



SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

**LES LACS POND WATER WELL REBUILDING
PROJECT**

BID NUMBER 16-43

**TOWN OF ADDISON, TEXAS
INFRASTRUCTURE & DEVELOPMENT SERVICES**

JANUARY 2016

PREPARED BY



**12225 Greenville Avenue, Suite 200
Dallas, Texas 75243
(214) 572-2272
Fax (214) 739-0095**



TOWN OF ADDISON, TEXAS

MAYOR

Todd Meier

COUNCIL MEMBERS

Janelle Moore

David Heape

Bruce Arfsten

Mary Carpenter

Ivan Hughes

Dale Wilcox

CITY MANAGER

Wesley Pierson

DIRECTOR OF INFRASTRUCTURE AND DEVELOPMENT SERVICES

Lisa Pyles

DEPUTY CITY MANAGER

Cheryl Delaney

TABLE OF CONTENTS

Section AB	Advertisement for Bids
Section IB	Instructions to Bidders
Section PF	Proposal Form
Section PQ	Prequalification Statement
Section BB	Bid Bond
Section CI	Indemnification Agreement
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</i>
Section SP	Special Provisions
Section PS	Project Sign
Section TS	Technical Specifications

SECTION AB

ADVERTISEMENT FOR BIDS

ADVERTISEMENT FOR BIDS

1. Sealed bids addressed to the Town of Addison, Texas, for the **Les Lacs Pond Water Well Rebuilding Project** in the Town of Addison, Texas, hereinafter called "City" or "Owner" in accordance with specifications and contract documents prepared by **Halff Associates, Inc.** will be received at the office of Wil Newcomer, Purchasing Manager, Finance Building, 5350 Belt Line Road, Addison, Texas until **2:00 p.m. on Thursday, February 18, 2016**. Bids received by the appointed time will be opened and read aloud. Any bids received after closing time will be returned unopened.
2. The Contractor shall identify his bid on the outside of the envelope by writing the words **INFRASTRUCTURE & DEVELOPMENT SERVICES BID NUMBER 16-43, LES LACS POND WATER WELL REBUILDING PROJECT**.
3. Bids shall be accompanied by a cashier's check or certified check upon a national or state bank in an amount not less than five percent (5%) of the total maximum bid price payable without recourse to the Town of Addison, or 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.bidsync.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.bidsync.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 informality 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. For information on bidding, call Wil Newcomer, Purchasing Manager, Town of Addison, (972) 450-7091. All questions on the work to be performed shall be submitted through www.bidsync.com.
9. The project consists of rebuilding the Les Lacs Pond Water Well and related improvements in accordance with the plans and specifications.
10. A **Pre-Bid Conference**, will be held at **10:00 a.m. on Monday, February 8, 2016** in the Les Lacs Park, 3925 Beltway Dr., Addison, Texas, (972) 450-7051.

Advertise: January 28, 2016
February 4, 2016
February 11, 2016

SECTION IB

INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

- A. PROJECT: WELL REBUILDING**, 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 removing and replacing the existing well pump, carrier pipe and all of the electrical wiring within the well area, removal of existing structures, trees, shrubs and the replacement of grasses and other features disturbed by construction for the Les Lacs Pond Water Well Rebuilding Project.
- C. PROPOSALS:** Proposals must be in accordance with these instructions in order to receive consideration.
- D. DOCUMENTS:** Bidding Documents include the Project Manual (consisting of the Advertisement for Bids, these Instructions to Bidders, Proposal Forms, Contract Agreement, Performance Bond, Payment Bond, Maintenance Bond, Contractor's Affidavit of Bills Paid, General Provisions, Special Provisions, Project Sign, and Technical Specifications), a Waiver of Lien, Drawings, and Addenda which may be issued by the Town of Addison during the bidding period. Bidding Documents may be viewed and/or obtained under the terms and conditions set forth in the Advertisement for Bids, Section AB of this Project Manual.
- 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 Drawings, Specifications (Project Manual) 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. **A Pre-Bid Conference, will be held at 10:00 a.m. on Monday, February 8, 2016** in the Les Lacs Park, 3925 Beltway Dr., Addison, Texas, (972) 450-7051.
- 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 to the Town of Addison, not later than one (1) week prior to the date set for opening bids, a written request for an interpretation or clarification. 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.bidsync.com. It will be the responsibility of each person who has been issued a set of bid documents to secure all Addenda from www.bidsync.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.bidsync.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. COMPLETION TIME: The completion time of the project will be **150** Calendar Days.

