The Contractor shall post on each Project site a notice, in the text, form and manner prescribed by the TWCC, 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.

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 Codes 401.011 (44) for all 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 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,

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

b. a new certificate of coverage showing extension of the coverage period, 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 Town of Addison in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and

(7) contractually require each other person with whom it contracts to perform as required by paragraphs (1) - (7) with the certificate 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 Town of Addison that all employees of the Contractor who will provide services on the Project will be covered by worker's 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 TWCC'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 Town of Addison to declare the contract void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the Town.

The following is the form of notice of workers' compensation coverage prescribed by the TWCC. Pursuant to Section 110.110 (d) (7), this notice must be printed with a title in at least 30-point bold type, and text in at least 19-point nominal type, and shall be in both English and Spanish and any other language common to the worker population.

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 (TWCC) at (512) 440-3789 to receive further information on the legal requirements for coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

30. **RESOLUTION OF DISPUTES:** The parties hereby covenant and agree that in the event of any controversy, dispute, or claim, of whatever nature arising out of, in connection with or in relation to the interpretation, performance or breach of this Contract, including but not limited to any claims based on contract, tort or statute, before filing a lawsuit, the parties agree to submit the matter to Alternative Dispute Resolution pursuant to the laws of the State of Texas. The parties shall select a third party arbitrator or mediator from the current list of neutrals on file with the Alternative Dispute Resolution Administrator of the Dallas County District Courts or other mutually agreeable mediator or arbitrator. All forms of Alternative Dispute Resolution may be used except binding arbitration. The proceedings shall be conducted in accordance with the laws of the State of Texas.

31. **SHOP DRAWINGS:** The Contractor shall provide, review, approve and submit all shop drawings, product data and samples required by the Town of Addison, the Engineer and the Contract Documents in accordance with Item 1.28 of the Standard Specifications for Public Works Construction, North Central Texas Council of Governments. The Contractor shall electronically submit shop drawing for review to Kimley-Horn, who will review, comment and forward to the Town of Addison for acceptance.

Shop drawings shall include all items to be installed in the Project, including but not limited to:

- | | | |
|--|---|--|
| <input type="checkbox"/> Concrete Mix Designs | <input type="checkbox"/> Traffic Control Plan | <input type="checkbox"/> Water Main Pipe/Fitting |
| <input type="checkbox"/> Storm Sewer Pipe | <input type="checkbox"/> Bridge Superstructure | <input type="checkbox"/> Valves & Boxes |
| <input type="checkbox"/> Rock Riprap | <input type="checkbox"/> Manholes & Vaults | <input type="checkbox"/> Backfill Materials |
| <input type="checkbox"/> Sanitary Sewer Pipe/Fitting | <input type="checkbox"/> Metal Beam Guard Fence | <input type="checkbox"/> Handrail Shop Drawings |

32. **PROJECT VIDEO:** Prior to the start of construction, Contractor shall video the construction area and property adjacent to construction in the presence of the City Inspector. The format shall be DVD. The video shall be narrated. The Contractor shall furnish the Town of Addison a copy of the video in DVD format prior to commencement of Project. This effort shall be considered as subsidiary to the various bids items for this Project (See Section 19).

33. **SAMPLES AND TESTS OF MATERIALS:** The Town of Addison shall designate and pay an independent testing laboratory to furnish testing for this Project. Random testing will be provided by the independent lab as necessary for compliance with the Specifications. The Contractor shall coordinate construction with the testing lab and the Town of Addison, and shall provide assistance to the testing labs by providing excavation, access, trench safety, materials for testing and any other Work required to insure all testing requirements are met. Work performed to accommodate testing will be a subsidiary item and no extra payment will be authorized. All costs for the field quality control testing shall be paid for by the Town of Addison, except for any and all re-testing, which shall be paid by the Contractor and such cost shall be deducted from monthly pay requests. As a guide, the Contractor shall be responsible for providing any test required by the Specifications.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

All samples and tests shall be performed in accordance with the Standard Specifications for Public Works Construction, North Central Texas Council of Governments (5th Addition) as amended or supplemented.

34. **INSPECTION:** The Town of Addison and the Engineer reserve the right to inspect, test, measure or verify the construction Work for this Project as they deem necessary to ascertain that the Work is being accomplished in accordance with the standards and requirements set forth in the Contract Documents. Notwithstanding such reviews, the Contractor will be held responsible for the finished Work and any acceptance of the Work by the Town or governmental agencies will not relieve the Contractor from responsibility for the Work. The Town reserves the right to place full-time construction inspectors at the site of the Work. Costs for inspection services will be paid by the Town of Addison. The Contractor shall provide assistance to the Town of Addison and the Engineer by providing excavation, trench safety, or other Work necessary to facilitate inspection activities, and shall give sufficient notice well in advance of pending construction activities for scheduling of inspection services.

If the Specifications, the Town's instructions, laws, ordinances, or any public authority require any Work to be specially tested, the Contractor shall give the Town timely notice of its readiness for testing, and if the testing is by an authority other than the Town, of the date fixed for such testing. Tests by the Town shall be made promptly, and where practicable at the source of supply.

35. **ACCESS ROUTES, STAGING AREAS AND STORAGE AREAS:** All haul roads and access routes and the location of job site trailers, staging areas, and storage areas shall be subject to the approval of the Town and the Engineer. The Contractor shall be responsible for obtaining a staging area for storage of equipment and materials and for employee parking. The Contractor is responsible for maintaining and repairing all roads and other facilities used during construction. Upon completion of the Project all existing roads and other disturbed areas shall be left in a condition equal to that at the time the Contractor commences Work on this Project.
36. **PROPERTY ACCESS:** Access to adjacent commercial property shall be maintained at all times unless otherwise directed by the Engineer and/or Town of Addison. Contractor shall also maintain sufficient access throughout the Project limits to the existing buildings and businesses during construction operations.
37. **PLANT, PROCEDURES, METHODS AND EQUIPMENT:** The Contractor shall determine the methods to be employed, the procedures to be followed, and equipment to be used on the Work under this contract, subject to the requirements of these Specifications and approval of the Engineer and Town of Addison. Only adequate and safe procedures, methods and equipment shall be used.

The Contractor shall so arrange his Work and provide such plant and equipment as is necessary in order to meet the progress requirements of the approved time schedule and to complete the Work within the period of time as specified in the Contract. Only such

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

materials and equipment as are necessary for the construction of the Work under this contract shall be placed, stored or allowed to occupy any space at the site of the Work.

It is expressly agreed that the acceptance or approval of any order of procedure, methods or equipment submitted or employed by the Contractor shall not in any manner relieve the Contractor of responsibility for the safety, maintenance and repairs of any Work, or for the construction maintenance and safety of the Work hereunder, or from any liability whatsoever on account of any procedure or method employed by the Contractor.

Where the Work under this contract requires permits from the Town of Addison, the State of Texas, or other public authorities, duplicate copies of such permits shall be furnished to the Engineer by the Contractor before the Work covered thereby is started. **NO WORK WILL BE ALLOWED TO PROCEED BEFORE REQUIRED PERMITS ARE OBTAINED AND DISTRIBUTED.**

38. **PARKING OF CONSTRUCTION EQUIPMENT:** During all other periods of time when the Contractor's or their sub-contractors equipment is not being actively used on the construction Work, the Contractor shall park the equipment at locations which are approved by the Town of Addison. The Contractor shall provide adequate barricades, markers and lights to protect the Town of Addison, the Engineer, the public and other Work. All barricades, lights, and markers must meet the requirements of the Town of Addison, State and Federal regulations.
39. **ZONING REQUIREMENTS:** During the construction of this Project, the Contractor shall comply with the present zoning requirements of the Town of Addison in the use of vacant property for storage purposes.
40. **IN PUBLIC ROADS AND PRIVATE DRIVES:** No public road shall be entirely closed overnight, unless approved by the Town of Addison. It shall be the responsibility of the Contractor to build and maintain all weather bypasses and detours, if necessary, and to properly light, barricade and mark all bypasses and detours that might be required on and across the roads involved in the Work included in this Contract.

The Contractor shall make every effort to complete construction and allow immediate access to adjacent property at driveway entrances located along the roadways. Towns or tenants of improvements where access and/or entrance drives are located shall be notified at least twenty-four (24) hours prior to the time the construction will be started at their driveways or entrances and informed as to the length of time driveways will be closed. Contractor shall at all times maintain at least one point of access into all properties, unless obtaining written permission from property owner to do otherwise with such written permission being provided to the Town's inspector.

The Contractor shall be responsible for all road and entrance reconstruction and repairs and maintenance of same for a period of two years from the date of Town of Addison's acceptance of the Work. In the event the repairs and maintenance are not made immediately to the satisfaction of the Town, and it becomes necessary for the Town to make such repairs, the Contractor shall reimburse the Town for the cost of such repairs.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

The Contractor shall, at all times, keep a sufficient width of the roadway clear of dirt and other material to allow the free flow of traffic. The Contractor shall assume any and all responsibility for damage, personal or otherwise, that may be caused by the construction along roads and private drives.

41. **HAULING ON TOWN OF ADDISON STREETS:** The Contractor shall receive approval of its haul routes and type of equipment to be used prior to beginning construction. The Contractor shall be responsible for maintaining the cleanliness of existing paved roadways and shall provide equipment and manpower for that purpose.
42. **EXISTING POWER POLES & GUY WIRES:** The Contractor shall have the responsibility of coordinating with the proper authorities for the bracing, replacing or relocating of all utility poles and guy wires which interfere with the Work on this Project prior to beginning its construction operations. The Contractor will also be responsible for all damage to poles, guy wires, etc. that are damaged or destroyed by Contractor's operations.
43. **SAFETY RESTRICTIONS - WORK NEAR HIGH VOLTAGE LINES:** The contractor is responsible for the site safety of the project. Contractor shall follow governing regulatory requirements when working near high voltage lines, including but not limited to, OSHA 1926 and Town of Addison requirements.
44. **PROTECTION OF EXISTING UTILITIES AND STRUCTURES:** The location and dimensions shown on the Plans relative to existing utilities and subsurface structures are based on the best records and/or field information available and are not guaranteed by the Town of Addison or the Engineer to be accurate as to location and depth. It shall be the Contractor's responsibility to verify locations of adjacent and conflicting utilities sufficiently in advance of its activities in order that he may negotiate such restrictive locations with the Town of Addison of the conflicting utility and/or make local adjustments to provide adequate clearances. The Contractor shall take all necessary precautions in order to protect all utilities and services encountered, whether or not they are indicated on the Plans. All damage to utilities resulting from Contractor's operations shall be restored at its expense. The Town of Addison and the Engineer assume no responsibility for failure to show any or all of these utilities or structures on the Plans, or to show them in their exact locations. 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 whatsoever, unless the obstruction encountered is such as to necessitate changes in the lines or grades, or requires the building of special Work, provisions for which are not made in the Plans, in which case, provisions in these Specifications for Extra Work shall apply.
45. **PUBLIC UTILITIES AND OTHER PROPERTY TO BE CHANGED:** In case it is necessary to change or move the property of a public utility, such property shall not be moved or interfered with until authorized by the Town of Addison or the Engineer. The right is reserved for the Owner of public utilities to enter upon the limits of the Project for the purpose of making such changes or repairs of their property that may be made necessary by performance of the Contract. The Contractor shall be responsible for coordination with

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

the Town of Addison and the Engineer, and all utility companies whose utility lines or streets may be affected by the proposed improvements. The Contractor shall observe the following:

- a. Prior to any excavation, the Contractor shall determine the locations of all existing water, gas, sewer, electric, telephone, telegraph, television, pipelines and other underground utilities and structures.
 - b. After commencing Work, the Contractor shall use every precaution to avoid interference with existing underground and surface utilities and structures, and protect them from damage.
 - c. Where the locations of existing underground and surface utilities and structures are indicated, these locations are generally approximate, and all items which may be encountered during the Work are not necessarily indicated. The Contractor shall determine the exact locations of all items indicated, and the existence and locations of all items not indicated.
 - d. The Contractor shall repair or pay for all damage caused by its operations to all existing utility lines, public property, and private property, whether it is below ground or above ground, and he shall defend and settle in total the cost of all lawsuits which may arise as a result of its operations.
 - e. To avoid unnecessary interferences or delays, the Contractor shall coordinate all utility removals, replacements and construction with the appropriate utility company, and then request written authorization from the Town of Addison or the Engineer. The Town of Addison and the Engineer will not be liable for damages due to delay as a result of the above.
46. **MAINTENANCE AND REPAIRS:** The Contractor shall maintain and keep in good repair all Work contemplated under these Plans, Specifications, and Plans which shall include the maintenance and repair of all existing streets, storm sewer crossings, utility crossings, temporary crossings for access to adjacent property, barricades, lights, and danger signals, and all Work which is necessary for the well-being of the general public. In the event the Contractor fails in its obligations to properly maintain the Work, the Town of Addison shall make such repairs as are necessary and the cost of such repairs shall be deducted from payment due the Contractor.
47. **PROTECTION OF WORK:** During performance and up to date of final acceptance, the Contractor shall be under the absolute obligation to protect the finished Work against damage, loss or injury. In the event of damage, loss or injury, the Contractor shall promptly replace or repair such Work, whichever the Town of Addison shall determine to be preferable. The obligation to deliver finished Work in strict accordance with the contract prior to final acceptance shall be absolute and shall not be affected by the Town of Addison's approval of or failure to prohibit means and methods of construction used by the Contractor. All risk of loss or damage to the Work shall be borne solely by the

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Contractor until final acceptance of all Work by the Town of Addison, as evidenced by the Town of Addison's issuance of a certificate of acceptance.

48. **PUBLIC CONVENIENCE AND SAFETY:** In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the Project site, including safety of all persons and property during performance of the Work. This requirement shall apply continuously and not be limited to normal Work hours.

Materials stored about the Work site shall be so placed, and the Work shall at all times be so conducted, as to cause no greater obstruction to the traveling public than is considered necessary by the Town of Addison. The materials excavated shall be placed so as not to endanger the Work or prevent free access to all fire hydrants, water valves, gas valves, manholes (telephone, telegraph or electrical conduits, and sanitary sewers) and fire alarm or police call boxes in the vicinity.

The Town of Addison reserves the right to remedy any neglect on the part of the Contractor as regards to the public convenience and safety which may come to the Town of Addison's attention, after 24 hours notice in writing to the Contractor, save in cases of emergency, when the Town of Addison shall have the right to remedy any neglect without notice; and, in either case, the cost of such Work done by the Town of Addison shall be deducted from the monies due or to become due the Contractor. The Contractor shall notify the Town of Addison and the Engineer when any street is to be closed or obstructed. The Contractor shall provide for emergency vehicle access at all times.

Where the Work passes over or through private property, the Town of Addison shall provide such right-of-way. The Contractor shall notify the proper representatives of any public utility, corporation, company or individual, not less than 48 hours in advance of Work which might damage or interfere with the operation of their property along or adjacent to the Work. The Contractor shall be responsible for all damage or injury to property of any character (except such as may be required by the provisions of the Contract Documents, or caused by agents or employees or the Town of Addison) by reason of any negligent act or omission on the part of the Contractor, its employees, agents or Subcontractors, or at any time due to defective Work or materials, or due to its failure to reasonably or properly prosecute the Work, and said responsibility shall not be released by the fact that the Work shall have been completed and accepted.

When and where any such damage or injury is done to public or private property on the part of the Contractor, he shall restore or have restored at its own cost and expense such property to a condition similar or equal to that existing before such damage was done, by repairing, rebuilding or otherwise restoring as he may be directed, or he shall make good such damage or injury in a manner acceptable to the property Town of Addison and the Engineer. In case of failure on the part of the Contractor to restore such property or make good such damage or injury, the Town of Addison may, upon 48 hour written notice under ordinary circumstances, and without notice when a nuisance or hazardous condition results, proceed to repair, rebuild or otherwise restore such property as may be determined

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

necessary, and the cost thereof shall be deducted from any monies due or to become due to the Contractor under this contract; or where sufficient contract funds are unavailable for this purpose, the Contractor or its surety shall reimburse the Town of Addison for all such costs.

49. **PROTECTION OF PERSONS AND PROPERTY:** The Contractor shall have the responsibility to provide and maintain all warning devices and take all precautionary measures required by law or otherwise necessary to protect the Work and persons and property while said persons or property are approaching, leaving or within the Work site or any area adjacent to said Work site. No separate compensation shall be paid to the Contractor for the installation or maintenance of any protective measures, warning devices, barricades, lights, signs, or any other precautionary measures required by law or otherwise necessary for the protection of persons or property.

The Contractor shall assume all responsibilities to the general public in connection with the general public's immediate approach to and travel through the Work site and the area adjacent to said Work site.

Where the Work is in or adjacent to any street, alley, sidewalk, public right-of-way or public place, the Contractor shall at its own cost and expense provide such flagmen and watchmen and furnish, erect and maintain such warning devices, barricades, lights, signs, and other precautionary measures for the protection of persons or property as may be prudent or necessary, or as required by law. The Contractor's responsibility for providing and maintaining flagmen, watchmen, warning devices, barricades, signs and lights and other precautionary measures shall not cease until the Project shall have been completed and accepted by the Town of Addison, and shall cease when the Town of Addison notifies the Contractor in writing of final Project acceptance.

If the Town of Addison discovers that the Contractor has failed to comply with applicable federal or state laws (by failing to furnish the necessary flagmen, warning devices, barricades, lights, signs or other precautionary measures for the protection of persons or property), the Town of Addison may order the Contractor to take such additional precautionary measures as required by law to protect persons and property. In addition, the Contractor shall be held responsible for all damages to the Work and other public or private property due to the failure of warning devices, barricades, signs, lights or other precautionary measures in protecting said property; and whenever evidence is found of such damage, the Town of Addison may order the damaged portion immediately removed and replaced by and at the cost and expense of the Contractor.

50. **TRAFFIC CONTROL:** It shall be the responsibility of the Contractor to provide traffic control during the construction as required by the State of Texas, the Town of Addison, and in accordance with the following additional requirements:
- a. The Contractor shall be required to furnish barricades, flares, flagmen, etc., for the protection of the public, employees and the Work.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

- b. The Contractor shall prosecute its Work in such a manner as to create a minimum of interruption to traffic along adjacent roadways.
- c. The unit price bid under the appropriate bid item of the proposal shall cover all cost for providing signage, markings, lighting, barricades, flagmen and other devices and personnel required for traffic control during construction of the Project.
- d. The Contractor shall not remove any regulatory sign, instructional sign, warning sign, street name sign or any other sign or signal which currently exists.
- e. **The Contractor shall provide a comprehensive Traffic Control Plan to the Town of Addison for review, comment, and approval.** In the event the planned sequence of work is different in any way from that sequence of work provided for in the plans or where additional details are required to be reviewed and approved by Addison prior to any further work is performed. The Traffic Control Plan shall be designed in accordance with established standards and regulations and signed and sealed by a professional engineer, registered in the State of Texas. The plan should reflect the Contractor's proposed construction phasing and methodology and include the design layout for all proposed detour and traffic situations. This effort is paid by lump sum in bid item A-31.

51. BARRICADES, WARNING SIGNS, DETOURS AND SEQUENCE OF CONSTRUCTION: Throughout the construction operations, streets and intersections will remain open to traffic by constructing the Work in stages. All streets, driveways, adjacent business and alleys shall remain open to traffic as far as is practicable.

A. General Construction: The Contractor shall plan its Work sequence in a manner that will cause minimum interference with aircraft operations during construction operations. Before beginning Work on this Project, the Contractor shall submit, for approval by the Town of Addison, a plan of construction operations outlining in detail a sequence of Work to be followed; setting out the method of handling traffic on streets, roads and driveways along, across and adjacent to the Work. If at any time during the construction, the Contractor's proposed plan of operation for handling traffic does not provide for safe comfortable movement, the Contractor shall immediately change its operations to correct the unsatisfactory conditions.

Ditches across the traffic lanes will be kept covered with a portable traffic-bearing surface at all times unless Work in the ditch is in progress. Only one lane of traffic may be closed at a time when Work is in progress in a ditch.

B. Safety: The Contractor shall provide, construct and maintain barricades and signs at locations set out in the Plans and in the Special Provisions in accordance with the Texas Manual on "Uniform Traffic Control Devices for Streets and Highways". In addition, he shall provide and maintain such other barricades and signs as deemed necessary by the Town or the Engineer, and provide and maintain, between sunset and sunrise, a sufficient number of lights at barricades and points of danger for the protection of vehicular and pedestrian traffic.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Barricades shall be placed in such a manner as not to interfere with the sight distance of drivers entering the street from side streets.

The Contractor shall keep traveled surfaces used in its hauling operation clear and free of dirt or other material.

The Contractor shall provide and maintain qualified flagmen at such points and for such periods of time as may be required to provide for the safety and convenience of public travel and Contractor's personnel.

52. EXCAVATION SAFETY SYSTEMS:

The Work performed under this section of the Specifications consists of providing trench safety systems consisting of shoring, sheeting, trench shield, and/or laid back slopes to meet the trench safety requirements of the Occupational Safety and Health Administration (O.S.H.A.), as required for this Project and specified herein.

A. General: Trench safety systems shall be provided by the Contractor as provided in Subpart P - Excavation, Trenching and Shoring, Part 1926 of the Code of Federal Regulations which describes safety and health regulations as administered by the U.S. Department of Labor Occupational Safety and Health Administration (O.S.H.A.). The standards specified by the O.S.H.A. Regulations shall be the minimum allowed on this Project. It shall be the responsibility of the Contractor to design and install adequate trench safety systems for all trenches excavated on this Project.

The Contractor shall furnish to the Town for review, prior to beginning construction activity, a Trench Safety Plan for the entire Project. The trench safety plan must be prepared and sealed by a Professional Engineer registered in the State of Texas. In addition, all trench safety systems utilized in this Project must be designed by a Professional Engineer registered in the State of Texas. The Contractor shall be totally responsible for the safety of all persons involved in the construction of this Project.

B. Core Borings: Any core borings and soil data furnished by the Town are for the convenience of the Contractor. The Contractor shall be responsible for any additional soil or geotechnical information required. The Contractor shall be responsible for properly designed trench safety systems to be utilized for any type of subsurface condition found on this Project. The furnishing of soil information by the Town of Addison in no way relieves the Contractor of this obligation. If no core borings or soil data are furnished by the Town, it shall be the Contractor's responsibility to obtain whatever geotechnical information required for preparation of trench safety systems.

C. Inspections: In addition to the inspections of the trench and trench safety systems required of the Contractor by the O.S.H.A. Regulations, the Town may further inspect the Work. The Town shall have the right to reject any trench safety systems which he finds to be inadequate, and the Contractor shall immediately improve the system to comply with this specification.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

D. Measurement and Payment: Measurement and payment of Trench Safety Systems shall be based on the actual linear footage of the pipe installed on the Project. The payment shall be full compensation for all planning, engineering, materials, equipment, fabrications, installation, recovery and all incidental Work required.

53. **TRENCH EXCAVATION, BACKFILL AND COMPACTION**: Trench excavation, backfill and compaction of water and sewer utility trenches shall be in accordance with Town of Addison Standards and with details shown on the Construction Plans.

A. Trench Excavation: If the stated maximum trench widths are exceeded, either through accident or otherwise, and if the Engineer determines that the design loadings of the pipe will be exceeded, the Contractor will be required to support the pipe with an improved trench bottom. The expense of such remedial measures shall be entirely the Contractor's own. All trenching operations shall be confined to the width of permanent rights-of-way, permanent easements and any temporary construction easements. All excavation shall be in strict compliance with the Trench Safety Systems Special Condition of this document.

B. Trench Backfill: Trenches shall be backfilled above the top of the embedment material with approved backfill material per Town of Addison Standards for the appropriate pipe size, pipe material, depth, and soil condition.

C. Compaction: All trenches under proposed or existing pavement shall be compacted to within a range of 95% to 100% Standard Proctor Density. Trenches which lie outside limits of pavement shall be compacted to a minimum of 90% Standard Proctor Density (ASTM D-698).

54. **TRENCH WALLS**: The Contractor shall use shoring or a drag box in those areas where it is required to protect existing improvements. This shall be subsidiary to the linear foot cost of the pipe and not a separate pay item.

55. **SUSPENSION OF WORK RELATED TO DANGER**: In addition to the other remedies for suspension of the Work as provided for in the General Provisions and Special Provisions, the Town of Addison has the authority to suspend all work immediately if, in the Town of Addison's opinion, there is imminent danger to workers or the general public. If there is no imminent danger to workmen or the general public, but trench conditions are not in compliance with Federal Regulations 29 C.F.R. 1926.650-1926.652, the Town of Addison shall warn the Contractor who shall then immediately order all workmen in and adjacent to the trench away from the area. The Contractor must then bring the trench into compliance with the regulations. If the Contractor does not make the required corrections, all work on the Contract shall cease and the Town of Addison will issue a letter of Temporary Suspension of Work. The only work authorized after issuance of this letter is work approved by the regulations. Other work shall not be permitted until the Town of Addison issues a letter of Release of Temporary Suspension of Work. The Contractor shall not be entitled to additional compensation, an extension of time or payment of damages as a result of a temporary suspension of work under this provision.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

56. **PROPERTY LINES AND MONUMENTS:** 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 expense of the Contractor.
57. **CONSTRUCTION STAKING:** Construction staking will not be provided by the Town of Addison or Engineer. This item will be performed by the Contractor and shall be subsidiary to other bid items. The Contractor will also be responsible for maintaining stakes. If re-staking is required for any reason, it will be the Contractor's responsibility, including associated costs.