J. 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.

NOTE: A COMPUTER-GENERATED PROPOSAL FORM MAY BE USED IN LIEU OF THE ENCLOSED FORMS. THE FORM SHALL BE 8 1/2" BY 11" IN SIZE, AND WILL BE ATTACHED TO THE PROPOSAL IN THE PROPER SECTION, AND WILL BE MADE PART OF THE PROPOSAL AND CONTRACT DOCUMENTS.

NOTE: THE SPREADSHEET OPTION IS FOR THE CONVENIENCE OF THE BIDDER. NO WORDING IN THE SPREADSHEET SHALL MODIFY OR AMEND THE WORDING IN THE BID PROPOSAL OR PLANS. THE UNIT PRICE ON THE FORM SHALL BE THE PRICE OF THE ITEM, AND ERRORS THAT MAY BE PRESENT IN THE PRINTOUT WILL NOT BE RECOGNIZED AS AN OPPORTUNITY TO REVISE THE PROPOSAL. THE SUMMARY SHEET INCLUDED IN THIS BID DOCUMENT SHALL BE UTILIZED FOR SUMMARIZING THE BID. THE SPREADSHEET SHALL PRESENT EACH ITEM IN THE ORDER AND NUMBER AS SHOWN IN THE CITY'S PROPOSAL AND BID SCHEDULE FOR THIS PROJECT. THE SPREADSHEET SHALL BE IN A COLUMN FORMAT WITH THE FOLLOWING COLUMNS:

1. ITEM NUMBER
2. DESCRIPTION & UNIT PRICE IN WORDS
3. UNIT OF MEASURE
4. UNIT PRICE
5. ESTIMATED QUANTITY
6. AMOUNT BID

K. 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:

INFRASTRUCTURE & DEVELOPMENT SERVICES BID NUMBER 16-43
LES LACS WATER WELL REBUILDING PROJECT

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.

NOTE: THE BID SUBMITTAL FORM SHALL BE 8 1/2" BY 11" IN SIZE. NO ELECTRONIC SUBMITTAL IS ACCEPTABLE. THE BID SUBMITTAL SHALL CONSIST OF THE ORIGINAL COMPLETED BID PROPOSAL WITH BID BOND, TWO COPIES OF THE BID PROPOSAL AND BID BOND, AND A THUMB DRIVE WITH THE ELECTRONIC COPY OF THE BID PROPOSAL.

L. 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.

M. 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.

N. SUBMISSION OF POST-BID INFORMATION: Upon notification of acceptance, the selected bidder shall, within five (5) calendar days, 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.

O. 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 Infrastructure & Development 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, 4th Edition*, (hereinafter called SSPWC) Item 104.2 "Change or Modification of Contract".

P. 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.

Q. 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.

R. COST PLUS TIME BIDDING: N/A

S. 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.

T. 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.)

U. BID SECURITY: Bids shall be accompanied by a cashier's check or certified check upon a national or state bank in an amount not less than five percent (5%) of the total maximum bid price payable without recourse to the Town of Addison, or 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 checks or bid bonds will be returned to all except the three lowest bidders within three (3) days after the opening of bids, and the remaining checks or 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.

- V. 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.
- W. 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.
- X. 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) year Maintenance Bond in accordance with Section MB.
 5. Acknowledgement that the project has been reviewed and accepted by TDLR.
- Y. 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.
- Z. PRIORITY OF CONTRACT DOCUMENTS:** In case of conflict between contract documents, priority of interpretation shall be in the following order: signed agreement; performance and payment bonds; proposal; special provisions (or conditions); technical specifications; general provisions; advertisement for bids; project drawings; Standard Specifications for Public Works Construction (NCTCOG, October 2004); Town of Addison Standard Drawings. This priority list shall take precedence over Item 105.1.1 of the SSPWC.

SECTION PF
PROPOSAL FORM

PROPOSAL FORM

February 25 _____, 2016

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	<u>BB</u>
Addendum No. 2	<u>BB</u>
Addendum No. 3	<u>BB</u>
Addendum No. 4	<u>BB</u>
Addendum No. 5	<u>BB</u>

The following pages contain all bid items for:

BID SCHEDULE – LES LACS POND WATER WELL REBUILDING PROJECT

BID SCHEDULE

LES LACS POND WATER WELL REBUILDING PROJECT BID NUMBER 16-43

Base Bid – Removal, Site Preparation and Miscellaneous

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
001	1	LS	Mobilization and Town required bonds and insurance, amount not to exceed 5% of the total bid amount, for the sum of <u>Eleven Thousand Two Hundred Twenty Nine</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 11,229.00	\$ 11,229.00
002	1	LS	Pulling and transportation of pump, motor and cable to and from shop. All replaced parts need to be transported back to Town of Addison, complete in place for the sum of <u>Six Thousand One Hundred Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 6,106.00	\$ 6,106.00
003	1	LS	Perform Television Inspection of well casing and screens, complete in place for the sum of <u>Three Thousand Three Hundred Ninety Three</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 3,393.00	\$ 3,393.00
004	1	LS	Traffic control during construction, including barricades, traffic signs and all other materials and incidentals, complete in place for the sum of <u>Five Thousand Seven Hundred Sixty Two</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 5,762.00	\$ 5,762.00
005	1	LS	Furnish, install, and maintain SW3P, Inlet Protection, Site Protection and Erosion Control including permitting, complete in place for the sum of <u>Twelve Thousand Seventy</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 12,070.00	\$ 12,070.00
006	3	EA	Furnish and Install Project Signs as specified in plans, complete in place for the sum of <u>Seven Hundred Sixty Nine</u> Dollars and <u>Zero</u> Cents per Each.	\$ 769.00	\$ 2,307.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
007	1	LS	Remove Existing Electrical Equipment (including Electric Meters, Boxes, and Electrical Wires within Well Area) as indicated in plans, complete in place for the sum of <u>One Thousand Seven Hundred Ninety Eight</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$1,798.00	\$1,798.00
008	1	LS	Remove and dispose of existing brick screening walls and columns according to the plans and specifications, complete in place for the sum of <u>Two Thousand Fifty Eight</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$2,058.00	\$2,058.00
009	15	EA	Remove trees (including shrubs) and grubbing, according to the plans, specifications, and details, complete in place for the sum of <u>One Thousand Seventy Five</u> Dollars and <u>Zero</u> Cents per Each.	\$1,075.00	\$16,125.00
010	10	SY	Sawing, removal and recycling of existing reinforced or non-reinforced concrete sidewalk, complete in place for the sum of <u>Fifty Seven</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$57.00	\$570.00
011	10	SY	Sawing, removal and recycling of existing reinforced or non-reinforced concrete pad, complete in place for the sum of <u>Eighty Five</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$85.00	\$850.00

SUB-TOTAL BASE BID (Items 001-011)