All construction staking shall be done under the supervision of a Registered Professional Land Surveyor registered in the State of Texas. The Contractor shall submit copies of cut sheets and field books for the construction of all paving, water, wastewater, and stormwater improvements to the Town of Addison for review prior to construction of the improvements. The information on the cut sheets and field books shall include but not be limited to the following:

- a. Heading to include date, contract number, Project name, surveying firm, Contractor, and construction plan sheet number.
 - b. Location, description of street/line and street/line name, number, letter, etc. designation.
 - c. Benchmark Data: Location, description, and elevation.
 - d. Slope or percent of grade of each curb line or utility line.
 - e. Stations at 50 foot intervals and including all PC, PT, PI, PVC, PVI, PVT, PRC, grade changes, etc.
 - f. Offset description including distance to center line or back of curb and direction of offset; left, right, east, west, etc,
 - g. Cut to subgrade, pavement, top of curb, or flowline of the street or utility being staked.
 - h. Clarifying remarks such as top of curb, gutter, pavement, subgrade, manhole, cleanout, valve, tee, cross, fire hydrant, wastewater lateral, water service, etc.
 - i. Cut sheets shall be signed by a Texas Registered Professional Land Surveyor.
58. **DURING CONSTRUCTION:** During construction of the Work, the Contractor shall, at all times, keep the site of the Work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove same from any portion of the site if, in the opinion of the Town of Addison or the Engineer, such material, debris or rubbish constitutes a nuisance or is objectionable. In case of failure on the part of the Contractor to maintain a clean site, the Town of Addison may, upon 24 hour written notice, clean the site, and the cost thereof shall be deducted from any monies due or to become due to the

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Contractor under its contract; or where sufficient contract funds are unavailable for this purpose, the Contractor or its surety shall reimburse the Town of Addison for all such costs.

59. **CONSTRUCTION TRAFFIC OVER PIPE LINES:** The design of the new pipes and the design of the existing pipe have been taken into account and provided for highway live loads. It is apparent, however, that certain construction vehicles could exceed this highway load condition under shallow bury conditions. It will be the responsibility of the Contractor to protect both the new line and the existing lines from these possibly excessive loads. The Contractor shall not at any time cross the existing or new pipe with a truck delivering new pipe to the site. Any damage to the existing or new pipe will be repaired or replaced by the Contractor to the satisfaction of the Town of Addison.

In locations where it is not permissible to cross the existing or proposed pipes without additional protection, the Contractor may elect to provide additional protection of the pipes, such as steel plates, so that more frequent crossings of the pipes are allowed. It still is, however, the responsibility of the Contractor to repair any damage to the existing or proposed lines if the damage results from any phase of its construction operation.

60. **CONTRACTOR'S CONTINUING OBLIGATION:** Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the Town of Addison, nor the issuance of a certificate of Substantial Completion, nor any payment by Town of Addison to Contractor under the Contract Documents, nor any use or occupancy of the Work or any part thereof by Town of Addison, nor any act of acceptance by Town of Addison nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by the Town of Addison pursuant to final payment nor any correction of defective Work by Town of Addison will constitute an acceptance of Work not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents.
61. **IRRIGATION AND SPRINKLER REPAIR:** The Contractor shall maintain all existing irrigation systems within the limits of the Project during the duration of the contract, if necessary. The Contractor shall employ a licensed irrigator who is responsible for the repair or replacement of any damage to irrigation lines, valves, controllers, sprinklers, wiring and appurtenances which are damaged during construction. **This repair is subsidiary to the various other items bid. The Contractor will be responsible for any vegetation that dies as a result of damage to the irrigation system and replace it with equal vegetation at its own cost.**
62. **REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK:** All Work which has been rejected or condemned shall be repaired; or if it cannot be repaired satisfactorily, it shall be removed and replaced at the Contractor's expense. Defective materials shall be immediately removed from the Work site. Work done without line and grade having been provided; Work done beyond the line or not in conformity with the grades shown on the Plans or as provided, Work done without proper inspection; or any Extra or unclassified Work done without written authority and prior agreement in writing as to prices, shall be at the Contractor's risk and will be considered unauthorized, and at the option of the Town

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

of Addison may not be measured and paid for and may be ordered removed at the Contractor's expense. Upon failure of the Contractor to repair satisfactorily or to remove and replace, if so directed, rejected, unauthorized or condemned Work or materials immediately after receiving notice from the Town of Addison, the Town will, after giving written notice to the Contractor, have the authority to cause defective Work to be remedied or removed and replaced, or to cause unauthorized Work to be removed and to deduct the cost thereof from any monies due or to become due the Contractor.

63. **DISPOSITION AND DISPOSAL OF MATERIALS:** All materials to be removed from the site including refuse and other debris shall become the property of the Contractor and shall be disposed of outside the limits of the Project. Contractor shall also comply with all applicable laws governing the spillage of debris while transporting to a disposal site.
64. **CLEAN-UP FOR FINAL ACCEPTANCE:** The Contractor shall make a final cleanup of all parts of the Work before acceptance by the Town of Addison. This cleanup shall include removal of all objectionable rock and other construction materials, and in general preparing the site of the Work in an orderly manner and appearance.
65. **TV INSPECTION OF SANITARY SEWER/STORM SEWER:** Part of the final inspection of the wastewater systems on this Project shall include a closed circuit TV survey of the completed pipe installation, exclusive of services, and all imperfections in the installed facility revealed by the TV survey shall be remedied by the Contractor prior to acceptance of the Project as complete. All TV survey Work, including furnishing of necessary personnel, equipment and material shall be performed by the Contractor.
66. **TESTING REQUIREMENTS:** Testing shall be conducted in accordance with Town of Addison Specifications except as modified in the Special Provisions, Technical Specifications, or as on the plans. The Town of Addison will provide random testing. The Contractor shall coordinate construction with the Town of Addison, and shall provide assistance to the testing labs by providing trench safety, excavation, or other work to insure all testing requirements are met. Work performed to accommodate testing will be a subsidiary item and no extra payment will be authorized. All retesting shall be at the expense of the Contractor. As a general guide, the Contractor shall be responsible for providing the following tests:
 - (1) Density and associated tests on embedment and backfill.
 - (2) Compressive strength tests on concrete.
 - (3) Gradation soil tests on backfill as may be required.
 - (4) Pressure test, bacteriological tests for disinfection of water lines,
 - (5) Mandrel test for gravity sewer pipeline
 - (6) Vacuum test for SSMH for water tightness.
 - (7) Providing test results from manufacturer and as specified in Town of Addison Specifications (NTCOG).
67. **SILICONE JOINT SEALANT:** Silicone joint sealant must be used in all instances where joint sealant applies to Portland Cement Concrete pavement and curbs. Payment for the

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

use of silicone joint throughout this Project will in all cases be subsidiary to this contract at no extra cost.

68. **CLAIMS FOR DAMAGES OR INJURY:** General Provision Item 1.24.3 - SMALL CLAIMS FOR DAMAGE OR INJURY is amended to read as follows: “If any person files a claim against the Town of Addison or Contractor for personal injury or property damage resulting from, arising out of, or caused by, the operations of the Contractor, or any Work within the limits of the Project, the Contractor must either submit to the Town of Addison, a duly executed full release within thirty (30) days from the date of written claim, or immediately report the claim to its liability insurance carrier for their action in adjusting the claim. If the Contractor fails to comply with this provision within the stipulated time limit, it will be automatically deemed that the Contractor has appointed the Town as its irrevocably Attorney-In-Fact authorizing the Town to report the claim directly with the liability insurance carrier. This provision is in and of itself a Power-of-Attorney from the Contractor to the Town which authorizes the Town to take said action on behalf of the Contractor without the necessity of the execution of any other document. If the Contractor fails to comply with the provisions of this item the Town, at its own discretion, may terminate this contract or take any other actions it deems appropriate. Any payment or portion thereof due the Contractor, whether it is a final payment, progress payment, payment out of retainage or refund payment may be withheld by the Town as is authorized by Item 109.4. Bankruptcy, insolvency or denial of liability by the insurance carrier shall not exonerate the Contractor from liability.

As a result of the additional Work created to Town of Addison due to un-responded claims for damages by Contractor to third parties, Contractor shall incur penalties for failure to abide by this Special Provision.

Contractor shall respond to the claimant in writing regarding the status of the claim, including whether Contractor disputes the claim, wishes to settle, or will notify its liability insurance carrier regarding the claim. Contractor will be assessed a penalty by the Town of \$75.00 per claim, for its failure to respond to the claimant as described above within thirty days of its written notice of claim by the Town.

To ensure Contractor compliance, the Town of Addison shall be notified, by copied correspondence of responses or settlement by Contractor.”

69. **WAIVER OF CLAIMS:** The making and acceptance of final payment will constitute:
- A. A waiver of all claims by Town of Addison against Contractor, except claims arising from unsettled Liens, from defective Work appearing after final inspection or failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Town of Addison of any rights in respect of Contractor’s continuing obligations under the Contract Documents.
 - B. A waiver of all claims by Contractor against Town of Addison other than those previously made in writing and still unsettled.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

70. **MECHANICS AND MATERIALMEN'S LIEN:** The Contractor shall be required to execute a release of mechanics and materialmen's liens upon receipt of payment and shall ensure that the Project remains free and clear of all liens related to the Work. The Contractor shall have all liens removed by obtaining releases acceptable to the Town of Addison or shall bond around such liens by obtaining a discharge of all liens.
71. **CONTRACTOR'S AFFIDAVIT OF BILLS PAID:** The Contractor shall be required to execute the form provided in Section BP prior to the acceptance of the Project.
72. **PRODUCT RECORD DOCUMENTS:** The Contractor shall maintain record Plans and legibly annotate shop drawings to record changes made after review. A red felt-tip marking pen shall be used for all recording.

Maintenance of Documents: The Contractor shall maintain at the job site one record copy of the Contract Plans, Specifications, Shop Drawings, Change Orders, other modification to the Contract, field test records and other documents submitted by Contractor in compliance with specification requirements. These documents shall be maintained at the job site apart from documents used for construction. These documents are not to be used for construction purposes. The documents shall be maintained in clean, legible condition. The documents shall be made available at all times for inspection by the Town.

Recording: Each document shall be labeled Project Record Copy in 2-inch high printed letters. The record documents shall be kept current. No Work shall be covered until required information has been recorded.

Contract Plans: The appropriate drawing shall be legibly marked to record, where applicable:

- a. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
- b. Field changes of dimension and detail made during construction process.
- c. Changes made by Change Order or Supplemental Agreement.
- d. Details not on original Contract Plans.
- e. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
- f. Changes made by Change Order or Supplemental Agreement.
- g. Other matters not originally specified.

Shop Drawing: The Contractor shall maintain the Shop Drawings as record drawings and legibly annotate shop drawings to record changes made after review.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Submittal: At the completion of the Project, the Contractor shall deliver record Plans to the Town. The transmittal letter shall be accompanied, in duplicate, with:

- a. Date, Project title and number.
- b. Contractor's name and address.
- c. Title and number of each record document.
- d. Certification that each document as submitted is complete and accurate.
- e. Signature of Contractor or its authorized representative.

73. **OWNERSHIP OF WORK AND MATERIALS:** All Work performed by Contractor pursuant to the Contract shall be the property of the Town of Addison. The Town of Addison shall own all construction, and any data, documents, plans, specifications, working papers, computer programs, photographs, or other material produced by Contractor pursuant to the Contract, and Contractor hereby assigns and transfers to the Town of Addison any and all copyrights for such material. To the extent that such programs used are internal, proprietary programs used by Contractor in the performance of the Work, Contractor will provide the Town of Addison such access to the programs as is necessary for the Town of Addison to be able to use the products and documents generated by the program, but Contractor is not required to transfer the copyrights or other intellectual property rights to the program to the Town of Addison. As security for partial, progress, or other payments, title to work for which such payments are made shall pass to the Town of Addison at the time of the payment. To the extent that title has not previously been vested in the Town of Addison by reason of payments, full title shall pass to the Town of Addison at delivery of the Work at the location specified in the Contract.

Unincorporated Work to which the Town of Addison has received title by reason of progress, partial or other payments shall be segregated from other Contractor or Subcontractor materials and clearly identified as the Town of Addison property. The Contractor shall be responsible for all materials until they have been incorporated into the Work and the Work has been finally accepted by the Town of Addison. The title transferred as above shall in each case be good, and free and clear of any and all security interests, liens, or other encumbrances. The Contractor promises and agrees that it will not pledge, hypothecate, or otherwise encumber the items in any way that would result in any lien, security interest, charge, or claim upon or against said items. The transfer of title as provided above shall not imply acceptance by the Town of Addison, nor relieve Contractor from the responsibility to strictly comply with the Contract, and shall not relieve Contractor of responsibility for any loss of or damage to such items.

The Contractor shall insert provisions in its subcontracts sufficient to ensure compliance with the content of this Section.

74. **DRAWINGS AND OTHER DATA:** All documents developed by Contractor in the performance of the Contract shall become the sole property of the Town of Addison and may be used by the Town of Addison on any other project without additional compensation

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

to Contractor. Use by the Town of Addison of these documents on other projects does not confer any liability on Contractor.

The Town of Addison shall be considered the “person for whom the work was prepared” for the purpose of authorship in any copyrightable work under 17 U.S.C. § 201(b). With respect thereto, Contractor agrees not to assert or authorize others to assert any rights or establish any claim under the design related patent and copyright laws. All design drawings, as-built drawings and specifications, in any form, shall contain a copyright mark of the Town of Addison.

75. **TOWN OF ADDISON APPROVAL:** This Project is subject to final approval and acceptance by the Town of Addison. Final approval acceptance will not be given until the punch list items are completed to the Town’s satisfaction and as-built Plans are given to the Town of Addison.
76. **USE OF EXPLOSIVES:** The use of explosives by the Contractor to complete the Work shall be prohibited.
77. **POWER FOR CONSTRUCTION:** The Contractor shall contract with the local power provider and make the necessary arrangements for securing power required for the construction, including power required for temporary offices. There will be no separated pay item for connection into the existing power system or for the power required for construction purposes.
78. **LIQUIDATED DAMAGES:** If the Contractor fails to complete the Work within the time specified in the contract, the Contractor shall pay liquidated damages to the Town of Addison in the amount of \$ 1,000 for each calendar day of delay until the Work is completed or accepted.
79. **CONTRACT DELAY:** The parties anticipate that delays may be caused by or arise from any number of events during the course of the Contract, including, but not limited to, Work performed, disruptions, permitting issues, actions of subcontractors, suppliers, or other contractors, actions by third parties, weather, weekends, holidays, or other such events, forces or factors sometimes experienced in construction work. Such delays or events and their potential impacts on performance by the Contractor are specifically contemplated and acknowledged by the parties in entering into this Contract, and shall not extend the Contract time for completion. Further, any and all costs or impacts whatsoever incurred by the Contractor in accelerating the Work to overcome or absorb such delays or events in an effort to complete the Contract prior to expiration of the Contract time to complete, regardless of whether the Contractor does so or not, shall be the sole responsibility of the Contractor in every instance.
80. **SUBCONTRACTORS:** No subcontract shall relieve Contractor of any of Contractor’s obligations or liabilities under the Contract. Contractor shall be fully responsible and liable for the acts or omissions of all Subcontractors, including persons directly or indirectly employed by them, their guests and invitees. Contractor shall have sole responsibility for managing and coordinating the operations of its Subcontractors, including the settlement

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

of disputes with or between them. Nothing contained in the Contract shall be deemed to create a contractual relationship between any Subcontractor, and the Town of Addison.

Contractor shall provide to the Town of Addison one (1) copy of all executed subcontracts associated with the Contract, including any changes or modifications to the subcontracts, within three (3) days of their execution. No Subcontractor shall be permitted to perform work associated with the subcontract until the Subcontractor (or Contractor on the Subcontractor's behalf) is in compliance with the insurance requirements specified elsewhere in the Contract, and has furnished satisfactory evidence of insurance to the Town of Addison.

- 81. PAYMENTS TO SUBCONTRACTORS:** Contractor shall comply with the provisions of applicable laws and regulations relating to Contractor's relations with Subcontractors. Payments by Contractor to Subcontractors associated with the Town of Addison Contracts are subject to the time periods established in the Texas "Prompt Payment Act", contained in Chapter 2251 of the Texas Government Code.

All persons employed in the performance of the Work under the Contract, or any subcontracts hereunder, shall be paid not less than the general rates of per diem, holiday, and overtime wages prevailing in the locality of the Work of a similar character as detailed in the Special Provisions. Failure to comply with this provision shall subject Contractor to the penalties prescribed in Chapter 2258 of the Texas Government Code, as amended.

Contractor will include in each subcontract for property or services entered into by Contractor and a Subcontractor, including a supplier, for purposes of performing the Work under the Contract a payment clause that obligates Contractor to pay the Subcontractor for satisfactory performance under its subcontract within seven (7) days out of such amounts as are paid to Contractor by the Town of Addison under the Contract. A false certification to the Town of Addison under the provisions of the Payments clause may be a principal offense in violation of Section 37.10 of the Texas Penal Code.

- 82. USE OF COMPLETED PORTIONS OF THE WORK:** Whenever, as determined by the Town of Addison, any portion of the Work performed by Contractor is in a condition suitable for use, and the best interests of the Town of Addison requires such use the Town of Addison may take possession of or use such portion of the Work. Such use by the Town of Addison shall in no case be construed as final acceptance, and shall neither relieve Contractor of any of its responsibilities under the Contract, nor act as a waiver by the Town of Addison of any of the conditions thereof. Contractor shall not be liable for the cost of repairs, rework, or renewals, which may be required due to ordinary wear and tear resulting from such use. However, if such use increases the cost or delays the completion of remaining portions of the Work, Contractor shall notify the Town of Addison in writing as required by the Contract and shall be entitled to such additional compensation or extension of time, or both, as determined in accordance with the Contract.

If in the course of such use, the Work proves to not be in compliance with the Contract, the Town of Addison shall have the right to continue such use until such portion of the Work can, without injury to the Town of Addison, be taken out of service for correction of

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

defects, errors, omissions, or replacement of unsatisfactory materials, as necessary for such portions of the Work to comply with the Contract. Contractor shall correct the Work as soon as practical, but not later than one (1) month after notification by the Town of Addison.

Contractor shall not use any permanently incorporated materials unless such use is approved in writing by the Town of Addison. Where Contractor's request is granted for the use of certain materials, Contractor shall properly use and maintain and, upon completion of its use and at its own expense, recondition such materials to the satisfaction of the Town of Addison.

83. COMPLETE AGREEMENT: The Contract (including Attachments, the Special Provisions, other documents and manuals incorporated herein) is the full and complete agreement between the Town of Addison and Contractor with respect to the subject matter herein and supersedes any and all prior agreements between the parties hereto.

84. WAIVER: The waiver by the Town of Addison of the breach of any provision of the Contract by Contractor shall in no way impair the right of the Town of Addison to enforce the provision for any subsequent breach thereof. All remedies provided hereunder are cumulative and are in addition to all other remedies available at law or in equity.

85. EXECUTION OF THE CONTRACT: The Contract may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of the Contract may also be exchanged via electronic facsimile machines and any electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.

86. DEFINITIONS: The following definitions are added to the General Provisions and Special Provisions:

BIDDER: Any person, persons, partnership, company, firm, association, or corporation acting directly or through a duly authorized representative submitting a bid for the work contemplated.

PROJECT: The Town of Addison's overall objective and endeavor of which the Contract forms a part and ultimately creates, which encompasses all Contract Documents constructed to final completion and final acceptance.

TOWN ENGINEER (ENGINEER): Town Engineer or his/her authorized representative with the Town of Addison located at 16801 Westgrove Drive, Addison, Texas 75001.

CONSULTANT ENGINEER (DESIGN ENGINEER): The consultant engineer of record is Brian J. LaFoy, PE (Texas Registered PE #89363 with Kimley-Horn and Associates, Inc. located at 2201 West Royal Lane, Suite 275, Irving, Texas 75063.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

WORKING DAY: A working day is defined as a calendar day not including Saturdays, Sundays, or legal holidays authorized in the list prepared by the City of Dallas for contract purposes, in which weather or other conditions not under the control of the Contractor shall permit the performance of the principal units of work underway for a continuous period of not less than 7 hours between 7 A.M. and 6 P.M. A principle unit of work shall be that unit which controls completion time of the contract. Nothing in this definition shall be construed as prohibiting the Contractor from working on Saturdays, if the Contractor so desires and permission of the Town of Addison has been granted. Work on Sundays shall not be permitted except in cases of extreme emergency and then only with the written permission of the Town of Addison. If Saturday or Sunday work is permitted, working time shall be charged on the same basis as weekdays. Where the working time is expressed as calendar days or a specific date, the concept of working days shall no longer be relevant to the contract.

87. MODIFICATIONS TO THE LANGUAGE OF THE GENERAL PROVISIONS: The General Provisions are modified as follows:

- A. Add the following words to the General Provisions before the word “Certificates” found on the fourth line of Section 103.4.1:

“When permitted by law,”

- B. Delete the sentence “A model Certificate of Insurance is illustrated in Model Form A.6 in Appendix A.” beginning on the ninth line of Section 103.4.1 of the General Provisions and replace with the following:

“Certificates of Insurance shall be provided on a state approved form.”

- C. Delete the following sentence beginning on the second line of the fifth subparagraph of Section 104.2.1 of the General Provisions:

“The foregoing notwithstanding, the total original Contract amount shall not be increased more than 25 percent; the CONTRACTOR, by submission of a bid and execution of the Contract, is deemed to consent to the OWNER’S right to reduce the total original Contract amount by more than 25 percent.”

- D. Add the following word before the word “decide” found on the second line of Section 105.7.1 of the General Provisions:

“initially”

- E. Add the following word after the word “work” found on the fifth line of Section 105.7.1 of the General Provisions:

“, subject to the agreement of the Owner”

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

- F. Delete the following sentence beginning on the sixth line of Section 105.7.1 of the General Provisions:

“Engineer shall determine the amount and quality of work performed and materials furnished, and Engineer’s decision and estimates shall be final.”

- G. Delete Section 105.9.3 of the General Provisions titled “Inspection Overtime” in its entirety.