Sixty Two Thousand Two Hundred Sixty Eight Dollars

Zero Cents

Base Bid – Well and Well Area Improvements

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
101	1	LS	Furnish and Install Submersible 21 Stages 80gpm Well Pump @ 935' TDH with 30HP Motor, 460V, 3 Phase, complete in place for the sum of <u>Twenty One Thousand Four Hundred Eighty Four</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$21,484.00	\$21,484.00
102	905	LF	Furnish and Install 1/4" Stainless Steel Airline, complete in place for the sum of <u>Four</u> Dollars and <u>Twenty</u> Cents per Linear Foot.	\$4.20	\$3,801.00
103	1	LS	Furnish and Install motor conductor cable and other incidentals per manufacturer's recommendations, complete in place for the sum of <u>Six Thousand Six Hundred Fifteen</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$6,615.00	\$6,615.00
104	45	EA	Furnish and Install 3" X 20' threaded and coupled stainless steel column pipe sections, complete in place for the sum of <u>Eight Hundred Sixty Five</u> Dollars and <u>Zero</u> Cents per Each.	\$865.00	\$38,925.00
105	2	EA	Furnish and Install 3" in-line stainless steel check valve with plugs and other incidentals, complete in place for the sum of <u>One Thousand Three Hundred Five</u> Dollars and <u>Zero</u> Cents per Each.	\$1,305.00	\$2,610.00
106	1	EA	Furnish and Install Magnetic Flowmeter and other incidentals as necessary, complete in place for the sum of <u>Two Thousand Two Hundred Five</u> Dollars and <u>Zero</u> Cents per Each.	\$2,205.00	\$2,205.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
107	1	EA	Furnish and Install Air Release Valve and other incidentals as necessary, complete in place for the sum of <u>One Thousand Four Hundred Twenty Six</u> Dollars and <u>Zero</u> Cents per Each.	\$ 1,426.00	\$ 1,426.00
108	1	LS	Reset Pump and motor, return back to service and other incidentals as necessary, complete in place for the sum of <u>Six Thousand One Hundred Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 6,106.00	\$ 6,106.00
109	1	LS	Test pump (12 HRS). Provide written completion report, which includes: material settings, installation plan and test pump results and written warranty, complete in place for the sum of <u>Eight Hundred Fourteen</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 814.00	\$ 814.00
110	45	LF	Furnish and Install 3" PVC Schedule 80 Pipe and other incidentals as necessary, complete in place for the sum of <u>Twenty Eight</u> Dollars and <u>Twenty</u> Cents per Linear Foot.	\$ 28.20	\$ 1,269.00
111	10	SY	Construct 4 inch thick, 3,000 psi reinforced concrete sidewalk including all excavation, forming, expansion joint materials and incidentals necessary according to the plans, specifications, and details for the sum of <u>Sixty Eight</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$ 68.00	\$ 680.00
112	15	SY	Construct 4 inch thick, 3,000 psi reinforced concrete pad including all excavation, forming, expansion joint materials and incidentals necessary according to the plans, specifications, and details, complete in place for the sum of <u>Sixty Eight</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$ 68.00	\$ 1,020.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
113	34	LF	Construct brick screening walls (including columns) according to the plans, specifications, and details, complete in place for the sum of <u>One Hundred Eighty Seven</u> Dollars and <u>Zero</u> Cents per Linear Foot.	\$ 187.00	\$6,358.00
114	1	EA	Furnish and Install 3' long x 6' tall wrought iron swing gate according to the plans, specifications, and details, complete in place for the sum of <u>Seven Hundred Twenty Four</u> Dollars and <u>Zero</u> Cents per Each.	\$724.00	\$724.00
115	1	EA	Furnish and Install 10' long x 6' tall wrought iron sliding gate according to the plans, specifications, and details, complete in place for the sum of <u>Two Thousand Six Hundred Seventy Four</u> Dollars and <u>Zero</u> Cents per Each.	\$2,674.00	\$ 2,674.00

SUB-TOTAL BASE BID (Items 101-115)

Ninety Six Thousand Seven Hundred Eleven Dollars

Zero Cents

Base Bid – Electrical Improvements

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
201	1	LS	Furnish and Install electrical equipment: a Size 3 starter HOA 30HP, a 100A, 3P Contactor, a 100A Load Center 60A-MCB with (2) 20A Branch Circuits, a 100A Load Center with (6) 1P-20A, splice conductors, required ground boxes and any other incidentals according to the plans, specifications and details, complete in place for the sum of <u>Three Thousand Four Hundred Forty Three</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$3,443.00	\$3,443.00
202	30	LF	Furnish and Install, 4- #3/0, 2" PVC Conduit, according to the plans, specifications and details, complete in place for the sum of <u>Fifty</u> Dollars and <u>Thirty</u> Cents per Linear Foot.	\$50.30	\$1,509.00
203	75	LF	Furnish and Install, 3- #2, #8G, 1 1/2" PVC Conduit to Exist. Vault from ML, according to the plans, specifications and details, complete in place for the sum of <u>Twenty Three</u> Dollars and <u>Ninety Six</u> Cents per Linear Foot.	\$ 23.96	\$1,797.00
204	10	LF	Furnish and Install, LTG Circuits: (2) 4 #12, 3/4" PVC Conduit, according to the plans, specifications and details, complete in place for the sum of <u>Four Hundred Two</u> Dollars and <u>Zero</u> Cents per Linear Foot.	\$40.20	\$402.00
205	10	LF	Furnish and Install, 3- #6, 1" PVC Conduit to Irrigation Meter, according to the plans, specifications and details, complete in place for the sum of <u>Forty One</u> Dollars and <u>Eighty</u> Cents per Linear Foot.	\$ 41.80	\$418.00
206	10	LF	Furnish and Install, 3- #6, 1" PVC Conduit to Well Pump, according to the plans, specifications and details, complete in place for the sum of <u>Forty One</u> Dollars and <u>Eighty</u> Cents per Linear Foot.	\$41.80	\$418.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
207	1	EA	Furnish and Install Millbank Enclosure, according to the plans, specifications and details, complete in place for the sum of <u>Eleven Thousand Seven Hundred Sixty</u> Dollars and <u>Zero</u> Cents per Each.	\$11,760.00	\$11,760.00
208	1	EA	Furnish and Install, Millbank Irrigation Enclosure, according to the plans, specifications and details, complete in place for the sum of <u>Two Thousand Six Hundred Ninety Eight</u> Dollars and <u>Zero</u> Cents per Each.	\$2,698.00	\$2,698.00
209	1	EA	Furnish and Install Panel 'ML' 200A with (3) 100A Frame 3P CB's, 480V, 3 Phase, according to the plans, specifications and details, complete in place for the sum of <u>Seven Hundred Nineteen</u> Dollars and <u>Zero</u> Cents per Each.	\$719.00	\$719.00
210	1	LS	Furnish and Install Cathodic Protection for steel piping according to the plans, specifications and details, complete in place for the sum of <u>Twenty Eight Thousand Two Hundred Sixty Eight</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$28,268.00	\$28,268.00

SUB-TOTAL BASE BID (Items 201-210)

Fifty One Thousand Four Hundred Thirty Two **Dollars**

Zero **Cents**

Base Bid – Landscape Improvements

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
301	650	SF	Furnish and Install, Common Bermuda 'Mid Iron' Sod, according to the plans, specifications and details, complete in place for the sum of <u>Zero</u> Dollars and <u>Forty Six</u> Cents per Square Foot.	\$.46	\$ 299.00
302	430	SF	Furnish and Install, Wood Chips, according to the plans, specifications and details, complete in place for the sum of <u>One</u> Dollars and <u>Forty</u> Cents per Square Foot.	\$ 1.40	\$ 602.00
303	1	LS	Tree Trimming, complete in place for the sum of <u>Two Thousand Two Hundred Sixty One</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 2,261.00	\$ 2,261.00
304	1	LS	Tree Protection, complete in place for the sum of <u>One Thousand Six Hundred Ninety Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 1,696.00	\$ 1,696.00
305	1	LS	90 Day Establishment Period, complete in place for the sum of <u>One Thousand Six Hundred Ninety Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 1,696.00	\$ 1,696.00
306	1	LS	1 Year Maintenance, complete in place for the sum of <u>Seven Thousand Six Hundred Thirty Two</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 7,632.00	\$ 7,632.00

SUB-TOTAL BASE BID (Items 301-306)

Fourteen Thousand One Hundred Eighty Six Dollars

Zero Cents

SUMMARY

**BID SCHEDULE – LES LACS POND WATER WELL
REBUILDING PROJECT**

1. Removal, Site Preparation and Miscellaneous Subtotal	
(Items 001-011)	<u>\$62,268.00</u>
2. Well and Well Area Improvements Subtotal	
(Items 101-115)	<u>\$96,711.00</u>
3. Electrical Improvements Subtotal	
(Items 201-210).....	<u>\$51,432.00</u>
4. Landscape Improvements Subtotal	
(Items 301-306).....	<u>\$14,186.00</u>
	<u>TOTAL BID \$224,597.00</u>

Written in Words: Two Hundred Twenty Four Thousand Five Hundred Ninety Seven Dollars and Zero Cents

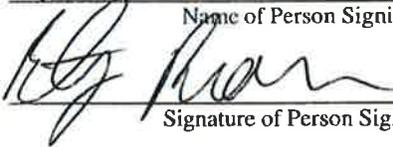
The pay items included in this proposal form comprise all of the pay items for the project. Any additional required work shall be considered subsidiary to the related pay items provided herein.