- H. Delete Section 107.2 of the General Provisions titled “Indemnification” in its entirety and replace with the following:

“THE CONTRACTOR AGREES TO INDEMNIFY, SAVE, PROTECT, DEFEND, AND HOLD HARMLESS THE OWNER, ITS AFFILIATES AND THEIR OFFICERS, DIRECTORS, AGENTS, INVITEES, AND EMPLOYEES (“INDEMNIFIED PARTIES”) FROM AND AGAINST ANY AND ALL LIABILITY, COST, DAMAGE, EXPENSES, FINES AND ALL REASONABLE LEGAL FEES AND COURT COSTS, CLAIMS, LOSSES, CAUSES OF ACTION, SUITS, AND LIABILITY OF ANY KIND, INCLUDING ALL EXPENSES OF LITIGATION AGAINST THE INDEMNIFIED PARTIES, WHETHER OR NOT CAUSED IN PART BY ANY ACT OR OMISSION OF A PERSON OR ENTITY INDEMNIFIED HEREUNDER, OR WHETHER LIABILITY IS IMPOSED UPON SUCH PERSON OR ENTITY, FOR ANY LOSS, INJURY, DAMAGE OR DEATH ARISING FROM OR OUT OF THE CONTRACTOR’S ACTS OR OMISSIONS, INCLUDING, BUT NOT LIMITED TO CONTRACTOR’S NEGLIGENT OR GROSSLY NEGLIGENT PERFORMANCE OF THE WORK; NEGLIGENT OR GROSSLY NEGLIGENT USE OR MISUSE OF OWNER’S PROPERTY; NEGLIGENT OR INTENTIONAL ACTIONS, ERRORS OR OMISSIONS AND THOSE OF ITS EMPLOYEES, OFFICERS, DIRECTORS, AGENTS OR SUBCONTRACTORS; VIOLATION OF ANY FEDERAL, STATE OR MUNICIPAL LAWS, REGULATIONS AND/OR ORDINANCES; CONTRACTOR’S OR ITS SUBCONTRACTOR’S USE OF PROPERTY, EQUIPMENT, VEHICLES, OR MATERIALS; DEFECTIVE WORKMANSHIP; NEGLIGENT OR GROSSLY NEGLIGENT USE OR MISUSE OF UTILITIES; OR SUBCONTRACTORS’, EMPLOYEES’, AGENTS’, OFFICERS’, OR DIRECTORS’ NEGLIGENCE OR INTENTIONAL TORTS. IT IS THE EXPRESS INTENT OF CONTRACTOR TO INDEMNIFY THE INDEMNIFIED

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

PARTIES FROM THE CONSEQUENCES OF THEIR JOINT AND/OR CONCURRENT NEGLIGENCE AND/OR SOLE NEGLIGENCE. IN THE EVENT OF FAILURE BY THE CONTRACTOR TO FULLY PERFORM IN ACCORDANCE WITH THIS INDEMNIFICATION PARAGRAPH, EACH OF THE INDEMNIFIED PARTIES, AT ITS OPTION, AND WITHOUT RELIEVING CONTRACTOR OF ITS OBLIGATIONS HEREUNDER, MAY SO PERFORM, BUT ALL COSTS AND EXPENSES SO INCURRED BY ANY OF THE INDEMNIFIED PARTIES IN THAT EVENT SHALL BE REIMBURSED BY CONTRACTOR TO THE INDEMNIFIED PARTIES, OR ANY OF THEM, AND UNTIL REIMBURSED BY CONTRACTOR SHALL BEAR INTEREST, AT THE RATE OF INTEREST PROVIDED TO BE PAID ON JUDGMENT UNDER THE LAWS OF THE STATE OF TEXAS. THIS INDEMNIFICATION SHALL NOT BE LIMITED TO DAMAGES, COMPENSATION OR BENEFITS PAYABLE UNDER INSURANCE POLICIES, WORKERS' COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

IN THE EVENT THIS CONTRACT RELATES TO A PROJECT OTHER THAN A SINGLE FAMILY HOUSE, TOWNHOUSE, DUPLEX, OR LAND DEVELOPMENT DIRECTLY RELATED THERETO OR A PUBLIC WORKS PROJECT OF A MUNICIPALITY THEN THE INDEMNITY PROVISIONS INCLUDED HEREIN SHALL BE LIMITED SUCH THAT SUBCONTRACTOR SHALL NOT BE REQUIRED TO INDEMNIFY, HOLD HARMLESS OR DEFEND CONTRACTOR OR ANY THIRD PARTIES AGAINST A CLAIM CAUSED BY THE NEGLIGENCE OR FAULT, THE BREACH OR VIOLATION OF A STATUTE, ORDINANCE, GOVERNMENTAL REGULATION, STANDARD, OR RULE, OR THE BREACH OF CONTRACT OF AN INDEMNIFIED PARTY, ITS AGENT OR EMPLOYEE, OR ANY THIRD PARTY UNDER THE CONTROL OR SUPERVISION OF THE INDEMNIFIED PARTY, OTHER THAN SUBCONTRACTOR OR ITS AGENT, EMPLOYEE, OR SUBCONTRACTOR OF ANY TIER EXCEPT THAT SUBCONTRACTOR SHALL INDEMNIFY, HOLD HARMLESS AND DEFEND THE INDEMNIFIED PARTY AGAINST ANY CLAIMS FOR THE BODILY INJURY OR DEATH OF AN EMPLOYEE OF SUBCONTRACTOR, ITS AGENTS, OR ITS SUBCONTRACTORS OF ANY TIER.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE INDEMNITY PROVISIONS INCLUDED HEREIN SHALL BE LIMITED SUCH THAT CONTRACTOR SHALL NOT BE REQUIRED TO INDEMNIFY, HOLD HARMLESS OR DEFEND OWNER OR ANY THIRD PARTIES AGAINST A CLAIM CAUSED BY THE NEGLIGENCE OR FAULT, THE BREACH OR VIOLATION OF A STATUTE, ORDINANCE, GOVERNMENTAL REGULATION, STANDARD, OR RULE, OR THE BREACH OF CONTRACT OF THE INDEMNIFIED PARTIES, ITS AGENT OR EMPLOYEE, OR ANY THIRD PARTY UNDER THE CONTROL OR SUPERVISION OF THE INDEMNIFIED PARTIES, OTHER THAN CONTRACTOR OR ITS AGENT, EMPLOYEE, OR SUBCONTRACTOR OF ANY TIER EXCEPT THAT CONTRACTOR SHALL INDEMNIFY, HOLD HARMLESS AND DEFEND THE INDEMNIFIED PARTIES AGAINST ANY CLAIMS FOR THE BODILY INJURY OR DEATH OF AN EMPLOYEE OF CONTRACTOR, ITS AGENTS, OR ITS SUBCONTRACTORS OF ANY TIER.”

- I. Add the following language after Section 103.3.1.4 of the General Provisions:

“103.3.1.5. Maintenance Bond. A good and sufficient bond in an amount not less than **100-percent** of the approximate total of the Contract, as evidenced by the proposed tabulation, or conditioned on the full and proper maintenance and repair of the Work to be done and performed for a period of one year from the date of final acceptance of the Work and the Contractor will do all necessary backfilling that may arise on account of sunken conditions in ditches, or otherwise, and do and perform the 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 the Contractor in construction of same, or on account of any defect arising in any of the Work laid or constructed by the 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 the Contractor.”

- J. Add the following language after Section 104.2.5. of the General Provisions:

“104.2.6. Change Orders. A Change Order is a written instrument and signed by the Owner, Contractor and Engineer stating their agreement upon all of the following:

- (1) the change in the Work;
- (2) the amount of the adjustment, if any, in the Contract Sum;
and

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

(3) the extent of the adjustment, if any, in the Contract Time.

In the event the Contractor proposes a Change Order, the Contractor shall provide sufficient detail for such Change Order to allow analysis and review by the Engineer.

Agreement on any Change Order shall constitute final agreement on the Work which is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the Contract Time. In the event a Change Order increases the Contract Sum, the Contractor shall include the Work covered by such Change Orders in Applications for Payment as if such Work were originally part of the Contract Documents.

The Contractor, upon receipt of written notification by the Owner or the Engineer of a proposed item or change in Work, shall prepare as soon as possible a Change Order on the form provided by the Owner. If the Change Order is returned to the Contractor for additional information or if the scope of the proposed change in the Work is modified by additions, deletions or other revisions, the Contractor shall revise the Change Order accordingly and resubmit the revised Change Order to the Owner and Engineer.”

- K. Delete the language in Section 105.2.1 of the General Provisions and replace it with the following language:

“105.2.1. WORKMANSHIP: If the OWNER notifies the CONTRACTOR in writing of defective work, the CONTRACTOR shall correct the deficiencies within five (5) calendar days of the Notice at no additional cost to the OWNER. If the defective work is not corrected within five (5) calendar days, or the CONTRACTOR is not making satisfactory progress (in the opinion of the OWNER) to correct the deficiencies, the OWNER may withhold future payments for All Work until the defective work has been corrected to the satisfaction of the OWNER.”

- L. Add the following language after Section 105.10 of the General Provisions:

“105.10.2. GUARANTEE AFTER COMPLETION: Unless otherwise specified in the technical section of these specifications, the CONTRACTOR shall, after test and acceptance, and for a period of one year from date of final written acceptance by the OWNER or within such longer or shorter period of time as may be prescribed by law or by the terms of any other applicable special warranty on designated equipment or portions of work as required by the Contract Documents, rebuild, repair, or replace any and all items

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

which have proven defective due to unsatisfactory material and/or workmanship. Upon written notice from the OWNER, the CONTRACTOR shall immediately make any repairs that may be ordered, or such repairs will be made by the Owner at the expense of the CONTRACTOR or the CONTRACTOR'S Surety. In case of an emergency where delay would cause serious loss or damage, the Owner may undertake to have the defects repaired without previous notice. The expense of all repairs, including all emergency repairs, shall be borne by the CONTRACTOR or the CONTRACTOR'S Surety, at no cost to the Owner. This obligation shall survive termination of the Contract.

105.10.3. OFFSET PROGRESS PAYMENTS: OWNER may, at its option, offset any progress payment or final payment under the Contract Documents against any debt (including taxes) lawfully due to OWNER from Contractor, regardless of whether the amount due arises pursuant to the terms of the Contract Documents or otherwise and regardless of whether or not the debt due to OWNER has been reduced to judgment by a court.

105.10.4. FINAL ACCEPTANCE AND PAYMENT: This Project is subject to final inspection and final acceptance by the Owner. Whenever the Work provided for by the Contract shall have been completely performed on the part of the CONTRACTOR, including, but not limited to compliance with North Central Texas Council of Governments Standard Specifications for Public Works Construction, October 2004 Section 202.6.4.6., the CONTRACTOR shall notify the OWNER that the Work is ready for final inspection. The OWNER will then make such final inspection and if the work is satisfactory and in accordance with the specifications and contract documents, the OWNER shall issue a certificate of acceptance to the CONTRACTOR and submit a request to accept the Work performed by the CONTRACTOR and payment of a final estimate under the terms of which the OWNER will release 100% of the retainage, plus the unpaid portions of the final estimate as the OWNER deems advisable.

Whenever the improvements provided for by the Contract shall have been completely performed on the part of the Contractor, as evidenced in the certificate of acceptance, and all required submissions provided to the OWNER, a final estimate showing the value of the Work shall be prepared by the OWNER as soon as the necessary measurements and computations can be made. All prior estimates upon which payments have been made are subject to necessary corrections or revisions in the final payment. The amount of this final estimate, less any sums that have been previously paid, deducted or retained under the provisions of the contract, shall be

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

paid the CONTRACTOR within 30 days after the final acceptance by the OWNER, provided the CONTRACTOR has furnished to the OWNER a consent of Surety and satisfactory evidence that all indebtedness connected with the Work and all sums of money due for any labor, materials, apparatus, fixtures, or machinery furnished for and used in the performance of the Work have been paid or otherwise satisfied, or that the person or persons to whom the same may respectively be due have consented to such final payment. This requirement is not intended and shall not be construed to recognize subcontractors for the purpose of privity of contract, and no third party benefit rights shall be obtained through these provisions for final payment. The acceptance by the CONTRACTOR of the final payment as aforesaid shall operate as and shall be a release to the OWNER from all claims or liabilities under the Contract, including all subcontractor claims, for anything done or furnished or relating to the Work under the Contract or for any act or neglect of said OWNER relating to or connected with the Contract.

All warranties and guarantees shall commence from the date of the certificate of acceptance. No interest shall be due the CONTRACTOR on any partial or final payment, or on the retainage.

105.10.5. RIGHT TO AUDIT CONTRACTOR'S RECORDS: By execution of the Contract, CONTRACTOR grants the OWNER the right to audit, at Owner's election, all of CONTRACTOR'S records and billings relating to the performance of the Work under the Contract. CONTRACTOR agrees to retain such records for a minimum of three (3) years following completion of the Work under this Contract. OWNER agrees that it will exercise the right to audit only at reasonable hours."

M. Add the following language after Section 107.5 of the General Provisions:

"107.5.1. COMPENSATION AND ACKNOWLEDGEMENT OF WORK: The CONTRACTOR shall receive and accept compensation, as herein provided, as full payment for furnishing all labor, tools, material, equipment and incidentals; for performing all Work contemplated and embraced under the Contract; for all loss or damage arising out of the nature of the Work, or from the action of the elements; for any unforeseen defects or obstruction which may arise or be encountered during the prosecution of the Work and before its final acceptance by the OWNER; for all risks of whatever description connected with the prosecution of the Work; for all expense incurred by or in consequence of suspension or discontinuance of such prosecution of the Work as herein specified; for any infringement of patents, trademarks or copyrights; and for

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

completing the Work in an acceptable manner according to the Plans and Specifications.”

- N. Add the following language after Section 107.11 of the General Provisions:

“107.11.1. COOPERATION OF THE CONTRACTOR: The CONTRACTOR shall give to the work the consistent attention necessary to facilitate the progress thereof, and the CONTRACTOR shall cooperate with the OWNER, and with other CONTRACTORS in every way possible.

The OWNER and the OWNER’S representatives shall at all times have free access to the Work whenever it is in preparation or progress and the contractor shall provide safe, convenient and proper facilities for such access and inspection.”

- O. Delete Section 107.4 of the General Provisions and replace it with the following:

“107.4. VENUE AND CHOICE OF LAW

The Owner, the Contractor, and the Contractor’s sureties agree that this Contract shall be performed in Dallas, Dallas County, Texas, and if legal action is necessary in connection therewith, exclusive venue shall lie in Dallas County, Texas. The terms and provisions of the Contract Documents shall be construed in accordance with the laws and court decisions of the State of Texas.”

- P. Delete the following language (which is the first paragraph) from Section 109.5.1. of the General Provisions:

“Between the 25th day and the last day of each month, the Owner shall make an approximate estimate of the value of the work done during the month under the specifications. Whenever the said estimate or estimates of work done since the last previous estimate exceeds \$100 in amount, a percentage of such estimate sum shall be paid the Contractor on or before the 15th day of the month next following. The monthly estimate may include acceptable nonperishable materials delivered to the work; such payment shall be allowed on the same percentage basis of the net invoice value as provided hereinafter. The percent retained by the owner shall normally be up to 10 percent at completion, unless otherwise stated. At the midpoint, or at any subsequent time, if the owner determines that the progress of the Contract is satisfactory in all respects, it may at its discretion cease to retain additional funds until the completion of the project, or until progress ceases to be satisfactory. The owner shall make the sole determination in this matter.”

- Q. Add the following language after Section 109.5.1. of the General Provisions:

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

“109.5.1.1. Applications for Payment. Applications for progress payment (“Application for Payment”) will be submitted no more often than monthly and shall be submitted on the dates set forth in the Agreement. Each Application for Payment shall be (1) sworn to and notarized, (2) supported by such data substantiating the Contractor’s right to payment as the Owner or Engineer may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for in the Contract Documents, and (3) submitted by the Contractor for review to the Engineer in form and substance as mandated by the Owner. The Contractor’s Application for Payment shall be segregated and detailed in a manner satisfactory to the Owner.

In each Application for Payment, the Contractor shall certify that such Application for Payment represents a just estimate of portion of the Work that is complete as of the last day covered by the Application for Payment and shall also certify by sworn affidavit as follows:

‘There are no known mechanics’ or materialmen’s liens outstanding at the date of this Application, all due and payable bills with respect to the Work have been paid to date or shall be paid from the proceeds of this Application for Payment, there is no known basis for filing of any mechanics’ or materialmen’s liens on the Work, and waivers from all subcontractors and materialmen have been or, at the time of payment, will be obtained in such form as to constitute an effective waiver of lien under the applicable laws of the State of Texas.’

109.5.1.2. Lien Waivers. Concurrent with each Application for Payment, the Contractor shall execute and furnish a waiver and release of its lien rights current through the effective date of such Application for Payment conditioned upon receipt of the payment that is the subject of the application. Beginning with the second Application for Payment, the Contractor shall also deliver with each such Application as a condition precedent to payment thereof, waivers of lien from each of the Subcontractors, Sub-subcontractors, and suppliers current through the effective date of the previous Application of Payment. The Contractor shall also execute and obtain any other reasonable forms as the Owner may require in order to assure an effective waiver and release of mechanics’ and materialmen’s liens in compliance with the laws of the State of Texas. The Contractor shall, if any Subcontractor, Sub-subcontractor or supplier refuses to furnish a release in full, furnish a bond satisfactory to the Owner to indemnify against any lien.”

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

- R. Delete Section 109.5.2 of the General Provisions and replace with the following:

“Ten-percent (10%) retainage shall be withheld until 40 days after Final Completion.”

- 88. CONTRACTOR REPRESENTATIONS:** By entering into the Contract, the Contractor makes the following representations to the Town of Addison:

- A. Contractor has examined and carefully studied the Bidding Documents and the related data identified in the Bidding Documents.
- B. The Contractor has visited the Project site where the goods are to be installed or services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of goods and services, if required to do so by the Bidding Documents, or if, in the Contractor’s judgment, any local condition may affect cost, progress, or the furnishing of goods and services.
- C. The Contractor is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the bid that may affect cost, progress, and the furnishing of goods and services.
- D. The Contractor has carefully studied, considered, and correlated the information known to the Contractor; information commonly known to sellers of similar goods doing business in the locality of the Project site where the goods will be installed or where services will be provided; information and observations obtained from the Contractor’s visits, if any, to the Project site where the goods will be installed or services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Project site where the goods will be installed or where services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of the Contractor’s obligations under the Bidding Documents.
- E. The Contractor has given the Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that the Contractor has discovered in the Bidding Documents, and the written resolution (if any) thereof by the Engineer is acceptable to the Contractor.
- F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the goods and services for which the bid is submitted
- G. The Contractor acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of bids, and final payment for all unit price bid items will be based on actual quantities, determined as provided in the Contract Documents. The Contractor also acknowledges that each unit price includes an amount considered by the Contractor to be adequate to cover the Contractor’s overhead and profit for each separately identified item.

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

- 89. PREVAILING WAGE RATES:** Wage rates paid on this Project shall not be less than specified in the schedule of general prevailing rates of per diem wages as set forth below in the Davis Bacon Act General Decision No. TX130035:

General Decision Number: TX20210025 01/01/2021

Superseded General Decision Number: TX20200025

State: Texas

Construction Type: Highway

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

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

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015.

If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Modification Number Publication Date

0 01/01/2021

* SUTX2011-007 08/03/2011

Rates Fringes

CONCRETE FINISHER (Paving and
Structures).....\$ 14.12

ELECTRICIAN.....\$ 19.80

FORM BUILDER/FORM SETTER

Paving & Curb.....\$ 13.16

Structures.....\$ 13.84

LABORER

Asphalt Raker.....\$ 12.69

Flagger.....\$ 10.06

Laborer, Common.....\$ 10.72

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Laborer, Utility.....\$ 12.32
Pipelayer.....\$ 13.24
Work Zone Barricade
Servicer.....\$ 11.68

POWER EQUIPMENT OPERATOR:

Asphalt Distributor.....\$ 15.32
Asphalt Paving Machine.....\$ 13.99
Broom or Sweeper.....\$ 11.74
Concrete Pavement
Finishing Machine.....\$ 16.05
Concrete Saw.....\$ 14.48
Crane Operator, Lattice
Boom 80 Tons or Less.....\$ 17.27
Crane Operator, Lattice
Boom over 80 Tons.....\$ 20.52
Crane, Hydraulic 80 Tons
or Less.....\$ 18.12
Crawler Tractor.....\$ 14.07
Excavator, 50,000 pounds
or less.....\$ 17.19
Excavator, over 50,000
pounds.....\$ 16.99
Foundation Drill , Truck
Mounted.....\$ 21.07

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Foundation Drill, Crawler

Mounted.....\$ 17.99

Front End Loader 3 CY or

Less.....\$ 13.69

Front End Loader, over 3 CY.\$ 14.72

Loader/Backhoe.....\$ 15.18

Mechanic.....\$ 17.68

Milling Machine.....\$ 14.32

Motor Grader, Fine Grade....\$ 17.19

Motor Grader, Rough.....\$ 16.02

Pavement Marking Machine....\$ 13.63

Reclaimer/Pulverizer.....\$ 11.01

Roller, Asphalt.....\$ 13.08

Roller, Other.....\$ 11.51

Scraper.....\$ 12.96

Small Slipform Machine.....\$ 15.96

Spreader Box.....\$ 14.73

Servicer.....\$ 14.58

Steel Worker (Reinforcing).....\$ 16.18

TRUCK DRIVER

Lowboy-Float.....\$ 16.24

Off Road Hauler.....\$ 12.25

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

Single Axle.....\$ 12.31

Single or Tandem Axle Dump

Truck.....\$ 12.62

Tandem Axle Tractor with

Semi Trailer.....\$ 12.86

Transit-Mix.....\$ 14.14

WELDER.....\$ 14.84

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

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

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Union Rate Identifiers

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

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

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

Union Average Rate Identifiers

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

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour

BELLA LANE SOUTH EXTENSION & ALPHA ROAD CONNECTOR

Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

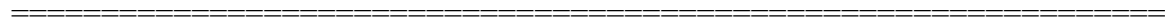
BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

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

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

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

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



END OF GENERAL DECISION

90. NO BOYCOTT ISREAL: Pursuant to Texas Government Code Chapter 2270, Contractor's execution of this Agreement shall serve as verification that the Contractor does not presently boycott Israel and will not boycott Israel during the term of this Agreement.

END OF GENERAL DECISION

BELLA LANE SOUTH EXTENSTION & ALPHA ROAD CONNECTOR

SECTION PS

PROJECT SIGN

PROJECT SIGN

1. Quantity

Two (2) Project Designation signs will be constructed and installed on the project site as directed by the Owner. It will be the responsibility of the Contractor to maintain the sign in a presentable condition at all times during construction. Maintenance will include painting and repairs as directed by the City Engineer or his appointee. The locations of the signs will be given to the Contractor by the Town of Addison at the Pre-Construction Conference.

2. Material

Sign shall be constructed of 3/4-inch thick smooth finish fir plywood (Grade A-C, exterior or better).

Sign will be securely mounted to 6" x 6" square posts. Nuts and bolts will not protrude from face of sign. Posts will be mounted to a support system that will provide adequate stabilization to ensure the sign will not fall over in heavy winds. Sand bags or other techniques may be necessary to protect sign.

3. Dimensions

Size of sign will be four feet tall and six feet wide. The height and arrangement of the lettering shall be in accordance with the attached detail.

4. Paint

Sign will be one-sided and will have a white background. Text will be black, except for the word "Addison!" which will be a blue color approved by the City Engineer. The paint will be an outdoor paint and will be maintained throughout the project in proper order. The quality of the paint, painting, and lettering on the signs shall be approved by the City Engineer or his appointee.

5. Payment

Project Signs will be a separate pay item. This will include all labor, equipment, tools, and incidentals necessary to complete and install the work.

The Town of



**PLEASE PARDON THE TEMPORARY
INCONVENIENCE DURING THIS PROJECT**

“PROJECT NAME”

CONTRACTOR: _____

ESTIMATED COMPLETION DATE: XXX

AN ADDISON PROJECT

FOR MORE INFORMATION, PLEASE CALL (972) 450-2871

Special Specification 7076

Grouting of Water Mains



1. DESCRIPTION

This item will govern the grouting of existing water mains for the purposes of abandonment underneath roadways, paved areas, and at other designated locations. The location of this Work is as shown on the Contract Document plans and/or as encountered in the field during construction. The Contractor will, unless otherwise specified, furnish all labor, materials, equipment, tools and all other appurtenances necessary to abandon water lines segments in place by filling them with flowable cementitious low strength grout including plugs, bulkheads, excavation and backfill at locations as required to completely fill the line to be abandoned in place with grout to protect against future collapse of the line.

2. SUBMITTALS

- A. Proposed Mix Design Report
- B. Submit manufacturers data for proposed plugs and detail of bulkhead
- C. Technical information for equipment and operations procedures including projected injection rate, grout pressure, method of controlling grout pressure, bulkhead and vent design and number of stages of grout application.
- D. Submit project specific plan for abandonment at least 15 days prior to commencing grouting activities, describe proposed sequence and other information pertinent to completion of Work.

3. MATERIALS

- A. Cement-based grout/ flowable fill with self-leveling and non-shrink characteristics.
- B. Unconfined compressive strength: Minimum 100 psi at 56 days as determined based on average of three tests for same placement. Present at least three acceptable strength tests for proposed mix design in mix design report.

4. CONSTRUCTION

Abandoning and grouting of water lines must not occur until all existing water mains and services have been transferred to a relocated water line or another line as designated in the Contract Documents. The Contractor will be responsible for the satisfactory coordination of the pipe abandonments with other construction and activities in the area. Delays in work resulting from lack of coordination will not be cause for additional compensation. Any work involving or impacting asbestos concrete pipe must be in accordance with the procedures outlined in the approved specifications for this project and will comply with all federal, state, and local laws, ordinances and regulations regarding the management of asbestos containing materials.

Remove all water line appurtenances, such as hydrants, valves and valve casing and castings. These appurtenances must be returned to the designated utility representative.

Make cuts, install bulkheads, vents to allow for air release

Remove any free standing water prior to starting fill placement.

Place grout/flowable fill using concrete or grout pumps capable of continuous delivery at planned placement rate to fill volume between placement points not to exceed 500 linear ft. at a time. Pump flowable fill through bulkheads constructed for placement of PVC pipes or other methods to contain grout in line to be abandoned. These pipe will be used for injection points or vents during placement. Place grout under pressure into property vented open system until grout emerges from vent pipes indicating pipe is completely filled. Pumping grout must be completed under sufficient pressure to overcome friction and to fill water main from downstream to upstream end. Remediate areas where flowable fill did not fill voids in water main by pressure grouting from inside water main or from surface if necessary. Plug each end of the water main being abandoned. Ensure that concrete is around plug/bulkhead and around pipe including bedding area such that it is not penetrable by groundwater and that bedding at this location is not a conduit for groundwater. The method of installation must be able to meet the requirement of completely filling the existing water main and any voids adjacent to it.

Backfill to grade above pipe left in place. Place and compact backfill in compliance with the Special Specifications.

Remove, transport, and, dispose of spoils. Spoils including pipe must be hauled to a facility permitted to accept the material. The method must provide for the release of air. When intermediate points are required to be constructed for the abandonment of the system, they must be a part of the abandonment project process. The method must provide for the isolation of water mains to be grouted from water mains that are abandoned in place without grouting as shown on the plans.

Water mains that are not under proposed pavement are generally not required to be grouted unless it is specified in the contract documents. Mains to be abandoned must be grouted only if required by the contract documents and payment as per these specifications is provided.

5. MEASUREMENT

This Item will be measured by the linear foot of water main to be abandoned regardless of depth.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Grout Abandonment Water Main of the size of water main specified. This price will be full compensation for the removing of the content within the pipe, cleaning, grouting, plugging, capping and abandoning all pipe, pipe bend section and all other appurtenance, and of dewatering, trenching, excavation and backfill, removal, transportation and disposal and all material or work necessary to properly abandon the pipe and must include all materials, labor, equipment, tools and incidentals necessary to complete the work.

SECTION TS

TECHNICAL SPECIFICATIONS

STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (North Central Texas) - Fifth Edition 2017

For this project, the Standard Specifications for Public Works Construction, North Central Texas, as prepared by the North Central Texas Council of Governments, and Town of Addison Standard Construction Details, shall govern all work to be done, together with any additional Technical Specifications included herein.

The following is a listing of technical specification sections that are anticipated for use on this project.

Site Protection & Preparation	Division 200
Roadway Construction	Division 300
Roadway Maintenance & Rehabilitation	Division 400
Underground Construction	Division 500
Conduit & Appurtenance Rehabilitation Structures	Division 600
Misc. Construction & Materials	Division 700
	Division 800

TXDOT STANDARD SPECIFICATION

The Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges Adopted by the Texas Department of Transportation November 1, 2014 are included in the contract by reference and are available as a separate document from TxDOT at the following link: <https://www.txdot.gov/business/resources/txdot-specifications.html>)

The following is a listing of technical specifications that are anticipated for use on this project.

Item 340	Dense-Graded Hot-Mix Asphalt (Small Quantity)
Item 401	Flowable Fill
Item 416	Drilled Shaft Foundations
Item 420	Concrete Substructures
Item 422	Concrete Superstructures
Item 425	Precast Prestressed Concrete Structural Members
Item 432	Riprap
Item 434	Bridge Bearings
Item 442	Metals for Structures
Item 450	Railing
Item 454	Bridge Expansion Joints
Item 462	Concrete Box Culverts and Drains
Item 464	Reinforced Concrete Pipe

- Item 466 Headwall and Wingwall
- Item 467 Safety End Treatment
- Item 531 Sidewalks
- Item 540 Metal Beam Guard Fence
- Item 644 Small Roadside Sign Assemblies
- Item 666 Retroreflectorized Pavement Markings

The following is a listing of special specifications that are anticipated for use on this project.

- SS7076 Grouting of Water Mains

SECTION IS

ADDITIONAL INSURANCE REQUIREMENTS

TOWN OF ADDISON, TEXAS
ADDISON AIRPORT NORTHWEST DRAINAGE DITCH IMPROVEMENTS

REQUIREMENTS

Contractors performing work on TOWN OF ADDISON property or public right-of-way shall provide the TOWN OF ADDISON a certificate of insurance or a copy of their insurance policy(s) (and including a copy of the endorsements necessary to meet the requirements and instructions contained herein) evidencing the coverages and coverage provisions identified herein within ten (10) days of request from TOWN OF ADDISON. Contractors shall provide TOWN OF ADDISON 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. Work shall not commence until insurance has been approved by TOWN OF ADDISON.

All insurance companies and coverages must be authorized by the Texas Department of Insurance to transact business in the State of Texas and must have a A.M. Best's rating A-:VII or greater.

Listed below are the types and minimum amounts of insurances required and which must be maintained during the term of the contract. TOWN OF ADDISON reserves the right to amend or require additional types and amounts of coverages or provisions depending on the nature of the work.

TYPE OF INSURANCE	AMOUNT OF INSURANCE	PROVISIONS
1. Workers' Compensation Employers' Liability to include: (a) each accident (b) Disease Policy Limits (c) Disease each employee	Statutory Limits per occurrence Each accident \$1,000,000 Disease Policy Limits \$1,000,000 Disease each employee \$1,000,000	TOWN OF ADDISON, and Cobb, Fendley & Associates, Inc. to be provided a <u>WAIVER OF SUBROGATION AND 30 DAY NOTICE OF CANCELLATION</u> or material change in coverage. Insurance company must be A-:VII rated or above.
2. Commercial General (Public) Liability to include coverage for: a) Bodily Injury b) Property damage c) Independent Contractors d) Personal Injury e) Contractual Liability	Bodily Injury/Property Damage per occurrence \$1,000,000, General Aggregate \$2,000,000 Products/Completed Aggregate \$2,000,000, Personal Advertising Injury per occurrence \$1,000,000, Medical Expense 5,000	TOWN OF ADDISON, and Cobb, Fendley & Associates, Inc. <u>to be listed as ADDITIONAL INSURED and provided 30 DAY NOTICE OF CANCELLATION</u> or material change in coverage. Insurance company must be A-:VII rated or above.
3. Business Auto Liability to include coverage for: a) Owned/Leased vehicles b) Non-owned vehicles c) Hired vehicles	Combined Single Limit \$1,000,000 per occurrence for bodily injury and property damage	TOWN OF ADDISON, and Cobb, Fendley & Associates, Inc. <u>to be listed as ADDITIONAL INSURED and provided 30 DAY NOTICE OF CANCELLATION</u> or material change in coverage. Insurance company must be A-:VII-rated or above.
4. Umbrella or Excess Liability Policy over Commercial General Liability and Automobile Liability limits of \$1 million per occurrence	Minimum \$4 million per occurrence excess \$1 million underlying per occurrence	TOWN OF ADDISON, and Cobb, Fendley & Associates, Inc. <u>to be listed as ADDITIONAL INSURED and provided 30 DAY NOTICE OF CANCELLATION</u> or material change in coverage. Insurance company must be A-:VII-rated or above.

Certificate of Liability Insurance forms (together with the endorsements necessary to meet the requirements and instructions contained herein) may be **faxed** to the Purchasing Department: **972-450-7074** or **emailed to: purchasing@addisontx.gov**. Questions regarding required insurance should be directed to the Purchasing Manager.

With respect to the foregoing insurance,

1. All liability policies shall contain no cross liability exclusions or insured versus insured restrictions applicable to the claims of the Town of Addison.
2. All insurance policies shall be endorsed to require the insurer to immediately notify the Town of Addison, Texas of any material change in the insurance coverage.
3. All insurance policies shall be endorsed to the effect that the Town of Addison, Texas will receive at least thirty (30) days' notice prior to cancellation or non-renewal of the insurance.
4. All insurance policies, which name the Town of Addison and Kimley-Horn and Associates, Inc. as an additional insured, must be endorsed to read as primary coverage regardless of the application of other insurance.
5. Insurance must be purchased from insurers that are financially acceptable to the Town of Addison and licensed to do business in the State of Texas.

All insurance must be written on forms filed with and approved by the Texas Department of Insurance. Upon request, Contractor shall furnish the Town of Addison with complete copies of all insurance policies certified to be true and correct by the insurance carrier.

This form must be signed and returned with your quotation. You are stating that you do have the required insurance and if selected to perform work for TOWN OF ADDISON, will provide the certificates of insurance (and endorsements) with the above requirements to TOWN OF ADDISON within 10 working days.

A CONTRACT/PURCHASE ORDER WILL NOT BE ISSUED WITHOUT EVIDENCE AND APPROVAL OF INSURANCE.

AGREEMENT

I agree to provide the above described insurance coverages within 10 working days if selected to perform work for TOWN OF ADDISON. I also agree to require any subcontractor(s) to maintain insurance coverage equal to that required by the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The Town accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.

Project/Bid# _____

Company: _____

Printed Name: _____

Signature: _____ **Date:** _____

APPENDIX A

GEOTECHNICAL STUDY

APPENDIX A



GEOTECHNICAL STUDY

Alpha Road Connector – Vitruvian Phase IV Farmers Branch, Texas

20212439.001A
December 2, 2020
Revision No. 1: July 15, 2021



December 2, 2020
Revision No. 1: July 15, 2021
20212439.001A

Kimley-Horn & Associates, Inc.
2201 West Royal Lane, Suite 275
Irving, Texas 75063

Attention: Mr. Brian LaFoy, PE

**Subject: Geotechnical Study
Alpha Road Connector – Vitruvian Phase IV
Brookhaven Community College
Farmers Branch, Texas**

Dear Mr. LaFoy:

This report transmits the findings of our geotechnical study for the proposed Alpha Road Connector in Farmers Branch, Texas. The results of the field and laboratory work are included along with engineering recommendations for use during the design and construction of the project.

We appreciate the opportunity to be of service to you on this project. If we can be of additional assistance as the design progresses, please contact us at 972.868.5900.

Sincerely,

KLEINFELDER, INC.

Texas Registered Engineering Firm F-16438

Richard J. Hammerberg, PE
Senior Project Manager

Sri Dinakaran, PE, DGE, DBIA
Senior Program Manager

Copies Submitted: 1 electronic copy & 1 copy via mail

A Report Prepared for:

Kimley Horn & Associates
2201 West Royal Lane, Suite 275
Irving, Texas 75063

GEOTECHNICAL STUDY
Alpha Road Connector – Vitruvian Phase IV
Farmers Branch, Texas


20212439.001A
December 2, 2020
Revision No. 1: July 15, 2021

Prepared by:

7/15/2021




Richard J. Hammerberg, PE
Senior Project Manager


Sri Dinakaran, PE, DGE, DBIA
Senior Program Manager



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TABLE OF CONTENTS

SECTION	PAGE
1 INTRODUCTION.....	1
1.1 PROJECT DESCRIPTION.....	1
1.2 SITE DESCRIPTION.....	1
1.3 PURPOSE AND SCOPE.....	2
2 FIELD EXPLORATION AND LABORATORY TESTING.....	3
2.1 FIELD EXPLORATION.....	3
2.2 LABORATORY TESTING.....	5
3 SUBSURFACE CONDITIONS.....	6
3.1 GEOLOGY.....	6
3.2 STRATIGRAPHY.....	6
3.3 GROUNDWATER OBSERVATIONS.....	7
3.4 EXPANSIVE SOIL CHARACTERISTICS.....	7
4 ANALYSIS AND RECOMMENDATIONS.....	10
4.1 BRIDGE STRUCTURE.....	10
4.1.1 Drilled Shaft Foundations.....	10
4.1.2 Drilled Shaft Construction Considerations.....	11
4.1.3 LPILE Parameters (version 2019) for Soil and Rock.....	12
4.1.4 Soluble Sulfates.....	13
4.2 PAVEMENT RECOMMENDATIONS.....	14
4.2.1 Pavement Thickness.....	14
4.2.2 Pavement Subgrade Preparation.....	16
4.2.3 Pavement Material Specifications.....	16
4.3 ADDITIONAL DESIGN CONSIDERATIONS.....	17
4.3.1 Box Culvert.....	17
4.3.2 Wall Structures.....	17
4.3.3 Wall Outfall.....	17
4.3.4 Lateral Earth Pressures.....	18
4.3.5 2018 IBC Seismic Design Parameters.....	19
4.3.6 Utility and Service Lines.....	20
4.3.7 Detention Pond Slopes.....	20
5 EARTHWORK.....	21
5.1 SITE PREPARATION.....	21
5.2 MATERIAL REQUIREMENTS AND TESTING.....	21
6 LIMITATIONS.....	23

FIGURES

Figure 1 Exploration Location Plan and Vicinity Map

APPENDICES

Appendix A Field Explorations
Appendix B Laboratory Testing

**GEOTECHNICAL STUDY
ALPHA ROAD CONNECTOR – VITRUVIAN PHASE IV
FARMERS BRANCH, TEXAS**

1 INTRODUCTION

1.1 PROJECT DESCRIPTION

This report presents the results of the geotechnical study for the proposed Alpha Road Connector in Farmers Branch, Texas. We understand that the project is planned to link Alpha Road and Bella Road to the Brookhaven Community College and to the master-planned Vitruvian community. Currently, Brookhaven Community College has one point of ingress and egress. The proposed project will increase the ingress and egress points to three and improve the traffic mobility to the college.

Geotechnical information was originally requested to provide design level recommendations for the proposed pavements, culverts, and for the three-span bridge along with its associated walls and embankments. A draft report dated January 30, 2014, was submitted to the Town of Addison under our Project No. 137422. Shortly thereafter, the project was suspended, thus a sealed report was never issued. The project has since been reinstated and assigned to Kimley Horn & Associates (KHA) who requested additional geotechnical work for a detention pond. We understand that the design of the entire project will be performed by KHA (), and that the bridge structure will be designed in accordance with the Texas Department of Transportation (TxDOT) bridge design standards. We understand that retaining walls and embankments will not be constructed as part of the approaches to the aforementioned bridge. A detention pond is planned along the southern portion of the road and slope recommendations have been requested.

1.2 SITE DESCRIPTION

The Alpha Road Connector is located at the northeast quadrant of Brookhaven College to Bella Road and Alpha Road in Farmers Branch, Texas. The site is relatively flat and partially wooded with a creek running through the property.

1.3 PURPOSE AND SCOPE

This study was performed based on the Scope of Services presented in our proposal number 136796 dated October 11, 2013, and our proposal DFW20P110120), dated April 9, 2020. The purpose of our geotechnical study was to evaluate subsurface soil and groundwater conditions at the site to provide recommendations for use during design and construction of the proposed additions. To accomplish this purpose, we performed the following tasks:

- Drilled 4 bridge borings (3 borings to a depth of 80 feet and 1 boring to a depth of 60 feet), 4 pavement borings to a depth of 10 feet, 2 culvert borings to a depth of 25 feet below grade under the original scope of work, and 4 detention pond borings were drilled to a depths of 5.5 to 20 feet below ground service under the 2020 scope of work. Borings were drilled to obtain samples for visual evaluation, laboratory testing, and to observe subsurface conditions;
- Performed laboratory testing on select samples to evaluate soil/rock classification and to determine the generalized engineering properties of the subsurface soils and rock; and
- Performed engineering analyses using the collected data to develop geotechnical recommendations for the design and construction of the proposed bridge, culverts, and pavement.

This report is based on the project information provided to us by the Town of Addison and the original engineer of record, Nathan D. Maier Consulting Engineers, and KHA. If the project information differs from the descriptions contained in this report, we should be contacted to review our recommendations. It is possible that modification of our recommendations may be required based upon changes in the project.

2 FIELD EXPLORATION AND LABORATORY TESTING

2.1 FIELD EXPLORATION

Subsurface conditions were evaluated by drilling and sampling 10 borings with a truck-mounted drilling rig. Bridge borings B-01 through B-04 were drilled to depths of 60 to 80 feet below existing grade, pavement borings P-01 through P-04 were drilled to a depth of 10 feet below existing grade, and culvert borings C-01 and C-02 were drilled to a depth of 25 feet below existing grade. These borings were completed between October 29 and November 5, 2013. The approximate boring locations are presented on Figure 1, Exploration Location Plan and Vicinity Map Plan of Borings, in the Appendix. These original locations were staked by NDMCE.

Borings D-01 and D-02 were drilled on October 19, 2020, due to the addition of a detention pond on the southern portion of the proposed road. The borings were located in the field by Kleinfelder and drilled to depths of approximately 15 and 20 feet below existing grade.

Borings D-03 and D-04 were drilled on December 15, 2020, with a manual hand auger to evaluate soils within the detention pond as well as the depth of weathered limestone in the footprint of the detention pond. The borings were located in the field by Kleinfelder and drilled to depths of approximately 5.5 to 7 feet below existing grade.

Hollow stem augers, continuous flight augers and push sampling drilling techniques were used without drilling fluids within the clayey material. Rock and rock-like materials were collected with a NX size double-tube core barrel. Drilling fluid was introduced into the boring during coring operations.

When present, seepage and groundwater levels were recorded, as discussed in a following section. Bridge Borings B-01, B-02, and B-04 were left open overnight for a 24-hour water reading. At the completion of drilling or at the end of the 24-hour water reading, each boring was backfilled with auger cuttings up to and slightly above the existing ground surface in open areas.

A log of each boring is presented in the Appendix, along with a boring log key to the symbols and terms used on the logs (Figures 2 and 3). The logs indicate the material types, depths, and other details of materials encountered for each boring. Soil and rock descriptions presented

upon the boring logs resulted from a combination of field and laboratory test data. Stratigraphy lines correspond to the approximate boundary between strata. However, the in-situ subsurface transition can be, and is often gradual.

Relatively undisturbed samples of cohesive soils were collected by using the drilling rig to push a seamless steel Shelby tube sampler with an outside diameter of 3 inches into the soil (based upon ASTM D1587). The depths at which these samples were collected are indicated on the boring logs. After a tube was recovered, the sample was extruded in the field, examined, and logged. The sample was then sealed in a plastic bag to reduce moisture loss and protect the sample.

During logging, an estimate of the sample consistency was obtained using a pocket penetrometer. This test provides relative strength data that is used as an approximate indicator of shear strength. The result of the penetrometer reading was recorded at a corresponding depth on the boring logs. Note that a reported value of “4.5+” indicates that the capacity of the penetrometer device was exceeded.

Additionally, granular soils and weathered limestone samples were collected by driving a split-spoon sampler in conjunction with the Standard Penetration Test (SPT). This technique involves driving the spoon sampler a distance into the soil using a free-falling hammer (based upon ASTM D 1586). During the test, the logger records the number of blows required to drive the spoon sampler over three successive 6-inch increments. The first 6 inches is the “seating drive,” while the number of blows required to drive the sampler the last two 6-inch increments is the “penetration” in blows per foot. Where resistance was high, the number of inches of penetration for 50 blows of the hammer is recorded. When less than 6 inches of penetration is obtained, the test is terminated regardless of the drive increment. The results of the penetration test are reported on the boring log at the corresponding depth. Materials recovered from the split-spoon sampler are then placed in a plastic bag to protect the sample and to reduce moisture loss. The boreholes were backfilled with soil cutting upon completion of drilling.

Rock and rock-like materials were evaluated in place using the Texas Department of Transportation (TxDOT) cone penetrometer test. This test evaluates the shear strength of the tested material by driving a steel cone into the material using a free-falling hammer (based upon Method TEX 132-E). During the test, the logger recorded either the number of blows producing 12 inches of penetration or the total inches of penetration due to two successive applications of

50 blows, for a total of 100 blows. The results of the test were recorded on the boring logs at the corresponding test depth. The bridge borings were terminated based on TxDOT standards for bridge design, which requires 4 consecutive blow counts of 100 blows for 3 inches or better.

Samples of rock and/or rock-like materials were collected with an NX size double-tube core barrel fitted with a carbide bit. The lengths of core run and are recorded on the boring logs at the corresponding depth. Samples are removed from the core barrel in the field, field classified, sealed, and packaged for transportation for further examination and testing. Before packaging, the total length of the recovered sample is recorded and reported as a percentage of the total sample length (REC). The total length of all the pieces greater than four inches in length is also recorded as a percentage of the total sample length and reported as the rock quality designation (RQD). Core breaks obviously caused by the drilling process were fitted together and counted as a continuous piece. Breaks that were not easily distinguished as being a result of the drilling process were conservatively considered a natural break.

2.2 LABORATORY TESTING

Laboratory testing was performed on selected samples collected from the borings during drilling. These samples were selected as being generally representative of that stratum and/or boring(s). Testing was performed to allow for material classification according to the Unified Soil Classification System (ASTM D 2487), and to evaluate the engineering properties of the materials. These tests included:

- Moisture content;
- Dry unit weight;
- Atterberg limits (liquid and plastic limits);
- Percent passing No. 200 sieve;
- One-dimensional swell under approximate overburden load;
- Soluble sulfates;
- Lime vs pH series test; and
- Unconfined compressive strength of soil/rock.

The test results are presented at the corresponding depth on each boring log and Table 1, Laboratory Test Results Summary in the Appendix.

3 SUBSURFACE CONDITIONS

3.1 GEOLOGY

The Atlas maps published by the Bureau of Economic Geology at the University of Texas, Austin indicated that the site is located on border of the Austin Chalk and Eagle Ford geological formation. The Austin Chalk was encountered on the eastern part of the project at borings C-02 and P-01. The rest of the borings lie in the Eagle Ford Formation. The Austin Chalk formation typically consists of fat clays overlying lean, chalky clay, followed by the parent limestone bedrock. The thickness of the clay above the limestone varies but is generally encountered at a shallow depth. The dark brown fat clays are typically highly expansive, while the lean chalky clay is only moderately expansive. The upper portions of the limestone is generally weathered, fractured, and very light brown to light yellow brown in color. Some zones of severely weathered limestone that are clay-like can be present above the weathered material. The underlying primary limestone is generally harder than the weathered limestone and is light to medium gray in color.

The Eagle Ford formation typically includes residual clay and shaly clay overlying the primary shale that contains significant quantities of soluble sulfates. The clays and shaly clays of the Eagle Ford vary in color from dark brown to yellow brown, are highly expansive. The clays are often jointed; contain silt and sand seams/partings, and bentonite seams/layers. The primary shale is commonly gray to dark gray in color and is not as hard as most regional rock materials. The shale is often calcareous and can contain very hard limestone and sandstone seams. Soft bentonite seams and layers can also be present.

3.2 STRATIGRAPHY

The subsurface conditions, observed in our borings, consisted of are high plasticity clay (CH) and moderate plasticity clay (CL), overlying shale or weathered limestone and limestone. Detailed descriptions of the stratigraphy are included in the boring logs presented on Plates 4 through 14 in the Appendix.

3.3 GROUNDWATER OBSERVATIONS

The borings were advanced using techniques that allow for direct and indirect observations of seepage and groundwater during drilling operations. Groundwater was observed in two of the borings (B-01 and C-01) during drilling operations. All pavement borings were dry. These observations have been made during the course of this study, as indicated on the boring logs and Table 3.1.

Table 3.1: Groundwater Observation

Boring	Depth to Groundwater below Existing Grade (feet)		
	During Drilling	On completion of Drilling	After 24 hours
B-01	13	5 (water added for coring)	5
B-02	Dry	5 (water added for coring)	13
B-03	Dry	16 (water added for coring)	NA
B-04	Dry	6 (water added for coring)	Dry
C-01	5	4	6
C-02	Dry	Dry	NA
D-01	Dry	Dry	NA
D-01	Dry	Dry	NA

The occurrence of groundwater can vary due to many factors. These factors include seasonal changes, site topography, surface runoff, the layering and permeability of subsurface strata; water levels in the creek, utilities, and other factors not evident at the time of this study. The possibility of groundwater and its fluctuation should be considered when developing this project. A groundwater study has not been performed. Long-term observations would be necessary to more accurately evaluate groundwater levels and fluctuations. We recommend that a test hole be drilled outside the footprint of the proposed bridge prior to the start of construction to establish the groundwater level at that time. This will enable the contractor to select the appropriate equipment to install the foundations.

3.4 EXPANSIVE SOIL CHARACTERISTICS

The subgrade at this site includes expansive soil that will exhibit shrink and swell behavior. The amount of shrink/swell behavior will depend upon moisture fluctuations that occur over the

design life of the structure. The total magnitude of the shrink/swell behavior is also dependent upon the thickness of the expansive soil and the depth of the active moisture zone. Moisture fluctuations occur due to seasonal cycles but can also be influenced to varying degrees by drainage conditions; site grades/sloping ground, landscaping, irrigation practices, the presence of vegetation, groundwater, and the presence of flatwork or other impervious barriers. This large number of variables complicates the evaluation of the magnitude of shrink/swell movements that could occur.

An estimate of the potential expansive soil movement was made using a variety of methods, including the Potential Vertical Rise (PVR) Method 124-E published by TxDOT, the results of laboratory index and swell testing, engineering judgment, and our experience. The estimated soil movement or Potential Vertical Movement (PVM) is summarized in Table 3.2.

Table 3.2: Estimated Potential Soil Movement (PVM)

Location	Based on TxDOT Method (dry condition)
B-01	2.0
B-02	3.5
B-03	3.0
B-04	3.5
C-01	1.5
C-02	1.0
P-01	2.0
P-02	3.0
P-03	3.0
P-04	1.0

Recognize these values are not exact values but are only an indication of the potential movements due to expansive soil for seasonal moisture fluctuations. Actual movements may be significantly larger than estimated due to inadequate site grading, poor drainage, ponding surface water, and/or leaks in utility lines. Significant changes to existing site grading can also alter actual vertical movements by changing the thickness of the expansive soil and/or altering the active moisture zone depth.

Selected plastic soils were also subjected to one-dimensional swell tests. These tests are summarized in Table 3.3. The swell and swell pressure values provided are based upon laboratory testing. Higher and lower values are possible in other areas of the structure.

TABLE 3.3: SWELL TEST SUMMARY

Location	Depth (ft.)	Swell (%)	Load Applied (psf)	Swell Pressure (psf)
B-01	3.5-5	0.0	500	NA
B-01	8-10	0.0	1000	NA
B-02	3.5-5	7.7	500	31,500
B-02	6.5-8	7.3	875	24,125
B-03	3.5-5	6.9	500	24,500
B-03	8-10	0.5	1,000	NA
B-04	6.5-8	4.7	875	13,525
C-01	8-10	0.0	1,000	NA

4 ANALYSIS AND RECOMMENDATIONS

Based on the results of our evaluation, in our professional opinion, the project site can be developed for the proposed structure using conventional grading and foundation construction techniques, provided that the recommendations presented herein are incorporated into the design and construction of the project. The primary geotechnical concern for this project is the presence of inconsistent and highly expansive clay soils. Recommendations addressing expansive clay soils, as well as general recommendations regarding geotechnical aspects of the project design and construction, are presented below.

4.1 BRIDGE STRUCTURE

4.1.1 Drilled Shaft Foundations

Borings B-01 through B-4 were drilled for the bridge structure. The shafts should be straight-sided, steel reinforced concrete, and designed based on the recommendations presented in Table 4.1.

Table 4.1: Drilled Shaft Design Values

Design Item	Design Value
Shaft type	Auger-excavated and straight-sided
Bearing Stratum Description	Gray Shale
Approximate Bearing Stratum Depth	19 to 25 feet below existing grade
Minimum Penetration	12 feet into bearing stratum for bridge ⁽²⁾
Maximum Allowable Bearing Pressure	12,000 psf ⁽¹⁾
Maximum Allowable Side Shear Within Bearing Stratum	1,000 psf (for axial downward and upward resistance) ⁽¹⁾
Minimum Shaft Diameter	24 inches
Need for Temporary Steel Casing During Installation	Should be Anticipated
Uplift Pressure due to expansive clays	1,200 psf over 10 feet

Note: (1) A factor of safety of 3 was used to evaluate allowable bearing pressure and for side shear.
 (2) The actual penetrations will need to be determined by the project structural engineer during structural design.