- 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.

Billy Brown

Name of Person Signing Bid



Signature of Person Signing Bid

2410 Squire Place, Farmers Branch, Texas 75234

Address

972-484-2717

Telephone No.

972-484-2263

Fax No.

75-1455223

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

If BIDDER is:

AN INDIVIDUAL

By N/A _____
(Individual's Name)

(Seal)

doing business as _____

Business address: _____

Phone No. _____

A PARTNERSHIP

By N/a _____
(Firm Name)

(Seal)

(General Partner)

doing business as _____

Business address: _____

Phone No. _____

A CORPORATION

By Groves Electrical Service, Inc.
(Corporation Name)

Texas
(State of Incorporation)

By Bill Groves
(Name of Person Authorized to Sign)

President
(Title)

(Corporate Seal)

Attest _____
(Secretary)

Business address: 2410 Squire Place Suite A. Farmers Branch, Texas 75234

Phone No. 972-484-2717

A JOINT VENTURE

By N/A
(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 PQ

PREQUALIFICATION STATEMENT

**PREQUALIFICATION STATEMENT
FOR
PUBLIC IMPROVEMENTS
IN THE
TOWN OF ADDISON**

Contractor: Groves Electrical Service, Inc. Date: 2/25/16

Project name, if applicable: Les Lacs Pond Water Well Rebuilding Project

INSTRUCTIONS

All information on the PREQUALIFICATION STATEMENT FOR PUBLIC IMPROVEMENTS and the PREQUALIFICATION STATEMENT OF CONTRACTOR'S SURETY must be complete and the forms submitted together with bid documents as indicated in the Advertisement for Bids and Instructions to Bidders.

This Prequalification Statement consists of two (2) parts. The first part (Sections A through D) pertains to Contractor's status information and work history. The second part is the Prequalification Statement of Contractor's Surety, in which the Surety Company will need to complete. Additional information/documentation from the Contractor or Surety Company may be required during the application review process.

CONTRACTOR INFORMATION:

Please complete the appropriate Section A, B, or C. All contractors must complete Section D.

SECTION A: If the contractor is a CORPORATION, complete this section***Name of corporation:***

Groves Electrical Service, Inc.	1968
Registered name of corporation	Doing business as
Texas	8/24/1974
Date charter expires	Date of corporation filing (if non-Texas corporation, date Certificate of Authority was issued)

Registered agent:

Lee	Claude	Groves
First name	Middle name	Last name
2410 Squire Place Suite A.	Farmers Branch	Dallas Texas 75234
Address	City	County State Zip
972-484-2717		972-484-2263
Area code and phone number		Area code and fax number
Area code and cell phone number		e-mail address

Corporation's principal office:

2410 Squire Place Suite A.	Farmers Branch	Dallas	Texas	75234
Street address	City	County	State	Zip
Mailing address (if different from above)	City	County	State	Zip
972-484-2717		972-484-2263		
Area code and phone number		Area code and fax number		

Person executing contract on behalf of corporation:

Bill	Homer	Groves	President
First name	Middle name	Last name	Title
2410 Squire Place Suite A.	Farmers Branch	Dallas Texas 75234	
Street address	City	County State Zip	
Mailing address (if different from above)	City	County State Zip	
972-484-2717	972-484-2263	75-1455223	
Area code and phone number	Area code and fax number	Federal Tax Identification No.	
Area code and cell phone number		e-mail address	

Additional Officers/Personnel:

First name	Middle name	Last name	Title
Area code and cell phone number		e-mail address	
First name	Middle name	Last name	Title
Area code and cell phone number		e-mail address	

SECTION B: If the contractor is a PARTNERSHIP, complete this section

First Partner:

N/A

First name	Middle name	Last name		
Residence Address	City	County	State	Zip
Area code and cell phone number		email address		

Second Partner:

First name	Middle name	Last name		
Residence Address	City	County	State	Zip
Area code and cell phone number		email address		

Business:

Name under which you are engaged in business (if operating under an assumed name)				Website Address
Street address	City	County	State	Zip
Mailing address (if different from above)	City	County	State	Zip
Principal place of business - County & State		Name of contact person	Title	
Area code and phone number	Area code and fax number	Federal Tax Identification No.		