Straight drilled reinforced concrete shafts will use a combination of end bearing and side resistance in developing their load carrying capacity. Where temporary casing is required, no side resistance should be considered above the bottom of the casing. Foundations designed based on these values should experience minor settlement due to loading when properly constructed, but we recommend that the design account for one-half inch of potential settlement. Because of potential variations in the depth of the bearing material, the depth of the shafts should be based upon the recommended penetration into the bearing stratum, and not upon a predetermined elevation. We recommend that Kleinfelder be present during construction to observe the penetration into the bearing material.

The expansive subgrade will subject the shafts to uplift pressures and will create tensile forces within the shafts. Accordingly, each shaft should be steel reinforced to withstand these forces. The actual uplift forces will vary with depth and moisture condition, but steel reinforcement design for the soil uplift pressures may be modeled using 1,200 psf acting over the entire shaft perimeter of the upper 10 feet of the shaft. This reinforcement should not preclude the need for additional reinforcement due to structural design or as required by appropriate codes. It is important to note that the uplift pressure provided is due to expansive soils and does not consider other pressures such as wind, impact, etc. Resistance to structural uplift loads should be evaluated using the values provided in Table 4.1.

4.1.2 Drilled Shaft Construction Considerations

We recommend that Kleinfelder monitor drilled shaft construction to observe the followings:

- the proper identification of bearing material;
- that adequate penetration of the shaft excavation into the bearing layer is provided;
- that the base and sides of the shaft excavation are clean of loose cuttings; and
- that if seepage is encountered, whether it is of sufficient amount to require the use of temporary steel casing for straight-sided shafts.

Note that these items and the following discussion are intended to benefit the Owner and maintain the intent of the design during construction. This discussion is not intended to prescribe a specific means and methods for construction.

Seepage and groundwater were observed in borings B-01 and C-01, at the site during this study. If seepage occurs during construction, temporary steel casing may be required. If casing is used, the casing should be advanced 2 to 3 feet into the shale stratum to establish an impermeable seal. A continuous head of plastic concrete should be maintained within the casing during casing extraction to prevent the caving of the excavation and/or inflow of groundwater.

The concrete placement should occur as soon as possible after completion of the excavation and observation of the shaft, and no longer than 8 hours after completion of the excavation. Prolonged air exposure or inundation of the bearing surface with groundwater could deteriorate the bearing material. Shaft excavations should be deepened if delays occur to provide a suitable bearing surface. Kleinfelder should be contacted in this event to provide appropriate recommendations.

Some intervals of the limestone within the shale stratum are hard. This limestone can be difficult to penetrate, especially when drilling large diameter shafts. The drilled shaft excavations should be performed with hard rock drilling equipment suitable to perform this work by a contractor experienced in this area.

Precautions are required during reinforcing steel and concrete placement to prevent loose soil, rock, and debris from falling into the excavation. The concrete should not be allowed to strike the reinforcing cage or the sides of the excavation during placement. A tremie pipe can prevent this occurrence. Mushrooming of the drilled shaft near or at the surface should not be allowed to prevent the formation of a horizontal surface that will be subject to expansive uplift pressures.

4.1.3 LPILE Parameters (version 2019) for Soil and Rock

The LPILE parameters provided below are for the subsurface material encountered in the Borings B-01 through B-04. The depths of each layer can be generalized from the boring log. The Stiff Clay w/o water soil type parameter was used for the CH, CL, and Weathered Shale soils encountered in the borings. Tables 4.2 and 4.3 provide Lpile parameters for soil and rock.

Table 4.2 – Lpile Parameters for Soil

Soil Type	Cohesion, psf	Friction Angle	Unit Wt, pcf ⁽¹⁾	ϵ_{50}/k_{rm}
Neglect 0 - 3 feet	---	---	---	---
Stiff Clay w/o water (above water table)	2,500	---	124	0.0055
Stiff Clay w/o water (below water table)	1,500	---	124	0.007

(1) Represents total unit weight. In conditions where soils are below the water table, submerged unit weights should be used. Submerged unit weight is obtained by subtracting the unit weight of water (62.4 pcf) from the total unit weight.

Table 4.3 – Lpile Parameters for Rock

Lpile Rock Type	Uniaxial Compressive strength, psi	Initial Modulus of Rock Mass, psi	RQD, %	Unit Wt, pcf ⁽¹⁾	K_{rm}
Weak Rock (Shale)	90	800	50	137	0.0007

(1) Unit weights represent total unit weights. In conditions where soils are below the water table, submerged unit weights should be used.

4.1.4 Soluble Sulfates

Concrete that comes into contact with soils can be subject to sulfate attack. We measured soluble sulfate concentrations in 5 samples from this site. Concentrations were measured between 0.01 to 0.58 percent, with one sample having sulfate concentrations greater than 0.2 percent and four samples with concentrations less than 0.2 percent. Water-soluble sulfate concentrations of 0.2 percent or greater indicate Class 2 severe sulfate exposure, and concentrations of 0.1 percent to 0.2 percent indicate moderate sulfate exposure, according to the American Concrete Institute (ACI). For sites with Class 2 sulfate exposure, ACI recommends using a cement meeting the requirements for Type V (sulfate resistant) cement or the equivalent, with a maximum water-to-cementitious material ratio of 0.45 and air entrainment of 5 to 7 percent. We understand Type V cement may not be readily available. As alternative ACI allows a blend of any type of Portland cement and fly ash (Class F) that meets the performance requirements (ASTM C 1012) of ACI 201.

4.2 PAVEMENT RECOMMENDATIONS

4.2.1 Pavement Thickness

The pavement thickness calculation for the new rigid pavement section was performed using Pavement Analysis Software (WinPAS), Version 1.0.4, which is based on the AASHTO pavement design procedures. Values used in the analysis of the pavement capacity are as follows:

- 85% Reliability
- 0.35 Overall (Standard) Deviation
- 3,500 (psi) Concrete compressive strength at 28 days
- 3,694,022 psi Concrete Modulus of Elasticity
- 3.2 Load Transfer Coefficient (assumes the use of load transfer dowels across joints and tied shoulders)
- 256 psi/in Modulus of Subgrade Reaction (assumes treated subgrade)
- 1.1 Drainage Coefficient (assumes slow, positive drainage)
- 4.2 Initial Serviceability
- 2.5 Terminal Serviceability

These values were selected based upon guidance in the AASHTO and TxDOT pavement design guides, local experience, and engineering judgment.

Traffic information for pavement design was based on estimates from 2008 average weekday traffic on the City of Farmers Branch, Traffic Engineering Division website. If more accurate traffic information is available then we should be contacted to review the pavement section and revise our recommendations, if necessary. The recommended pavement is intended to provide a sufficient thickness of structural materials, such that wheel loads are widely distributed. Based upon this assumption, we recommend a minimum 6 inches of reinforced concrete pavement and 8 inches of lime stabilized subgrade below the concrete.

We understand the City of Farmers Branch prefers a pavement section consisting of 8 inches of Portland cement concrete over a moisture conditioned clay subgrade. While this pavement section is structurally sufficient for the anticipated traffic loads, it is our opinion that removing the

lime stabilized portion of the pavement section can lead to premature subgrade failures. The lime stabilized subgrade provides a consistent subgrade, reduces surface moisture infiltration, and provides a stable working platform for the paving contractor, particularly during wetter portions of the year.

An estimated PVR on the order of 2 to 4 inches was calculated for the subsurface material encountered in the pavement borings. While the pavement may be structurally adequate, it can still experience cracking and movement due to the expansive subgrade. Please note that the purpose of lime stabilizing the pavement subgrade is to increase its strength and to increase its permeability/porosity, not to reduce its post-construction swell potential. Post-construction heave can be mitigated by excavating, moisture conditioning and compacting the native clays soils during construction. Kleinfelder can provide recommendations for over-excavation, if desired, based upon the movement criteria established by the Town of Addison and the City of Farmers Branch.

The residual soils of the Eagle Ford formation typically contain high concentrations of soluble sulfates. When mixed with hydrated lime, the sulfates can react with the free calcium, forming the mineral ettringite. This reaction is typically highly expansive and can cause significant distress to the stabilized subgrade and pavement. This reaction can be mitigated by removal and replacement of the sulfate bearing soils, extending the mellowing time during the stabilization process, and double lime application techniques. Prior to the lime application process, we recommend the subgrade soils within the Eagle Ford zone be sampled at approximate 250-foot intervals and tested for soluble sulfate concentrations. Once the concentration level is established, an effective mitigation plan can be recommended. We recommend the construction contract provide provisions for removal and replacement of subgrade soils, extended mellowing periods, and double lime application techniques.

Due to the presence of softer material at the site, continuous proof rolling should be used to detect areas of soft and/or pumping soil. Proof rolling should be based upon TxDOT Standard Specification Item 216 and performed using a heavy tired vehicle weighing at least 25 tons, with the tires inflated to the manufacturer's specified operating pressure. The entire area should be proof rolled, with each succeeding pass offset by not greater than one tire width. Proof rolling should be performed within the pavement area, and also within flatwork areas, such as sidewalks, pads, etc. Kleinfelder should be present during proof rolling activities to assist with

the identification of unsuitable soil. Unsuitable soil should be undercut and reworked, or otherwise improved in a manner that is suitable to the engineer. When fill is planned, proof rolling should occur before the fill is placed. After proof rolling, and before fill placement, the subgrade should be scarified to a depth of 8 inches, and recompacted to the specified density and moisture content.

4.2.2 Pavement Subgrade Preparation

Subgrade soils at this site in the proposed pavement areas consist of dark brown to olive brown clay. Based on the results of laboratory testing, the subgrade performance of the on-site can be improved by stabilization with hydrated lime.

4.2.3 Pavement Material Specifications

The following pavement material specifications are based on Texas Department of Transportation's (TxDOT) 2014 Edition Standard Specifications.

- Portland Cement Concrete - TxDOT Item 360 - Concrete with a minimum 28-day compressive strength of 3,500 psi is recommended. Concrete should be reinforced and include load transfer dowels at joints. Concrete should include air entrainment to increase temperature resistance.
- Lime Stabilized Subgrade - TxDOT Item 260 except as modified herein. Apply and mix hydrated lime at an estimated application rate of 7 percent (42 lbs/sq.yd.) hydrated lime for an 8-inch stabilization depth. The application rate of hydrated lime should be verified during construction by performing lime series tests with the lime proposed by the contractor. The lime series should include pH (12.4 target) percent swell (less than 1 percent under a confining pressure of 150 psf after curing) and compressive strength (minimum of 150 psi after curing for 5 days at 100 degrees Fahrenheit) The well mixed material should be mellowed for a minimum of 3 days, remixed, moisture conditioned and compacted to a minimum of 95 percent of ASTM D 698 (Standard Proctor density) at 2 to 5 percentage points above the optimum moisture content. Stabilization of the subgrade should extend at least one foot outside the perimeter of the pavement.

4.3 ADDITIONAL DESIGN CONSIDERATIONS

4.3.1 Box Culvert

We understand that construction of two box culverts are planned for the site. One will be located west of Alpha Road and the other located at the road next to Brookhaven College. The subsurface conditions vary greatly between the two culverts. Boring C-01 located next to Brookhaven College encountered subsurface conditions of dark brown, olive brown to yellow brown clay and groundwater at 5 feet. This culvert at Boring C-01 may utilize an allowable bearing pressure of 1,500 psf. Boring C-02 located next to Alpha Road encountered dark brown to light brown clay, underlain by weathered limestone and limestone. This culvert at Boring C-02 may utilize an allowable bearing pressure of 2,000 psf.

4.3.2 Wall Structures

Reinforced concrete walls related to the bridge construction should be supported by drilled shafts. The drilled shaft recommendations provided for the bridge structure should be used for designing the drilled shafts to support the wing walls or other walls related to the bridge construction. Where the wall bottoms are supported on drilled shafts, wall bottoms should be isolated from the underlying clay by minimum 8-inch voids. Retainers should be provided to prevent sloughing and caving of soils into the voids. The following design parameters and considerations are presented for design of the walls subject to lateral earth pressures.

4.3.3 Wall Outfall

The concrete cantilever gravity walls planned around the detention pond will have an outfall that should be supported by spread footings. We recommend footings be designed for a net allowable soil bearing pressure of 1,500 pounds per square foot (psf) for dead plus sustained live loads. Footings should be embedded at least 24 inches below the lowest adjacent grade. Additional embedment for uplift resistance shall be determined by the structural engineer. All footings should bear on native stiff clay soils. The footing dimension and reinforcement should be designed by the structural engineer; however, continuous, and isolated spread footings should have minimum widths of 18 and 24 inches, respectively. A one-third increase in the above bearing pressures can be used for transient wind or seismic loads. Footings should be

backfilled as soon as practical after concrete placement. An allowable coefficient of friction of 0.24 between the base of the footings and the native soils can be used for sliding resistance using the dead load normal stresses.

4.3.4 Lateral Earth Pressures

The lateral earth pressures on the retaining walls and culvert will depend on the restraint conditions of the walls, type of backfill, surcharge pressure, and hydrostatic pressure potential. Depending on the wall type, the design condition could be active or at-rest. If the walls are constructed to be restrained at the top, thus the at-rest (K_o) earth pressure coefficient will be developed. Active pressures will apply for walls that are allowed to rotate. Coefficients of active earth pressure and earth pressure at rest are provided in Table 4.4 and may be used for horizontal backfill.

TABLE 4.4: EARTH PRESSURE CRITERIA

Material	Earth Pressure Condition	Equivalent Fluid Pressure, pcf	
		Drained Condition	Undrained Condition
Compacted, On-site Site Soil $\phi=19^\circ$, $\gamma_t=125$ pcf	At-rest, $K_o = 0.67$	84	105
	Active, $K_a = 0.51$	64	94
Granular/Select Fill $\phi=28^\circ$, $\gamma_t=120$ pcf	At-rest, $K_o = 0.53$	64	93
	Active, $K_a = 0.36$	43	83

The above values do not include the effect of hydrostatic pressures or lateral pressures induced by surface loads, which must be taken into account by the structural engineer. Subsurface drain systems must be included in the design to prevent hydrostatic build-up behind the walls. The preceding recommendations assume that the backfill material between the wall and excavation face consists of fine-graded and coarse-graded drainage material meeting the specifications listed in the following section. The above lateral pressures do not include any surcharge loads such as traffic loads, which could be applied behind the top of the wall. Sloping ground surface behind the tops of walls or surcharge loads behind the walls will increase lateral earth pressures. Appropriate factors of safety must be used.

4.3.5 2018 IBC Seismic Design Parameters

Based on information obtained from the borings, published geologic literature and maps, and on our interpretation of the 2018 IBC criteria, it is our opinion that the project site may be classified as Site Class C according to Section 1613.2.2 of 2018 IBC and Chapter 20 of ASCE 7. Approximate coordinates for the site are noted below. Accordingly, seismic design parameters for Site Class C have been provided for the 2018 IBC.

- Latitude: 32.93200 °N
- Longitude: -96.84802 °W

The Risk-Targeted Maximum Considered Earthquake (MCE_R) mapped spectral accelerations for 0.2 seconds and 1 second periods (S_s and S_1) were estimated using Section 1613.2.1 of the 2018 IBC and the SEAOC and OSHPD website that uses the U.S. Geological Survey (USGS) web services (available at <http://seismicmaps.org>). The mapped acceleration values and associated soil amplification factors (F_a and F_v) based on the USGS Hazard Data and corresponding site modified spectral accelerations (S_{MS} and S_{M1}) and design spectral accelerations (S_{DS} and S_{D1}) are presented in Table 4.5.

**Table 4.5
2018 IBC Seismic Design Parameters**

Design Parameter	Recommended Value
Site Class	C
S_s (g)	0.104
S_1 (g)	0.055
F_a	1.3
F_v	1.5
S_{MS} (g)	0.135
S_{M1} (g)	0.083
S_{DS} (g)	0.09
S_{D1} (g)	0.055

4.3.6 Utility and Service Lines

Utility lines along the sidewalk or roadway may experience differential movement in response to expansive soil movements. These movements may damage connections. Flexible connections are recommended to account for differential movement between the lighting and utilities.

Design and construction of the utilities must also consider other expansive soil issues in order to limit damage. Excavations should be sloped so that water within excavations will flow to a low point away from the roadway where it can be removed before backfilling. Compaction of bedding material should not be water-jetted. Compacted backfill above the utilities should be on-site clays to limit the percolation of surface water. Utility trenches extending under structures should include fat clay or concrete cut-off collars at the perimeter/edge to prevent the transmission of water along trench lines.

4.3.7 Detention Pond Slopes

Borings D-01 and D-02 indicate the detention pond side slopes will consist of very high plasticity clay soils. As such we recommend a target slope of 4 horizontal to 1 vertical (4H:1V) if space allows, but in no case should be less than 3H:1V. The side slopes should be well vegetated for erosion mitigation; however, routine maintenance may be required to repair shallow skin slides caused by cyclic wetting and drying.

5 EARTHWORK

5.1 SITE PREPARATION

The project sites should be stripped of vegetation, roots, organic material, existing construction materials (if present) and other undesirable debris. Obstructions that could hinder preparation of the sites should also be removed, with special attention given to tree stumps and associated root systems. A typical stripping depth is about 6 inches, but the actual depth will vary and should be based on field observations. After stripping, the area should be suitable for the support of construction equipment. Unsuitable areas (such as those with wet, soft, yielding, and/or pumping subgrade) should be corrected before construction proceeds.

We recommend proof rolling be used to detect areas of soft and/or pumping soil in the proposed roadway. Proof rolling should be based upon TxDOT Standard Specification Item 216 and performed using a heavy tired vehicle weighing at least 25 tons, with the tires inflated to the manufacturer's specified operating pressure. The entire roadway area should be proof rolled at the final subgrade level, with each succeeding pass offset by not greater than one tire width. Kleinfelder can provide construction observation services during proof rolling activities to assist with the identification of unsuitable soil. Unsuitable soil should be undercut and reworked, or otherwise improved in a manner that is suitable to the engineer. When fill is planned, proof rolling should occur before the fill is placed. After proof rolling, and before fill placement, the subgrade should be scarified to a depth of 8 inches, and recompact to the specified density and moisture content.

5.2 MATERIAL REQUIREMENTS AND TESTING

Table 5.1 provides material, moisture, and density requirements for a variety of materials and applications. Compaction of each lift should be continuous over its entire area. The maximum allowable aggregate size for these materials is 2 inches (except for crushed limestone, which should be limited to 1½ inches). Fill should be placed in loose horizontal lifts not exceeding 8 inches, with the intent of providing a compacted lift thickness of 6 inches. When crushed limestone is used, the maximum loose lift thickness should be reduced to 6 inches (or less if there is difficulty achieving compaction). Fill placed along slopes should be placed in horizontal lifts that are benched into the slope.

Table 5.1 - Material and Compaction Requirements

Material Use	Material Requirements	Proctor Test Method	(1)Density Requirement	(1)Moisture Requirement
“Low-expansive” Select Fill:	PI: 7 to 15, LL≤35 Passing #200 Sieve: ≤70% Organics < 2 %	ASTM D 698	95 % minimum	-1 to +3 %
Native Clay Soils	NA	ASTM D 698	94 % minimum	+2 to +6 %
Lime Stabilized Subgrade: Pavement	TxDOT Item 260 Organics < 2 %	ASTM D 698	95 % minimum	+2 to +5 %

(1) Based upon Maximum Dry Density and Optimum Moisture Content

Prior to placing any fill material, the exposed subgrade should be scarified to a depth of 8 inches; moisture conditioned and compacted per the requirements for moisture conditioned on-site soil provided in Table 5.1. The material should be consistent with regard to type and moisture content. Clods should be processed and mixed, and water should be evenly applied, so that each lift has a uniform moisture and density. Each lift should be tested to confirm it has the specified moisture and compaction. One moisture/density test should be performed for every 5,000 square feet per lift of compacted area. For smaller areas, a minimum of three tests should be provided for every lift. Subsequent lifts should not be placed until the exposed lift has the specified moisture and density. Lifts failing to meet the moisture and density requirements should be reworked to meet the required specifications.

The specified moisture content must be maintained until compaction of the overlying lift, or construction of overlying flatwork. Failure to maintain the moisture content could result in excessive soil movement and can also have a detrimental effect on overlying plastic concrete. The contractor must provide some means of controlling the moisture content (such as water hoses, water trucks, etc.). Maintaining subgrade moisture is always critical, but will require the most effort during warm, windy and/or sunny conditions. Density and moisture testing is recommended to provide an indication that adequate earthwork is being provided. However, the quality of the fill is the sole responsibility of the contractor. Satisfactory verification testing is not a guarantee of the quality of the contractor's earthwork operations.

6 LIMITATIONS

This work was performed in a manner consistent with the level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used only by the Client and the registered design professional in responsible charge and only for the purposes stated for this specific engagement within a reasonable time from its issuance, but in no event later than two (2) years from the date of the report.

The work performed was based on project information provided by Client. If Client does not retain Kleinfelder to review any plans and specifications, including any revisions or modifications to the plans and specifications, Kleinfelder assumes no responsibility for the suitability of our recommendations. In addition, if there are any changes in the field to the plans and specifications, Client must obtain written approval from Kleinfelder's engineer that such changes do not affect our recommendations. Failure to do so will vitiate Kleinfelder's recommendations.

Recommendations contained in this report are based on our field observations and subsurface explorations, limited laboratory tests, and our present knowledge of the proposed construction. It is possible that soil, rock, or groundwater conditions could vary between or beyond the points explored. If soil, rock, or groundwater conditions are encountered during construction that differ from those described herein, the client is responsible for ensuring that Kleinfelder is notified immediately so that we may reevaluate the recommendations of this report. If the scope of the proposed construction, including the traffic estimates, and the design depths or locations of the foundations, changes from that described in this report, the conclusions and recommendations contained in this report are not considered valid unless the changes are reviewed, and the conclusions of this report are modified or approved in writing, by Kleinfelder.

As the geotechnical engineering firm that performed the geotechnical evaluation for this project, Kleinfelder should be retained to confirm that the recommendations of this report are properly incorporated in the design of this project, and properly implemented during construction. This may avoid misinterpretation of the information by other parties and will allow us to review and modify our recommendations if variations in the soil conditions are encountered. As a minimum Kleinfelder should be retained to provide the following continuing services for the project:

- Review the project plans and specifications, including any revisions or modifications;
- Observe foundation bearing soils to confirm conditions are as anticipated.

This report, and any future addenda or reports regarding this site, may be made available to bidders to supply them with only the data contained in the report regarding subsurface conditions and laboratory test results at the point and time noted. Bidders may not rely on interpretations, opinion, recommendations, or conclusions contained in the report. Because of the limited nature of any subsurface study, the contractor may encounter conditions during construction which differ from those presented in this report. In such event, the contractor should promptly notify the owner so that Kleinfelder's geotechnical engineer can be contacted to confirm those conditions. We recommend the contractor describe the nature and extent of the differing conditions in writing and that the construction contract include provisions for dealing with differing conditions. Contingency funds should be reserved for potential problems during earthwork and foundation construction.



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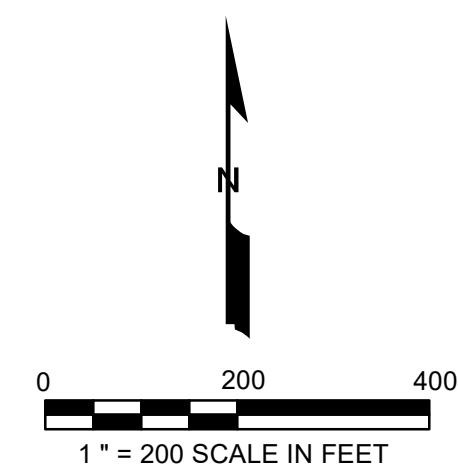
Bright People. Right Solutions.



VICINITY MAP NOT TO SCALE

NOTE:
 BASE MAPPING AND VICINITY MAP CREATED FROM LAYERS
 COMPILED BY ESRI PRODUCTS AND 2021 MICROSOFT
 CORPORATION.
 COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE TEXAS
 NORTH CENTRAL FIPS 4202

LEGEND	
●	SOIL BORING



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PROJECT NO.
20212439.001A

 DRAWN BY: DM
 CHECKED BY: RH
 DATE: 07-13-2021

EXPLORATION LOCATION PLAN
 AND VICINITY MAP

 Alpha Road Connector - Vitruvian Phase I
 Brookhaven Community College
 Farmers Branch, Texas

FIGURE

 1



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SAMPLE/SAMPLER TYPE GRAPHICS

	Auger Sample
	NX CORE SAMPLE (2.154 in. (54.7 mm.) core diameter)
	SHELBY TUBE SAMPLER
	STANDARD PENETRATION SPLIT SPOON SAMPLER (2 in. (50.8 mm.) outer diameter and 1-3/8 in. (34.9 mm.) inner diameter)
	TEXAS CONE PENETRATION

GROUND WATER GRAPHICS

	WATER LEVEL (level where first observed)
	WATER LEVEL (level after exploration completion)
	WATER LEVEL (additional levels after exploration)
	OBSERVED SEEPAGE

NOTES

- The report and log key are an integral part of these logs. All data and interpretations in this log are subject to the explanations and limitations stated in the report.
- Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual or differ from those shown.
- No warranty is provided as to the continuity of soil or rock conditions between individual sample locations.
- Logs represent general soil or rock conditions observed at the point of exploration on the date indicated.
- In general, Unified Soil Classification System designations presented on the logs were based on visual classification in the field and were modified where appropriate based on gradation and index property testing.
- Fine grained soils that plot within the hatched area on the Plasticity Chart, and coarse grained soils with between 5% and 12% passing the No. 200 sieve require dual USCS symbols, i.e., GW-GM, GP-GM, GW-GC, GP-GC, GC-GM, SW-SM, SP-SM, SW-SC, SP-SC, SC-SM.
- If sampler is not able to be driven at least 6 inches, 50/X indicates number of blows required to drive the identified sampler X inches with a 140 pound hammer falling 30 inches.
- TCP-Texas Cone Penetrometer, a 3 inches diameter by 2.5 inches inch long 60 degree conical point driven with a 170 ±2 pound hammer dropped 24 ±0.5 inches.

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)

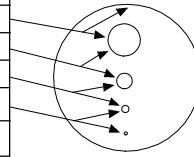
GRAVELS (More than half of coarse fraction is larger than the #4 sieve)	CLEAN GRAVEL WITH <5% FINES	Cu ≥ 4 and 1 ≤ Cc ≤ 3		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES	
		Cu < 4 and/or 1 > Cc > 3		GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES	
	GRAVELS WITH 5% TO 12% FINES	Cu ≥ 4 and 1 ≤ Cc ≤ 3		GW-GM	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES	
		Cu < 4 and/or 1 > Cc > 3		GW-GC	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES	
	GRAVELS WITH > 12% FINES	GRAVELS WITH 5% TO 12% FINES	Cu < 4 and/or 1 > Cc > 3		GP-GM	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
			Cu < 4 and/or 1 > Cc > 3		GP-GC	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
Cu < 4 and/or 1 > Cc > 3			GM	SILTY GRAVELS, GRAVEL-SILT-SAND MIXTURES		
COARSE GRAINED SOILS (More than half of coarse fraction is smaller than the #4 sieve)	CLEAN SANDS WITH <5% FINES	Cu ≥ 6 and 1 ≤ Cc ≤ 3		SW	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES	
		Cu < 6 and/or 1 > Cc > 3		SP	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES	
	SANDS WITH 5% TO 12% FINES	Cu ≥ 6 and 1 ≤ Cc ≤ 3		SW-SM	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES	
		Cu ≥ 6 and 1 ≤ Cc ≤ 3		SW-SC	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES	
	SANDS WITH > 12% FINES	SANDS WITH 5% TO 12% FINES	Cu < 6 and/or 1 > Cc > 3		SP-SM	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
			Cu < 6 and/or 1 > Cc > 3		SP-SC	POORLY GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
		Cu < 6 and/or 1 > Cc > 3		SM	SILTY SANDS, SAND-GRAVEL-SILT MIXTURES	
	FINE GRAINED SOILS (More than half of material is smaller than the #200 sieve)	SILTS AND CLAYS (Liquid Limit less than 50)		ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY	
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
			CL-ML	INORGANIC CLAYS-SILTS OF LOW PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS		
SILTS AND CLAYS (Liquid Limit greater than 50)		OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			
		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT			
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS			
			OH	ORGANIC CLAYS & ORGANIC SILTS OF MEDIUM-TO-HIGH PLASTICITY		

GINT FILE: L:\gint\projects\dwv Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [GEO-LEGEND 1 (GRAPHICS KEY) WITH USCS]

<p>KLEINFELDER Bright People. Right Solutions.</p>	PROJECT NO.: 137422	<p align="center">BORING LOG KEY</p> <p align="center">Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas</p>	BORING
	DRAWN BY: GW		3
CHECKED BY: RH	DATE: 11/8/2013		
REvised:			

GRAIN SIZE

DESCRIPTION	SIEVE SIZE	GRAIN SIZE	APPROXIMATE SIZE
Boulders	> 12 in. (304.8 mm.)	> 12 in. (304.8 mm.)	Larger than basketball-sized
Cobbles	3 - 12 in. (76.2 - 304.8 mm.)	3 - 12 in. (76.2 - 304.8 mm.)	Fist-sized to basketball-sized
Gravel	coarse 3/4 - 3 in. (19 - 76.2 mm.)	3/4 - 3 in. (19 - 76.2 mm.)	Thumb-sized to fist-sized
	fine #4 - 3/4 in. (#4 - 19 mm.)	0.19 - 0.75 in. (4.8 - 19 mm.)	Pea-sized to thumb-sized
Sand	coarse #10 - #4	0.079 - 0.19 in. (2 - 4.9 mm.)	Rock salt-sized to pea-sized
	medium #40 - #10	0.017 - 0.079 in. (0.43 - 2 mm.)	Sugar-sized to rock salt-sized
	fine #200 - #10	0.0029 - 0.017 in. (0.07 - 0.43 mm.)	Flour-sized to sugar-sized
Fines	Passing #200	<0.0029 in. (<0.07 mm.)	Flour-sized and smaller

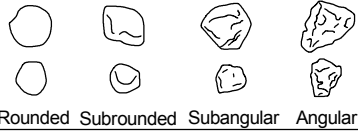


Munsell Color

NAME	ABBR
Red	R
Yellow Red	YR
Yellow	Y
Green Yellow	GY
Green	G
Blue Green	BG
Blue	B
Purple Blue	PB
Purple	P
Red Purple	RP

ANGULARITY

DESCRIPTION	CRITERIA
Angular	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular	Particles are similar to angular description but have rounded edges
Subrounded	Particles have nearly plane sides but have well-rounded corners and edges
Rounded	Particles have smoothly curved sides and no edges



PLASTICITY

DESCRIPTION	LL	FIELD TEST
Non-plastic	NP	A 1/8-in. (3 mm.) thread cannot be rolled at any water content.
Low (L)	< 30	The thread can barely be rolled and the lump or thread cannot be formed when drier than the plastic limit.
Medium (M)	30 - 50	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump or thread crumbles when drier than the plastic limit.
High (H)	> 50	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump or thread can be formed without crumbling when drier than the plastic limit.

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

REACTION WITH HYDROCHLORIC ACID

DESCRIPTION	FIELD TEST
None	No visible reaction
Weak	Some reaction, with bubbles forming slowly
Strong	Violent reaction, with bubbles forming immediately

APPARENT / RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT-N ₆₀ (# blows/ft)	MODIFIED CA SAMPLER (# blows/ft)	CALIFORNIA SAMPLER (# blows/ft)	RELATIVE DENSITY (%)
Very Loose	<4	<4	<5	0 - 15
Loose	4 - 10	5 - 12	5 - 15	15 - 35
Medium Dense	10 - 30	12 - 35	15 - 40	35 - 65
Dense	30 - 50	35 - 60	40 - 70	65 - 85
Very Dense	>50	>60	>70	85 - 100

CONSISTENCY - FINE-GRAINED SOIL

CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH (Qu)(psf)	CRITERIA
Very Soft	< 1000	Thumb will penetrate soil more than 1 in. (25 mm.)
Soft	1000 - 2000	Thumb will penetrate soil about 1 in. (25 mm.)
Firm	2000 < 4000	Thumb will indent soil about 1/4-in. (6 mm.)
Hard	4000 < 8000	Thumb will not indent soil but readily indented with thumbnail
Very Hard	> 8000	Thumbnail will not indent soil

NOTE: AFTER TERZAGHI AND PECK, 1948

STRUCTURE

DESCRIPTION	CRITERIA
Stratified	Alternating layers of varying material or color with layers at least 1/4-in. thick, note thickness
Laminated	Alternating layers of varying material or color with the layer less than 1/4-in. thick, note thickness
Fissured	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided	Fracture planes appear polished or glossy, sometimes striated
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay; note thickness
Homogeneous	Same color and appearance throughout

CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

	PROJECT NO.: 137422	SOIL DESCRIPTION KEY Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING 4
	DRAWN BY: GW CHECKED BY: RH DATE: 11/8/2013 REVISED:		

Date Begin - End: 11/01/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-75 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-01

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/Remarks
		Latitude: 32.93125° N Longitude: -96.84792° W No Elevation Available	Sample Number	Sample Type Blow Counts(B/C)= Uncorr. blows/6 in. Pocket Pen(PP)= tsf Texas Cone(TC)= blows/6 in RQD=%	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)		
0		Surface Condition: Bare Earth												
0-5		Lean CLAY to Fat CLAY (CL-CH): dark brown to olive brown, very stiff to stiff, with calcareous nodules, fine gravel, and sand	U-1	PP=4.0										
			T-2	TC=10/6" 5/6"										
5		- becoming olive brown	U-3	PP=2.0		26.7	96							
			T-4	TC=4/6" 4/6"										
		- large gravel, moist, olive brown to light brown	U-5	PP=1.5	CL	29.2		79	43	22				
			U-6	PP=2.5		39.4	83							
10		- clayey gravel layer from 12 to 14 feet	T-7	TC=6/6" 9/6"										
			U-8	PP=4.0										
			T-9	TC=7/6" 9/6"										
20		WEATHERED SHALE: gray to olive brown, very stiff, with iron oxide staining	U-10	PP=3.5		22.9	101						Unc. Comp. Str. = 1.68 tsf	
			T-11	TC=12/6" 17/6"										
25		SHALE: dark gray, laminated	U-12	PP=4.5										
			T-13	TC=50/3" 50/3 1/2"										
30			T-14	TC=50/3 3/4" 50/4"	72%	14.6	120						Unc. Comp. Str. = 6.47 tsf	
			C-15	RQD=42										
35			T-16	TC=50/2 1/2" 50/2"	92%									
			C-17	RQD=69										
40			T-18	TC=50/1 1/2" 50/1"	83%	17.8	113						Unc. Comp. Str. = 6.75 tsf	
		- with interbedded limestone layer	C-19	RQD=76										

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PROJECT NO.: 137422
 DRAWN BY: GW
 CHECKED BY: DR
 DATE: 11/8/2013
 REVISED:

BORING LOG B-01

 Alpha Road Connector - Vitruvian Phase IV
 Brookhaven Community College
 Farmers Branch, Texas

BORING

B-01


 PAGE: 1 of 2

Date Begin - End: 11/01/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-75 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-01

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/ Remarks
		Sample Number	Sample Type	Blow Counts (BC) = Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. RQD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No. 4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)		
		Latitude: 32.93125° N Longitude: -96.84792° W No Elevation Available												
		Surface Condition: Bare Earth												
		SHALE: dark gray, laminated - limestone seam plugged core barrel		T-20 C-21	TC=47/6" 50/5" RQD=0	NR								
50				T-22 C-23	TC=50/1" 50/3/4" RQD=90	90%								
55				T-24 C-25	TC=50/3" 50/3 1/2" RQD=83	91%								
60		- with interbedded limestone layer		T-26 C-27	TC=50/3" 50/3 1/4" RQD=93	94%								
65				T-28 C-29	TC=50/1 1/4" 50/1 1/2" RQD=95	95%								
		LIMESTONE: gray, with occasional shells												
70				T-30 C-31	TC=50/1/4" 50/1/4" RQD=97	97%								
		SHALE: dark gray												
75				T-32 C-33	TC=50/1 1/4" 50/1 1/4" RQD=96	98%								
80				T-34	TC=50/1" 50/1/2"									
85		The exploration was terminated at approximately 80 ft. below ground surface. The exploration was backfilled with auger cuttings on November 01, 2013.					GROUNDWATER LEVEL INFORMATION: ☒ Groundwater was encountered at 13 feet below the existing ground surface. After a 24 hour observation period, the water level was at 5 feet below existing ground surface. GENERAL NOTES: Boring was advanced to a depth of 30 feet prior to the use of water in the rock core drilling process.							

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	PROJECT NO.: 137422	BORING LOG B-01 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: GW		B-01
	CHECKED BY: DR		
	DATE: 11/8/2013		
	REVISED:		
			PAGE: 2 of 2

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Pat
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-02

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/Remarks
		Latitude: 32.93139° N Longitude: -96.84795° W No Elevation Available Location Offset: 20 ft. East of tree line Surface Condition: Bare Earth	Sample Number	Sample Type	Blow Counts (BC) = Uncorr. blows/6" in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. RQD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No. 4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)	
5	Fat CLAY (CH): brown to dark brown, hard, with fine to coarse gravel - becoming olive brown to yellow brown - becoming gray with manganese staining and orange sand seams	U-1	PP=4.5+			CH	14.9	116						
		T-2	TC=20/6" 20/6"											
		U-3	PP=4.5+											
		T-4	TC=17/6" 17/6"											
		U-5	PP=4.5+											
		U-6	PP=4.5+											
		T-7	TC=15/6" 14/6"											
15	WEATHERED SHALE: dark brown to gray, very stiff to hard, some orange staining, laminated - with interbedded limestone seam	U-8	PP=4.0				30.9							
		T-9	TC=8/6" 9/6"											
		U-10	PP=4.5+											
20	SHALE: dark gray, with occasional shells	T-11	TC=50/1" 50/1/2"		62%		21.6	103						
		C-12	RQD=17											
25		T-13	TC=50/2 1/4" 50/2 1/2"		94%									
		C-14	RQD=87											
30		T-15	TC=50/1 1/2" 50/1 1/2"		114%									
		C-16	RQD=86											
35		T-17	TC=50/2" 50/1/4"		82%		11.2	128						
		C-18	RQD=19											
40	- with interbedded limestone seam	T-19	TC=50/5" 50/6"		91%									
		C-20	RQD=74											

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	PROJECT NO.: 137422	BORING LOG B-02 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING B-02
	DRAWN BY: GW CHECKED BY: DR DATE: 11/8/2013 REVISED:		

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Pat
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-02

Depth (feet)	Graphical Log	FIELD EXPLORATION				LABORATORY RESULTS								Other Tests/ Remarks
		Sample Number	Sample Type Blow Counts (BC) Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. RQD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)			
		Latitude: 32.93139° N Longitude: -96.84795° W No Elevation Available Location Offset: 20 ft. East of tree line Surface Condition: Bare Earth												
		SHALE: dark gray, with occasional shells		T-21 C-22	TC=50/1/4" 50/1/4" RQD=72	72%								
50				T-23 C-24	TC=50/3/2" 50/3/4" RQD=71	71%								
55				T-25 C-26	TC=50/2/4" 50/3/4" RQD=40	40%								
60		LIMESTONE: gray, with occasional shells, with interbedded shale layers		T-27 C-28	TC=50/1/4" 50/1/4" RQD=93	93%								
65		SHALE: dark gray, hard, sandy, with shells		T-29 C-30	TC=50/3/4" 50/1/2" RQD=94	94%								
70				T-31 C-32	TC=50/1/2" 50/1/4" RQD=96	95%								
75				T-33 C-34	TC=50/1/4" 50/1" RQD=98	98%								
80				T-35	TC=50/1" 50/1"									
85		The exploration was terminated at approximately 80 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.				GROUNDWATER LEVEL INFORMATION: Groundwater was not encountered during drilling operations. After a 24 hour observation period, the water level was at 5 feet below existing ground surface. GENERAL NOTES: Boring was advanced to a depth of 20 feet prior to the use of water in the rock core drilling process.								

GINT FILE: L:\gint\projects\dw\ Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG B-02 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: GW CHECKED BY: DR DATE: 11/8/2013 REVISED:		B-01 PAGE: 2 of 2

Date Begin - End: 11/05/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-75 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-03

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/ Remarks	
		Latitude: 32.93185° N Longitude: -96.84804° W No Elevation Available Location Offset: 40 ft. Northwest of Stake Surface Condition: Bare Earth	Sample Number	Sample Type	Blow Counts (BC) = Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. RQD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No. 4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)		
5 10 15 20 25 30 35 40	<p>Fat CLAY (CH): brown to dark brown, hard, with calcareous nodules, coarse to fine gravel, and sand</p> <p>- becoming brownish gray, slickensided, iron oxide staining</p> <p>- with coarse gravel seam</p> <p>WEATHERED SHALE: dark gray, laminated</p> <p>SHALE: gray to dark gray, stiff to hard, sandy</p> <p>- limestone seam plugged core barrel</p>	U-1	PP=4.5+			CH	18.9	107	81	58	32	Unc. Comp. Str. = 7.06 tsf			
		T-2	TC=14/6" 14/6"												
		U-3	PP=4.5+												
		T-4	TC=12/6" 12/6"												
		U-5	PP=4.5+												
		U-6	PP=4.5												
		T-7	TC=2/6" 4/6"												
		U-8	PP=3.0												
		T-9	TC=13/6" 12/6"												
		U-10	PP=4.5+												
		T-11	TC=50/5" 50/5 1/2"												
		T-12	TC=50/4" 50/3 1/2"												
		C-13	RQD=98	98%	14.2								121	Unc. Comp. Str. = 13.53 tsf	
		T-14	TC=50/6" 50/2"												
		C-15	RQD=100	100%											
		T-16	TC=50/1 1/2" 50/1 1/4"												
		C-17	RQD=39	48%	18.5								113		Unc. Comp. Str. = 6.13 tsf
		T-18	TC=50/3 1/4" 50/4"												
		C-19	RQD=0	50%											

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PROJECT NO.: 137422
 DRAWN BY: GW
 CHECKED BY: DR
 DATE: 11/8/2013
 REVISED:

BORING LOG B-03

 Alpha Road Connector - Vitruvian Phase IV
 Brookhaven Community College
 Farmers Branch, Texas

BORING

B-03


 PAGE: 1 of 2

Date Begin - End: 11/05/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-75 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-03

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/Remarks
		Sample Number	Sample Type	Blow Counts (BC) / Incorr. blows/6 in.	Pocket Pen(PP) = tsf	Texas Cone(TC) = blows/6 in	RQD=%	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	
		Latitude: 32.93185° N Longitude: -96.84804° W No Elevation Available Location Offset: 40 ft. Northwest of Stake Surface Condition: Bare Earth												
		SHALE: gray to dark gray, stiff to hard, sandy - with interbedded limestone layer												
50		T-20 C-21	TC=50/1 1/2" 50/1"			87%								
55		T-22 C-23	TC=50/1 1/4" 50/1 1/2"			88%								
55		T-24 C-25	TC=50/1 1/4" 50/1"			100%								
60		T-26	TC=50/1 1/4" 50/1"											
65		The exploration was terminated at approximately 60 ft. below ground surface. The exploration was backfilled with auger cuttings on November 05, 2013.											GROUNDWATER LEVEL INFORMATION: Groundwater was not encountered during drilling or after completion. GENERAL NOTES: Boring was advanced to a depth of 25 feet prior to the use of water in the rock core drilling process.	

GINT FILE: L:\gint\projects\dw\ Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG B-03 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: GW		B-03
CHECKED BY: DR	DATE: 11/8/2013		
REVISED:			PAGE: 2 of 2

Date Begin - End: 11/04/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-75 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-04

Depth (feet)	Graphical Log	FIELD EXPLORATION						LABORATORY RESULTS						Other Tests/Remarks
		Latitude: 32.93200° N Longitude: -96.84802° W No Elevation Available Surface Condition: Bare Earth	Sample Number	Sample Type Blow Counts(B/C)= Uncorr. blows/6" in. Pocket Pen(PP)= tsf Texas Cone(TC)= blows/6 in. RQD=%	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)		
5		Fat CLAY (CH): dark brown to olive brown, hard, with calcareous nodules and coarse to fine gravel - becoming olive brown - iron oxide staining	U-1	PP=4.5+		CH	16.8	107	90	65	40	Unc. Comp. Str. = 8.79 tsf		
			T-2	TC=11/6" 9/6"										
			U-3	PP=4.5+										
			T-4	TC=7/6" 14/6"										
			U-5	PP=4.5+										
			U-6	PP=4.5+										
			T-7	TC=14/6" 20/6"										
15		WEATHERED SHALE: dark gray, laminated, with iron oxide staining, slickensided	U-8	PP=4.5+		20.7	107					Unc. Comp. Str. = 5.15 tsf		
			T-9	TC=47/6" 50/6"										
20		SHALE: dark gray, stiff to hard, with interbedded limestone seams and occasional shells	T-10	TC=50/5" 50/3"		81%								
			C-11	RQD=81										
			T-12	TC=50/1 1/2" 50/1 1/2"									96%	
C-13	RQD=96													
30		SHALE: dark gray, stiff to hard, with interbedded limestone seams and occasional shells	T-14	TC=50/1" 50/1 1/2"		93%								
			C-15	RQD=93										
35		SHALE: dark gray, stiff to hard, with interbedded limestone seams and occasional shells	T-16	TC=50/1" 50/1"		92%	17.8	112				Unc. Comp. Str. = 5.55 tsf		
			C-17	RQD=62										
40		SHALE: dark gray, stiff to hard, with interbedded limestone seams and occasional shells	T-18	TC=50/4" 50/3"		94%								
			C-19	RQD=94										

GINT FILE: L:\gint\projects\dfw Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]


	PROJECT NO.: 137422	BORING LOG B-04	BORING
	DRAWN BY: GW		
	CHECKED BY: DR	Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	
	DATE: 11/8/2013		
	REVISED:	B-04	
			PAGE: 1 of 2

Date Begin - End: 11/04/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-75 **Hammer Type - Drop:** 140 lb. Auto - 45 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG B-04

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/ Remarks
		Sample Number	Sample Type Blow Counts (BC) Uncorr. blows/6 in. Pocket Pen(PP)= tsf Texas Cone(TC)= blows/6 in. RQD=%	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)			
	Latitude: 32.93200° N Longitude: -96.84802° W No Elevation Available Surface Condition: Bare Earth													
45-50	SHALE: dark gray, stiff to hard, with interbedded limestone seams and occasional shells	T-20 C-21	TC=50/1 1/4" 50/1 1/2" RQD=91	91%										
50-55		T-22 C-23	TC=50/2" 50/1" RQD=98	98%										
55-60		T-24 C-25	TC=50/1 1/4" 50/1 1/2" RQD=82	82%										
60-65		T-26 C-27	TC=50/2 1/4" 50/1 1/2" RQD=95	95%										
65-66	LIMESTONE: gray, hard, pitted													
66-70	SHALE: dark gray, with occasional shells	T-28 C-29	TC=50/3/4" 50/1 1/2" RQD=94	9362%										
70-75		T-30 C-31	TC=50/1 1/4" 50/1" RQD=89	89%										
75-80		T-32 C-33	TC=50/1 1/4" 50/3/4" RQD=80	80%										
80-85		T-34	TC=50/1" 50/3/4"											
<p>The exploration was terminated at approximately 80 ft. below ground surface. The exploration was backfilled with auger cuttings on November 04, 2013.</p>		<p>GROUNDWATER LEVEL INFORMATION: Groundwater was not encountered during drilling operations. After a 24 hour observation period, the boring was dry. GENERAL NOTES: Boring was advanced to a depth of 25 feet prior to the use of water in the rock core drilling process.</p>												

GINT FILE: L:\gint\projects\dfw\Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG B-04	BORING
	DRAWN BY: GW		
CHECKED BY: DR	DATE: 11/8/2013	Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	B-04
REVISED:			PAGE: 2 of 2

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG C-01

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/Remarks
		Latitude: 32.93141° N Longitude: -96.84794° W No Elevation Available Surface Condition: Bare Earth	Sample Number	Sample Type	Blow Counts (BC) = Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. FGD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No. 4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)	
5 10 15 20 25		Fat CLAY to Lean CLAY (CL-CH): dark brown to olive brown, very stiff to soft, with calcareous nodules and gravel	U-1	PP=3.5										
			U-2	PP=3.0										
		- friable, olive brown to yellow brown	U-3	PP=2.5										
			U-4	PP=0.5										
		- pale brown, with coarse to fine gravel and sand seams	U-5	PP=1.5		SC	24.2	107		36	43	21	Unc. Comp. Str. = 0.84 tsf	
			U-6	PP= --										
		Lean CLAY with gravel (CL): light brown, gray, hard, high amount of gravel	S-7	BC=12 27 28										
			U-8	PP=4.5										
		WEATHERED SHALE: dark gray to light gray, with iron oxide staining, laminated	U-9	PP=4.5+										

The exploration was terminated at approximately 25 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.

GROUNDWATER LEVEL INFORMATION:
 Groundwater was encountered at 5 feet below the existing ground surface. After a 24 hour observation period, the water level was at 6 feet below existing ground surface.
GENERAL NOTES:
 Boring drilled at stake

GINT FILE: L:\gint\projects\dw\ Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING\TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG C-01 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: GW CHECKED BY: DR DATE: 11/8/2013 REVISED:		C-01
			PAGE: 1 of 1

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG C-02

Depth (feet)	Graphical Log	FIELD EXPLORATION						LABORATORY RESULTS						
		Latitude: 32.93256° N Longitude: -96.85580° W No Elevation Available	Sample Number	Sample Type	Blow Counts (BC) = Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. FGD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No. 4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)	Other Tests/Remarks
0		Fat CLAY (CH): dark brown, hard, with occasional calcareous nodules	U-1	PP=4.5+										
1			U-2	PP=4.5+										
2		Lean CLAY (CL): light grayish brown to light brown, hard, with gravel and sand seams	S-3	BC=14 14 25		SC	12.6			38	41	21		
5			S-4	BC=50/4"										
6		WEATHERED LIMESTONE: light brown to brown, with clay seams	T-5	TC=50/2" 50/2"										
10			T-6	TC=50/1/2" 50/1/2"										
12		LIMESTONE: gray	T-7	TC=50/3/4" 50/1/2"										
15			T-8	TC=50/1/2" 50/1/4"										
20														
25														

The exploration was terminated at approximately 25 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.

GROUNDWATER LEVEL INFORMATION:
 Groundwater was not encountered during drilling or after completion.
GENERAL NOTES:
 Boring drilled at stake



PROJECT NO.: 137422
 DRAWN BY: GW
 CHECKED BY: DR
 DATE: 11/8/2013
 REVISED:

BORING LOG C-02
 Alpha Road Connector - Vitruvian Phase IV
 Brookhaven Community College
 Farmers Branch, Texas


BORING
C-02
 PAGE: 1 of 1

GINT FILE: L:\gint\projects\dw\ Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING\TEST PIT SOIL LOG]

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore **BORING LOG P-01**
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/Remarks
		Latitude: 32.93256° N Longitude: -96.84558° W No Elevation Available	Sample Number	Sample Type	Blow Counts (BC)= Uncorr. blows/6 in. Pocket Pen(PP)= tsf Texas Cone(TC)= blows/6 in ROD=%	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)	
		Surface Condition: Bare Earth												
	Diagonal hatching	Fat CLAY (CH): dark brown, hard, with limestone fragments	U-1	PP=4.5+										
			U-2	PP=4.5+		CH	11.5			95	71	44		
	Stippled pattern	WEATHERED LIMESTONE: light brownish gray to light brown, with clay	S-3	BC=35 50/4"										
5														
			T-4	TC=50/1" 50/¼"										
		- becoming brownish gray												
10			T-5	TC=50										
		The exploration was terminated at approximately 10 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.					GROUNDWATER LEVEL INFORMATION: Groundwater was not encountered during drilling or after completion. GENERAL NOTES: Boring drilled at stake							
15														
20														
25														

GINT FILE: L:\gint\projects\dfw Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG P-01	BORING
	DRAWN BY: GW		
CHECKED BY: DR			
DATE: 11/8/2013			P-01
REVISED:			
PAGE: 1 of 1			

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG P-02

Depth (feet)	Graphical Log	FIELD EXPLORATION							LABORATORY RESULTS						Other Tests/ Remarks	
		Latitude: 32.93244° N Longitude: -96.84703° W No Elevation Available Surface Condition: Bare Earth	Sample Number	Sample Type	Blow Counts (BC) = Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in. FGD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No. 4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)			
5		Fat CLAY (CH): dark brown to dark grayish brown, hard to very stiff, with fine gravel and sand seams - becoming olive brown	U-1	PP=4.0												
			U-2	PP=4.5+		CH	14.0			67	57	34				
			U-3	PP=4.5+				17.2								
			U-4	PP=3.5				23.5								
			U-5	PP=2.0												
10			<p>The exploration was terminated at approximately 10 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.</p>							<p>GROUNDWATER LEVEL INFORMATION: Groundwater was not encountered during drilling or after completion. GENERAL NOTES: Boring drilled at stake</p>						
15																
20																
25																

GINT FILE: L:\gint\projects\dfw Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG P-02 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: GW CHECKED BY: DR DATE: 11/8/2013 REVISED:		P-02
			PAGE: 1 of 1

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG P-03

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/ Remarks
		Latitude: 32.93258° N Longitude: -96.84789° W No Elevation Available Surface Condition: Bare Earth	Sample Number	Sample Type	Blow Counts (BC) Uncorr. blows/6 in. Pocket Pen (PP) = tsf Texas Cone (TC) = blows/6 in FGD = %	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)	
0		Fat CLAY (CH): dark brown to dark brownish gray, hard, with fine gravel - becoming olive brown, some gray	U-1	PP=2.5		CH	31.5			91	63	34		
2.5			U-2	PP=4.5+			22.2							
5			U-3	PP=4.5+			24.8							
7.5			U-4	PP=4.5+			23.1							
10			U-5	PP=4.5+										
10	The exploration was terminated at approximately 10 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.		<u>GROUNDWATER LEVEL INFORMATION:</u> Groundwater was not encountered during drilling or after completion. <u>GENERAL NOTES:</u> Boring drilled at stake											

GINT FILE: L:\gint\projects\dfw\Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]



PROJECT NO.: 137422
DRAWN BY: GW
CHECKED BY: DR
DATE: 11/8/2013
REVISED:

BORING LOG P-03

Alpha Road Connector - Vitruvian Phase IV
Brookhaven Community College
Farmers Branch, Texas

BORING

P-03

PAGE: 1 of 1

Date Begin - End: 10/29/2013 **Drill Company:** StrataBore
Logged By: D. Russell **Drill Crew:** Marcus
Hor.-Vert. Datum: Not Available **Drill Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Exploration Plunge: -90 degrees **Exploration Method:** Hollow Stem Auger
Weather: **Auger Diameter:** 6 in. O.D.

BORING LOG P-04

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS							Other Tests/Remarks
		Latitude: 32.93350° N Longitude: -96.84782° W No Elevation Available Location Offset: 10 ft. South Surface Condition: Bare Earth	Sample Number	Sample Type Blow Counts (BC) Uncorr. blows/6 in. Pocket Pen (PP)= tsf Texas Cone (TC)= blows/6 in. FGD=%	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Density (pcf)	Passing No.4 Sieve (%)	Passing #200 Sieve (%)	Liquid Limit (NV=No Value)	Plasticity Index (NP=No Plasticity)		
5		CLAY (CL): dark brown to orange, with limestone fragments, calcareous, possible fill, with sand seams	U-1	PP=4.5+			17.7							
			U-2	PP=4.5+		CL	16.7		51	38	17			
		Fat CLAY (CH): dark brown to dark brownish gray, hard, with fine gravel	U-3	PP=4.0										
			U-4	PP=4.0			23.0							
			U-5	PP=4.0			25.6							
10		<p>The exploration was terminated at approximately 10 ft. below ground surface. The exploration was backfilled with auger cuttings on October 29, 2013.</p>					<p>GROUNDWATER LEVEL INFORMATION: Groundwater was not encountered during drilling or after completion. GENERAL NOTES: Boring drilled at stake</p>							

GINT FILE: L:\gint\projects\dfw Project Logs\137422 Alpha Road Connector.gpj R:\KLF_STANDARD_GINT_LIBRARY_SR.1.2.GLB [KLF_BORING/TEST PIT SOIL LOG]

	PROJECT NO.: 137422	BORING LOG P-04 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING P-04
	DRAWN BY: GW CHECKED BY: DR DATE: 11/8/2013 REVISED:		

PLOTTED: 11/30/2020 08:42 PM BY: DMarsau

Date Begin - End: 10/19/2020 **Drilling Company:** StrataBore Inc. **BORING LOG D-01**
Logged By: D. Marsau **Drill Crew:** Castillo
Hor.-Vert. Datum: Not Available **Drilling Equipment:** CME-45 **Hammer Type - Drop:** 140 lb. Auto - 30 in.
Plunge: -90 degrees **Drilling Method:** Continuous Flight Auger
Weather: Overcast **Exploration Diameter:** 8" in. O.D.

Depth (feet)	Graphical Log	FIELD EXPLORATION				LABORATORY RESULTS						
		Latitude: 32.93208° Longitude: -96.84678° Surface Condition: Grass	Sample Type Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Texas Cone(TC)= blows/6 in	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
Lithologic Description												
0	6" TOPSOIL		PP=4.5+	6"								
0-6	Fat CLAY (CH): dark brown and brown, moist, very stiff to hard, with calcareous nodules		PP=3.5	9"								
6-9			PP=3.0	9"								
9-13	-light brown below 9 feet		PP=2.5	13"								
13-14			PP=2.5	14"	CH	29.4	92	77	85	58		
14-18	-increase in sand, moist to wet below 13 feet		BC=3 5 6	18"								
18-20	- shaly, dark gray below 18 feet		PP=4.5+	8"								
The boring was terminated at approximately 20 ft. below ground surface. The boring was backfilled with auger cuttings on October 19, 2020.		GROUNDWATER LEVEL INFORMATION: Groundwater was not observed during drilling or after completion. GENERAL NOTES: The boring was located in the field by a Kleinfelder professional using a handheld GPS device with a horizontal accuracy of approximately 15 feet.										

PROJECT NUMBER: 20212439.001A OFFICE FILTER: DALLAS
 GINT TEMPLATE: E:KLF_STANDARD_GINT_LIBRARY_2021.GLB [KLF_BORING/TEST PIT SOIL LOG]



PROJECT NO.: 20212439.001A
 DRAWN BY: DM
 CHECKED BY: RJH
 DATE:

BORING LOG D-01
 Alpha Road Connector - Vitruvian Phase IV
 Brookhaven Community College
 Farmers Branch, Texas

BORING
D-01
 PAGE: 1 of 1

PLOTTED: 11/30/2020 08:42 PM BY: DMarsau

Date Begin - End: 10/19/2020	Drilling Company: StrataBore Inc.	BORING LOG D-02	
Logged By: D. Marsau	Drill Crew: Castillo		
Hor.-Vert. Datum: Not Available	Drilling Equipment: CME-45		Hammer Type - Drop: 140 lb. Auto - 30 in.
Plunge: -90 degrees	Drilling Method: Continuous Flight Auger		
Weather: Overcast	Exploration Diameter: 8" in. O.D.		

Depth (feet)	Graphical Log	FIELD EXPLORATION				LABORATORY RESULTS							Additional Tests/ Remarks	
		Latitude: 32.93090° Longitude: -96.84520° Surface Condition: Grass		Sample Type	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)		
Lithologic Description		Blow Counts(BC)= Uncorr. Blows/6 in.	Pocket Pen(PP)= tsf	Texas Cone(TC)= blows/6 in										
0		6" TOPSOIL		PP=4.5+	7"									
0-5		Fat CLAY (CH): dark brown and gray, moist, hard, with calcareous nodules		PP=4.5+	11"	CH	27.3	100	93	83	56			
5-10		Weathered LIMESTONE: light yellowish brown, soft		TC=50/5" 50/1"										
10-15		LIMESTONE: light gray, hard		TC=50/3" 50/1"										
15				TC=50/1" 50/0.5"										

The boring was terminated at approximately 15 ft. below ground surface. The boring was backfilled with auger cuttings on October 19, 2020.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
The boring was located in the field by a Kleinfelder professional using a handheld GPS device with a horizontal accuracy of approximately 15 feet.

GINT FILE: KLF_gint_master_2021
 GINT TEMPLATE: E:KLF_STANDARD_GINT_LIBRARY_2021.GLB [KLF_BORING/TEST PIT SOIL LOG]
 OFFICE FILTER: DALLAS
 PROJECT NUMBER: 20212439.001A

 KLEINFELDER <i>Bright People. Right Solutions.</i>	PROJECT NO.: 20212439.001A	BORING LOG D-02 Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: DM CHECKED BY: RJH DATE:		D-02

PLOTTED: 12/29/2020 10:11 AM BY: DMarsau

BORING LOG D-03

Date Begin - End: 12/15/2020 **Drilling Company:** Kleinfelder
Logged By: D. Marsau **Drill Crew:** D. Marsau
Hor.-Vert. Datum: Not Available **Drilling Equipment:** Hand Auger
Plunge: -90 degrees **Drilling Method:** Hand Auger
Weather: Overcast **Exploration Diameter:** 3" in. O.D.

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS						
		Latitude: 32.93175° Longitude: -96.84498° Surface Condition: Grass	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in.	Pocket Pen(PP)= tsf Texas Cone(TC)= blows/6 in	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)
Lithologic Description													
0		6" TOPSOIL											
0-4		Fat CLAY (CH): dark brown and brown, moist, stiff, with calcareous nodules											
4-5		- light brown, with broken limestone pieces below 4 feet				CH	25.0		98	79	60	38	
5		Weathered LIMESTONE: light brown, soft											
		<p>The boring was terminated at approximately 6 ft. below ground surface. The boring was backfilled with auger cuttings on December 15, 2020.</p>					<p>GROUNDWATER LEVEL INFORMATION: Groundwater was not observed during drilling or after completion. GENERAL NOTES: The boring was located in the field by a Kleinfelder professional using a handheld GPS device with a horizontal accuracy of approximately 15 feet.</p>						

PROJECT NUMBER: 20212439.001A OFFICE FILTER: DALLAS
 GINT TEMPLATE: E:KLF_STANDARD_GINT_LIBRARY_2021.GLB [_KLF_BORING/TEST PIT SOIL LOG]



PROJECT NO.: 20212439.001A
 DRAWN BY: DM
 CHECKED BY: RJH
 DATE:

BORING LOG D-03
 Alpha Road Connector - Vitruvian Phase IV
 Brookhaven Community College
 Farmers Branch, Texas

BORING
D-03
 PAGE: 1 of 1

Date Begin - End: 12/15/2020 **Drilling Company:** Kleinfelder
Logged By: D. Marsau **Drill Crew:** D. Marsau
Hor.-Vert. Datum: Not Available **Drilling Equipment:** Hand Auger
Plunge: -90 degrees **Drilling Method:** Hand Auger
Weather: Overcast **Exploration Diameter:** 3" in. O.D.

Depth (feet)	Graphical Log	FIELD EXPLORATION					LABORATORY RESULTS						Additional Tests/ Remarks
		Latitude: 32.93152° Longitude: -96.84580° Surface Condition: Grass	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in.	Pocket Pen(PP)= tsf	Texas Cone(TC)= blows/6 in	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	
Lithologic Description													
0 - 0.5		6" TOPSOIL											
0.5 - 7.0		Fat CLAY (CH): dark brown and brown, moist, stiff, with calcareous nodules					CH	44.6		99	87	80	49
7.0 - 10.0													

The boring was terminated at approximately 7 ft. below ground surface. The boring was backfilled with auger cuttings on December 15, 2020.

GROUNDWATER LEVEL INFORMATION:
 Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
 The boring was located in the field by a Kleinfelder professional using a handheld GPS device with a horizontal accuracy of approximately 15 feet.



PROJECT NO.: 20212439.001A
 DRAWN BY: DM
 CHECKED BY: RJH
 DATE:

BORING LOG D-04
 Alpha Road Connector - Vitruvian Phase IV
 Brookhaven Community College
 Farmers Branch, Texas


BORING
D-04
 PAGE: 1 of 1




KLEINFELDER

Bright People. Right Solutions.

Exploration ID	Approx. Sample Depth (ft.)	Sample No.	Sample Description	Moisture Content (%)	Dry Density (pcf)	Sieve Analysis			Atterberg Limits			Swell/Compression	Other Tests
						Passing 3/4 inch Sieve (%)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	LL	PL	PI		
B-01	3.5	U-3		26.7	96								
B-01	6.5	U-5	LEAN CLAY WITH SAND (CL)	29.2				79	43	21	22		
B-01	8.0	U-6		39.4	83								
B-01	19.0	U-10		22.9	101								Unc. Comp. Str. = 1.68 tsf
B-01	30.0	C-15		14.6	120								Unc. Comp. Str. = 6.47 tsf
B-01	40.0	C-19		17.8	113								Unc. Comp. Str. = 6.75 tsf
B-02	3.5	U-3		14.9	116								
B-02	6.5	U-5	FAT CLAY (CH)	18.6	109			95	66	27	39		
B-02	8.0	U-6		18.4									Unc. Comp. Str. = 5.26 tsf
B-02	14.0			30.9									
B-02	22.0			21.6	103								Unc. Comp. Str. = 3.38 tsf
B-02	35.0	C-18		11.2	128								Unc. Comp. Str. = 9.85 tsf
B-03	3.5	U-3	FAT CLAY WITH SAND (CH)	18.9	107			81	58	26	32		
B-03	6.0			21.2	102								Unc. Comp. Str. = 7.06 tsf
B-03	6.5	U-5		22.0									
B-03	8.0	U-6		25.0	98								
B-03	14.0	U-8		24.5									
B-03	25.0	C-13		14.2	121								Unc. Comp. Str. = 13.5 tsf
B-03	35.0	C-17		18.5	113								Unc. Comp. Str. = 6.13 tsf
B-04	3.5	U-3	FAT CLAY (CH)	16.8				90	65	25	40		
B-04	6.5	U-5		19.1	107								
B-04	8.0	U-6		18.8									Unc. Comp. Str. = 8.79 tsf
B-04	14.0	U-8		20.7	107								Unc. Comp. Str. = 5.15 tsf
B-04	35.0	C-17		17.8	112								Unc. Comp. Str. = 5.55 tsf
C-01	8.0	U-5	CLAYEY SAND (SC)	24.2	107			36	43	22	21		Unc. Comp. Str. = 0.84 tsf
C-02	2.0	U-2		34.1									
C-02	4.0	S-3	CLAYEY SAND (SC)	12.6				38	41	20	21		
P-01	2.0	U-2	FAT CLAY (CH)	11.5				95	71	27	44		

	PROJECT NO.: 137422	LABORATORY TEST RESULT SUMMARY Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING 15
	DRAWN BY: GW CHECKED BY: RH DATE: 11/8/2013 REVISED:		

Exploration ID	Approx. Sample Depth (ft.)	Sample No.	Sample Description	Moisture Content (%)	Dry Density (pcf)	Sieve Analysis			Atterberg Limits			Swell/Compression	Other Tests
						Passing 3/4 inch Sieve (%)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	LL	PL	PI		
P-02	0.0	U-1		30.5									
P-02	2.0	U-2	SANDY FAT CLAY (CH)	14.0				67	57	23	34		
P-02	4.0	U-3		17.2									
P-02	6.0	U-4		23.5									
P-03	0.0	U-1	FAT CLAY (CH)	31.5				91	63	29	34		
P-03	2.0	U-2		22.2									
P-03	4.0	U-3		24.8									
P-03	6.0	U-4		23.1									
P-04	0.0	U-1		17.7									
P-04	2.0	U-2	SANDY LEAN CLAY (CL)	16.7				51	38	21	17		
P-04	6.0	U-4		23.0									
P-04	8.0	U-5		25.6									

	PROJECT NO.: 137422	LABORATORY TEST RESULT SUMMARY Alpha Road Connector - Vitruvian Phase IV Brookhaven Community College Farmers Branch, Texas	BORING
	DRAWN BY: GW		16
CHECKED BY: RH			
DATE: 11/8/2013			
REVISED:			



Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

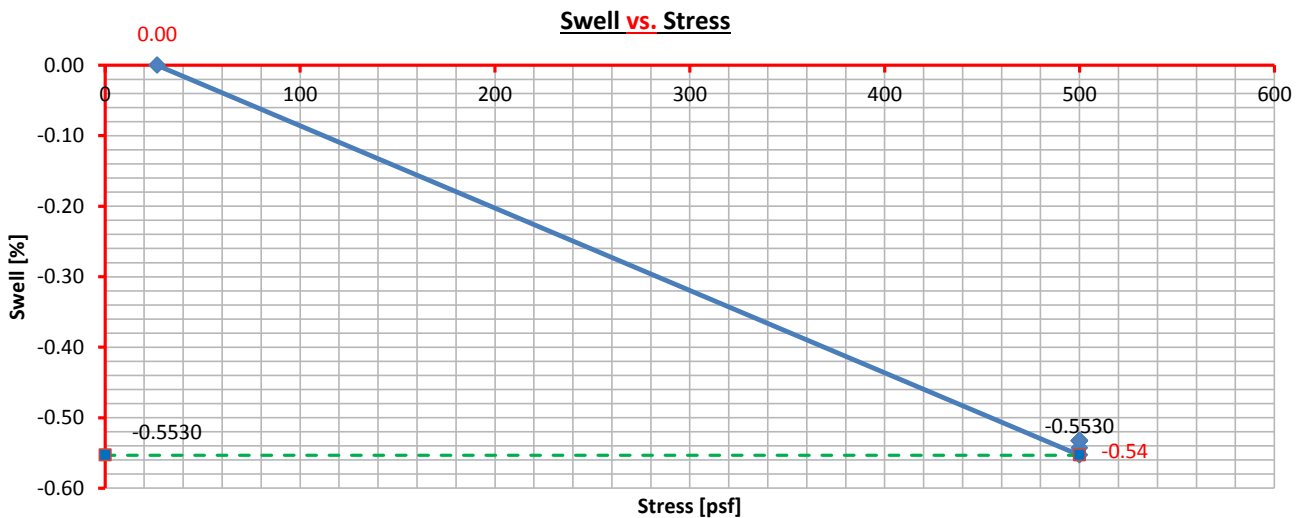
Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Lean clay, yellow/brown & brown, with calcareous nodules
Project No.: 137422
Boring No.: B-1
Sample Depth (ft.): 3.5' - 5.0'
Tested By: E. Arapi
Date Tested: 10/8/2013
Oedometer ID: 1

Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	500	500
Moisture Content (%) =	26.7	27.0
Wet Unit Weight (pcf) =	121.8	122.0
Dry Unit Weight (pcf) =	96.1	96.1

One-Dimensional Swell at Overburden Pressure = 0.0%





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

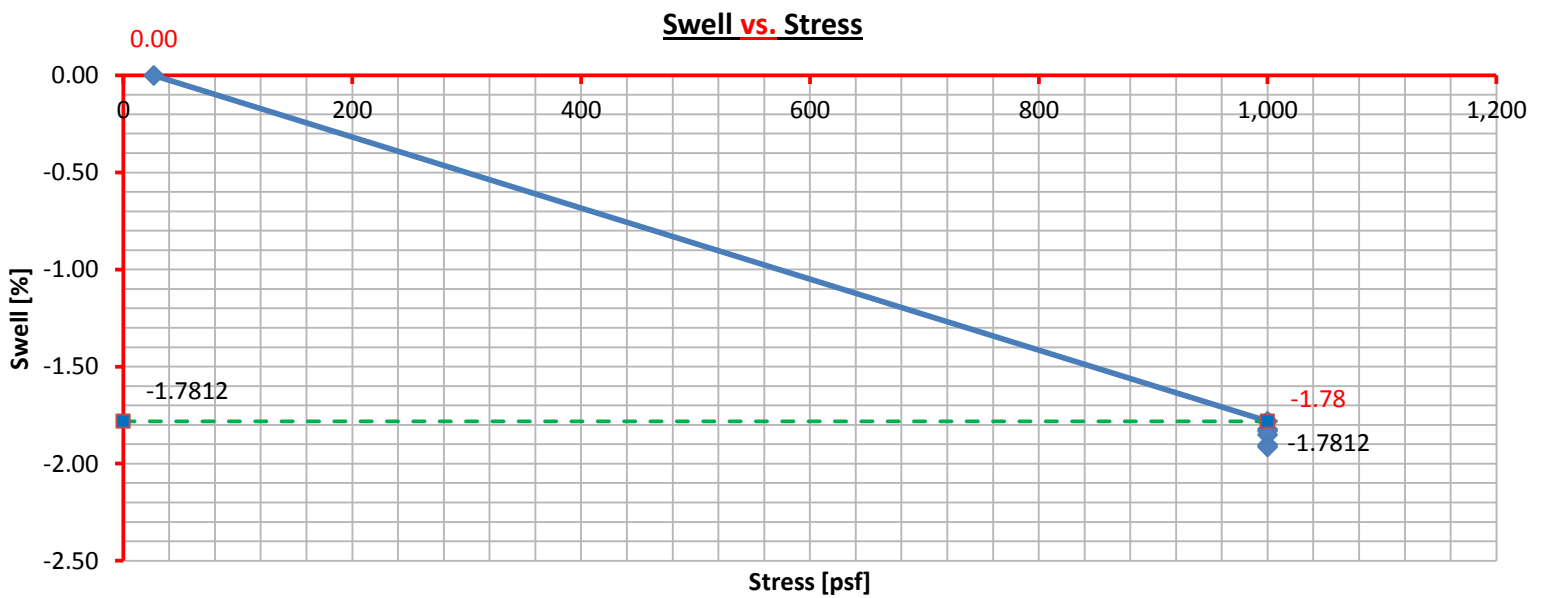
Project Name: Alpha Road Connector
Location: _____
Material Description: Lean clay, light brown, with fine gravel
Project No.: 137422 **Tested By:** E. Arapi
Boring No.: B-1 **Date Tested:** 10/8/2013
Sample Depth (ft.): 8.0' - 10.0' **Oedometer ID:** 2

Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	1000	1000
Moisture Content (%) =	39.4	38.5
Wet Unit Weight (pcf) =	115.2	114.7
Dry Unit Weight (pcf) =	82.7	82.8

One-Dimensional Swell at Overburden Pressure = -0.1%





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Fat Clay, dark brown, with calcerous nodules
Project No.: 137422
Boring No.: B-2
Sample Depth (ft.): 3.5' - 5.0'
Tested By: E. Arapi
Date Tested: 10/8/2013
Oedometer ID: 3

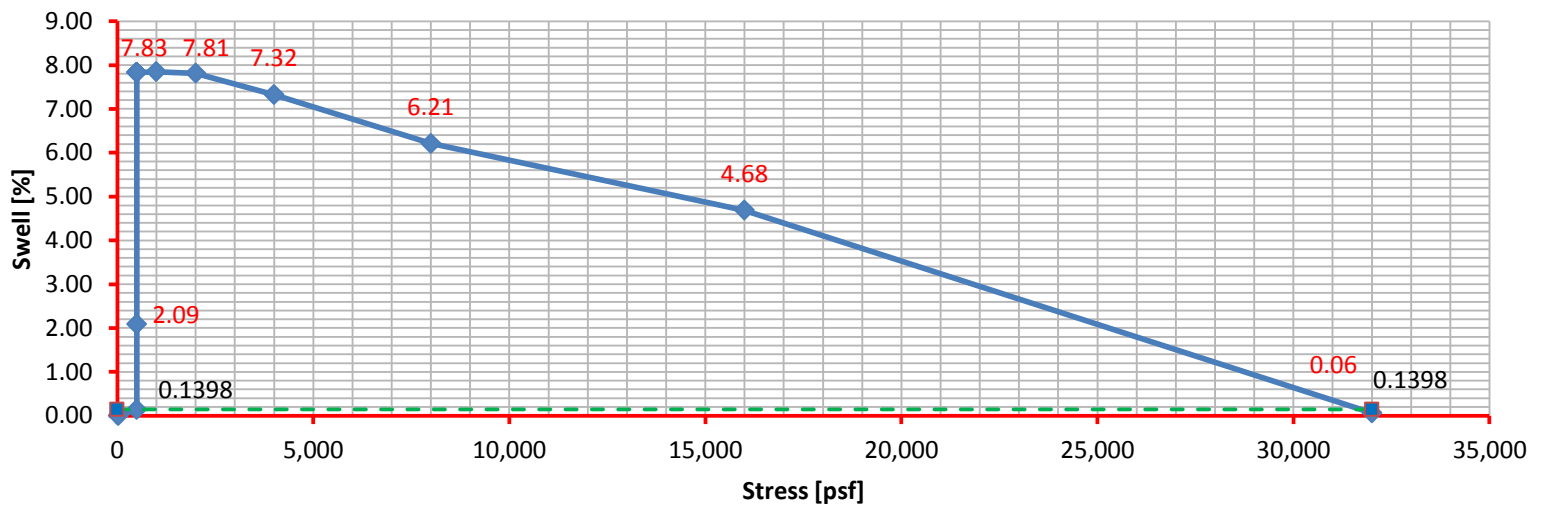
Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	500	32000
Moisture Content (%) =	14.9	17.6
Wet Unit Weight (pcf) =	133.0	126.4
Dry Unit Weight (pcf) =	115.8	107.5

One-Dimensional Swell at Overburden Pressure = 7.7%
Swell Pressure = 31500 psf

Swell vs. Stress





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Fat Clay, olive brown, with calcareous nodules
Project No.: 137422
Boring No.: B-2
Sample Depth (ft.): 6.5' - 8.0'
Tested By: E. Arapi
Date Tested: 10/8/2013
Oedometer ID: 4

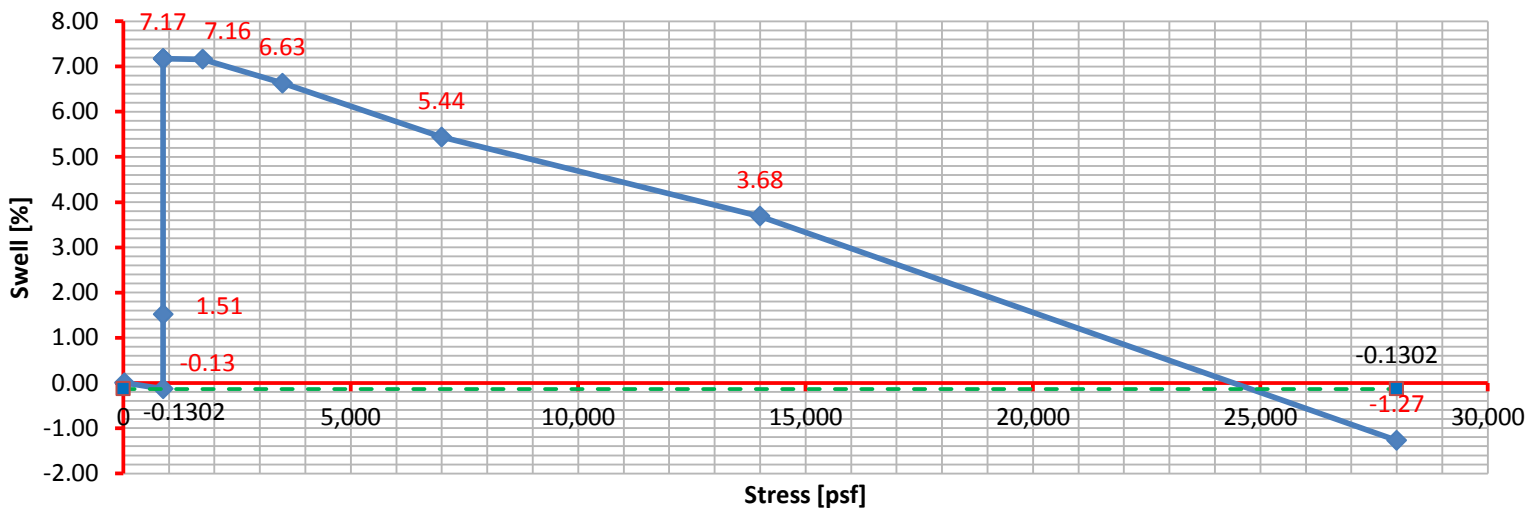
Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	875	28000
Moisture Content (%) =	19.7	21.0
Wet Unit Weight (pcf) =	129.5	122.0
Dry Unit Weight (pcf) =	108.2	100.8

One-Dimensional Swell at Overburden Pressure = 7.3%
Swell Pressure = 24125 psf

Swell vs. Stress





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Fat Clay, dark gray, with calcereous nodules & multi-colored shale partings
Project No.: 137422
Boring No.: B-3
Sample Depth (ft.): 3.5' - 5.0'
Tested By: E. Arapi
Date Tested: 10/8/2013
Oedometer ID: 5

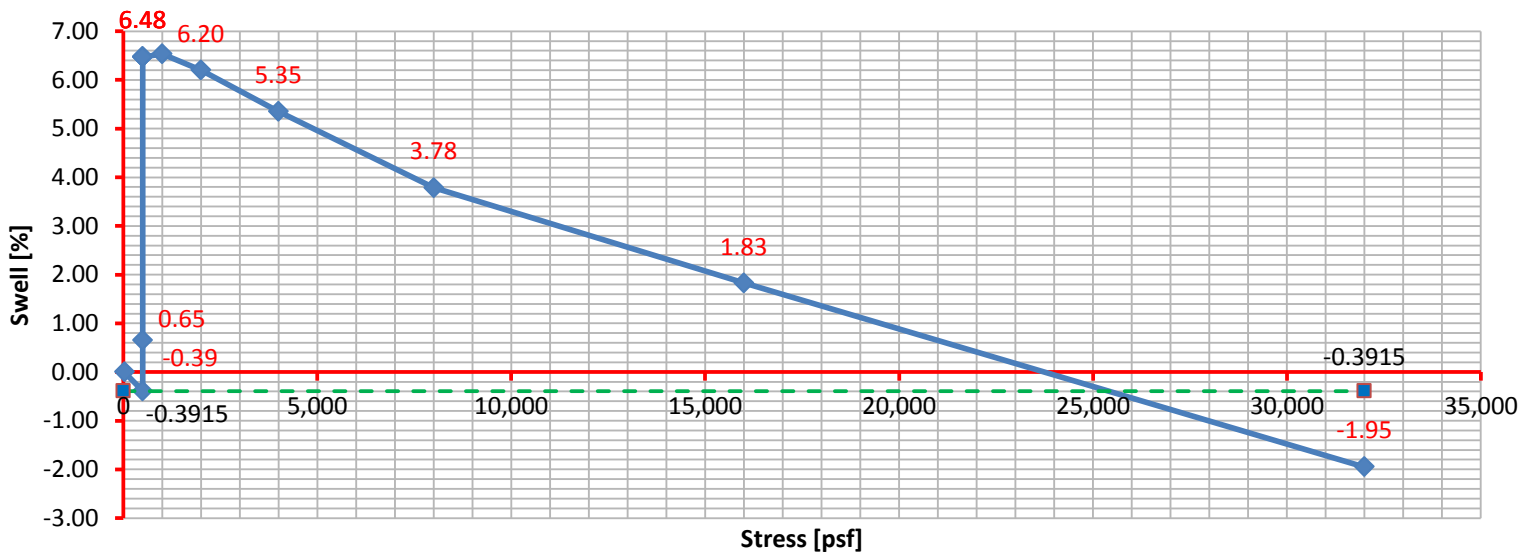
Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	500	32000
Moisture Content (%) =	19.6	20.9
Wet Unit Weight (pcf) =	127.7	120.9
Dry Unit Weight (pcf) =	106.8	100.0

One-Dimensional Swell at Overburden Pressure = 6.9%
Swell Pressure = 24500 psf

Swell vs. Stress





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

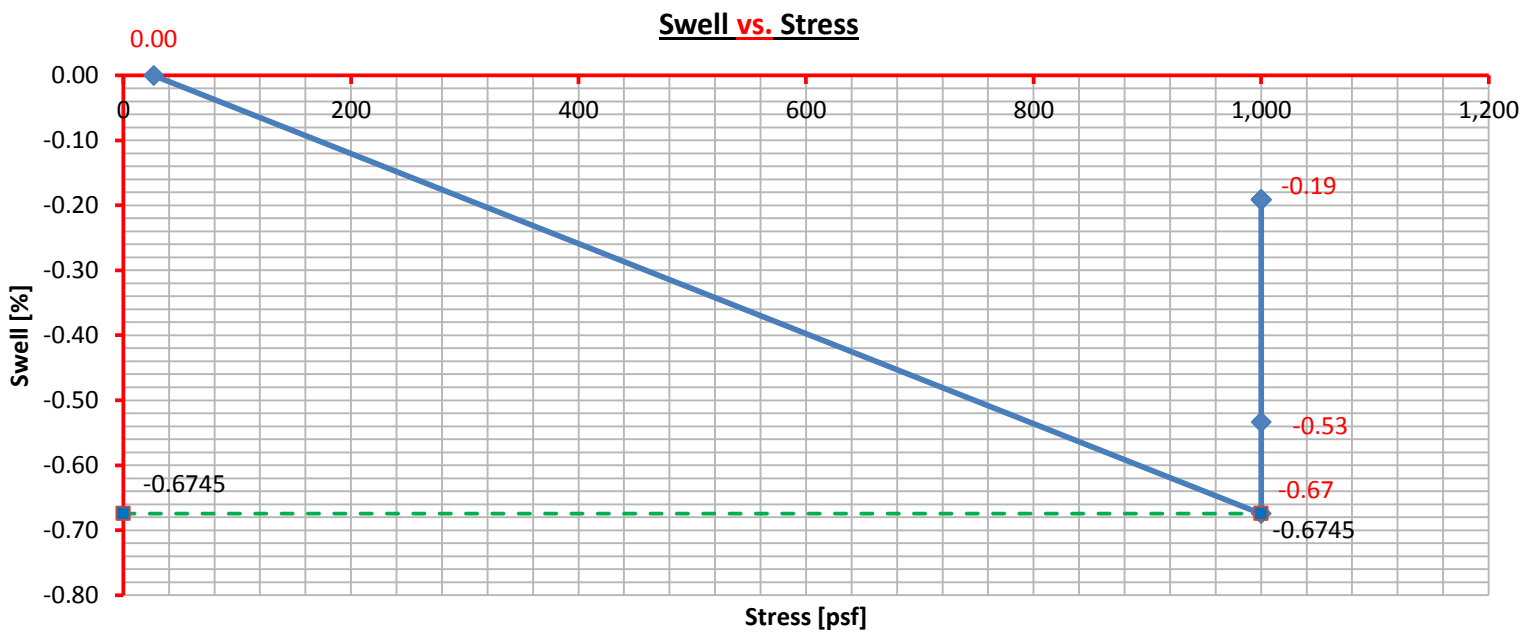
Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Fat Clay, dark brown, with gray shale partings
Project No.: 137422
Boring No.: B-3
Sample Depth (ft.): 8.0' - 10.0'
Tested By: E. Arapi
Date Tested: 10/8/2013
Oedometer ID: 6

Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	1000	1000
Moisture Content (%) =	25.0	26.6
Wet Unit Weight (pcf) =	123.1	124.0
Dry Unit Weight (pcf) =	98.5	98.0

One-Dimensional Swell at Overburden Pressure = 0.5%





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Fat Clay, brown, with calcerous nodules

Project No.: 137422 **Tested By:** E. Arapi
Boring No.: B-4 **Date Tested:** 10/8/2013
Sample Depth (ft.): 6.5' - 8.0' **Oedometer ID:** 7

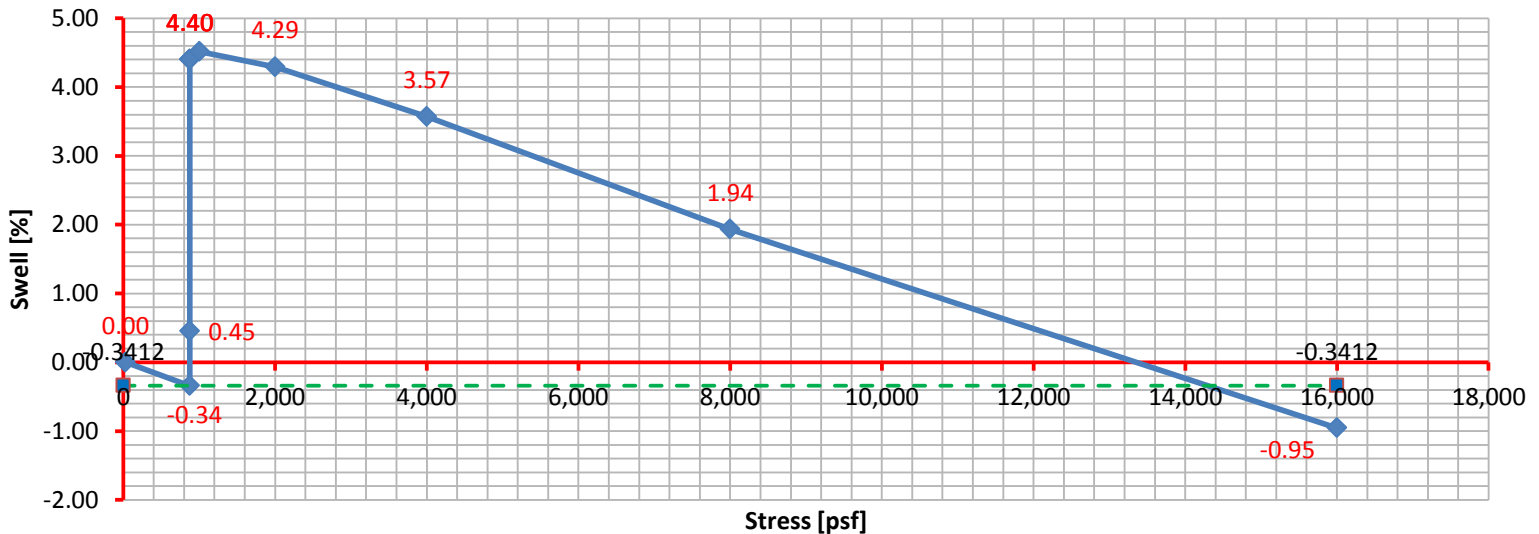
Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	875	16000
Moisture Content (%) =	19.1	21.0
Wet Unit Weight (pcf) =	127.4	123.6
Dry Unit Weight (pcf) =	107.0	102.1

One-Dimensional Swell at Overburden Pressure = 4.7%
Swell Pressure = 13525 psf

Swell vs. Stress





Geotechnical Engineering, Environmental Services, and
Construction Materials Engineering and Testing

Swell at Overburden Pressure Test Results

Project Name: Alpha Road Connector
Location: Farmers Branch, Texas
Material Description: Sandy clay, brown & light brown

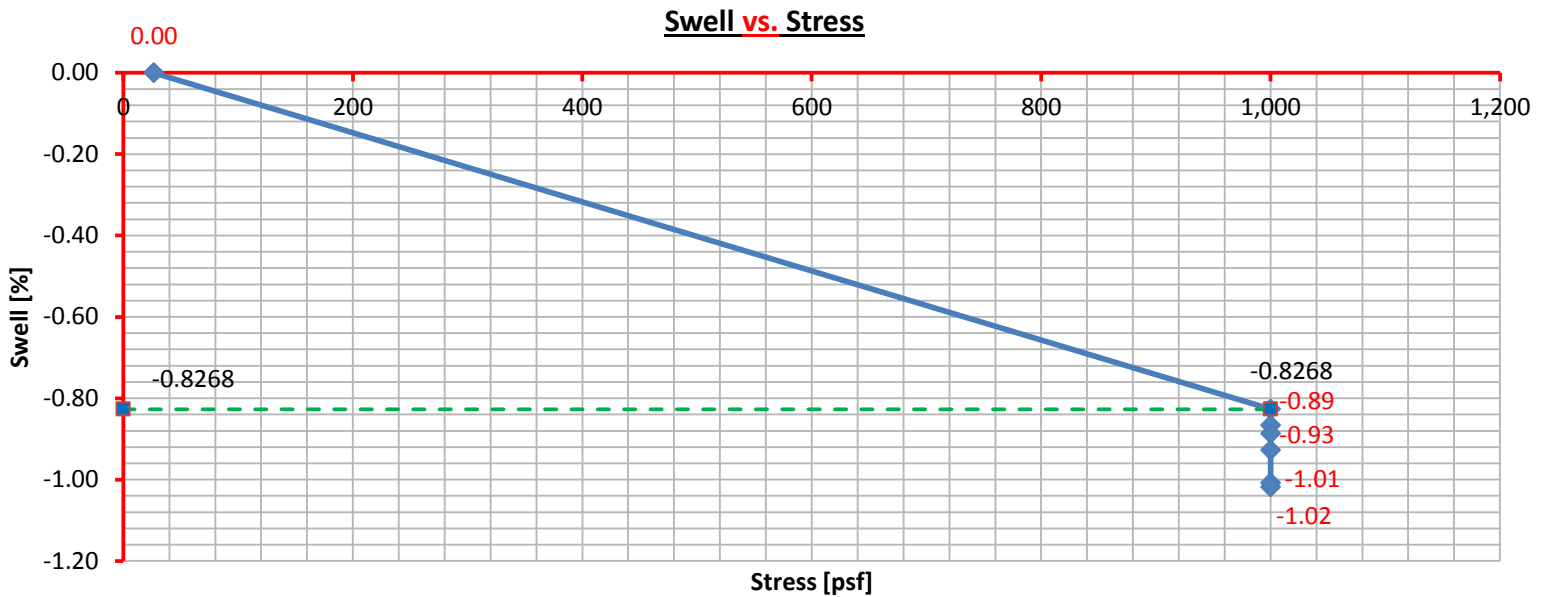
Project No.: 137422 **Tested By:** E. Arapi
Boring No.: C-1 **Date Tested:** 10/8/2013
Sample Depth (ft.): 8.0' - 10.0' **Oedometer ID:** 6

Soil Classification Properties

Liquid Limit = NA
 Plastic Limit = NA
 Plasticity Index = NA
 % Passing #200 Sieve = NA

	<u>Initial</u>	<u>Final</u>
Load Applied (psf) =	1000	1000
Moisture Content (%) =	26.5	26.0
Wet Unit Weight (pcf) =	123.0	122.7
Dry Unit Weight (pcf) =	97.2	97.4

One-Dimensional Swell at Overburden Pressure = -0.2%





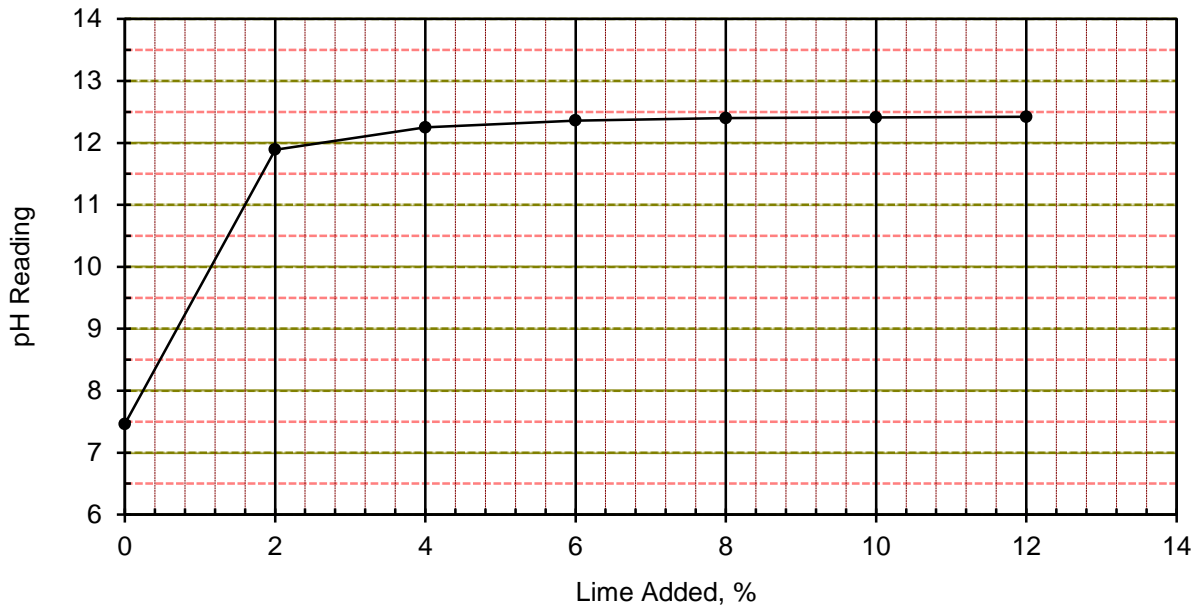
pH Lime Series Test Results

Project Name: Alpha Road Connector
Project Location: Farmers Branch, Texas
Material Description: Fat Clay, dark brown

Project No.: 137422 **Tested By:** R. Brewer
Boring No.: P-1 **Date Tested:** 11/13/13
Depth (ft.): 1.0' - 3.0' **pH Meter ID:** 54549

Soil Classification Properties:

Liquid Limit = 71
Plastic Limit = 27
Plasticity Index = 44
% Passing #200 Sieve = 95



The results shown on this report are for the exclusive use of the client for whom they were obtained and apply only to the samples tested and/or inspected. They are not intended to be indicative of the qualities of apparently identical products. The use of our name must receive prior written approval. Reports must be reproduced in their entirety. Test method based on ASTM C 977 (Eades and Grim).

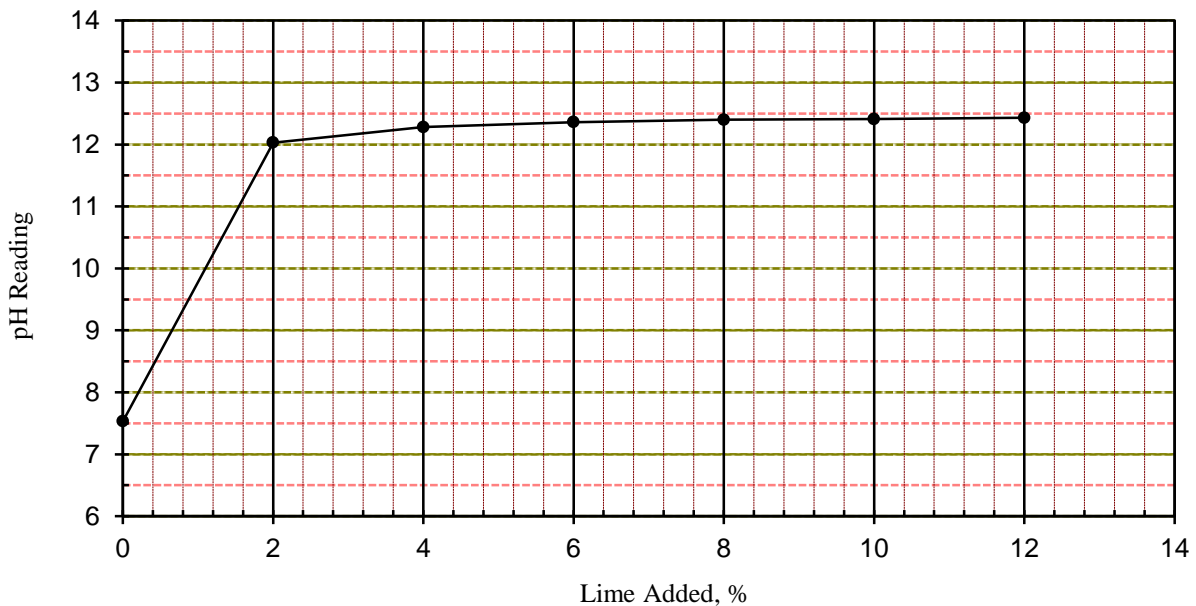


pH Lime Series Test Results

Project Name: Alpha Road Connector
Project Location: Farmers Branch, Texas
Material Description: Fat Clay, light brown & dark brown

Project No.: 137422 **Tested By:** R. Brewer
Boring No.: C-1 **Date Tested:** 11/13/13
Depth (ft.): 1.0' - 4.0' **pH Meter ID:** 54549

<u>% Lime Added</u>	<u>pH Reading</u>
0	7.53
2	12.03
4	12.28
6	12.36
8	12.40
10	12.41
12	12.43



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