SECTION C: If the contractor is a SOLE PROPRIETOR, complete this section

Name:

N/A

First name Middle name Last name

Business name under which you are engaged in business (if operating under an assumed name)

Residence:

Street address City County State Zip

Area code and phone number

Business:

Street address City County State Zip

Mailing address (if different from above) City County State Zip

Area code and phone number Area code and fax number Federal Tax Identification No.

Area code and cell phone number e-mail address

Principal place of business:

County State

Contact Person:

First name Middle name Last name Title

Area code and phone number Area code and fax number

Area code and cell phone number email address

SECTION D: Work history and references

1. Name of Bidder: Groves Electrical Service, Inc.

2. Do you operate under assumed name(s)? No If yes, please list:

3. How many years engaged in the contracting business under present firm or trade name? 48 years Give former names of firm or trade names, with dates of operation under each:

4. Number of years in business as a general contractor on the types of work requesting to be prequalified for: 5

5. Types of work done: (check all that apply)

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> Asphalt Paving | <input type="checkbox"/> Concrete Structures | <input type="checkbox"/> Landscaping | <input type="checkbox"/> Subgrade Preparation |
| <input type="checkbox"/> Auxiliary Lanes | <input type="checkbox"/> Demolition | <input type="checkbox"/> Misc. Concrete | <input type="checkbox"/> Manhole Rehabilitation |
| <input type="checkbox"/> Bridge Work | <input type="checkbox"/> Earth Work | <input type="checkbox"/> Sidewalks | <input type="checkbox"/> Booster/Pump Stations |
| <input type="checkbox"/> Channel Lining | <input type="checkbox"/> Fencing | <input type="checkbox"/> Storm Sewer | <input type="checkbox"/> Tank Erection |
| <input type="checkbox"/> Concrete Paving | <input type="checkbox"/> Gabions | <input type="checkbox"/> Street Repair | <input type="checkbox"/> Plant Construction |
| <input type="checkbox"/> Painting | <input type="checkbox"/> Water & Sanitary Sewer Line | <input type="checkbox"/> Water Wells | <input type="checkbox"/> Other _____ |

6. List major construction equipments, such as paving machine or other equipments appropriate to perform work (for example, GOMACO GPH 2800 Slipform Paver): (use attachments if necessary)

Excavators

7. Greatest number of contracts in excess of \$100,000 under construction at one time in the company's history:

35

8. Greatest number of contracts in excess of \$1,000,000 under construction at one time in the company's history:

5

9. Approximate average of dollar volume of incomplete work outstanding under contract at any one time:

\$450,000.00

10. List completed projects of the type of work qualifying for or similar work, plus the following information on each project: (use attachments if necessary)

a. **Beltline** **2011**
 Project Year Built

General Contractor/Electrician
 Type(s) of work

TOA	2 Million	Jason Shroyer
Owner/Design Engineer	Contract Price	Contact Person

Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

b. **Beltway** **2015**
 Project Year Built

General Contractor/Electrician
 Type(s) of work

TOA	2 Million	Michael Kashuba
Owner/Design Engineer	Contract Price	Contact Person

Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

c. **SH289** **2013**
 Project Year Built

General Contractor/Electrician
 Type(s) of work

Frisco	1.5 Million	Tracy Smith
Owner/Design Engineer	Contract Price	Contact Person

Area code and phone number

Tracy Smith 972-880-6347
 City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

11. Experience in water well improvement work within the past 10 years similar in cost and length to this project. Include, at a minimum, three (3) projects. (use attachments if necessary).

a. Trinity Forest Golf Course **2015**
 Project Name and Location Year Built

Hook up the deep wells and circulating pumps
 Describe Scope of Work

City of Dallas **\$40,000.00**
 Owner/Design Engineer Contract Price Contact Person Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

b. Frisco **2011**
 Project Name and Location Year Built

Hook deep well
 Describe Scope of Work

Fisco ISD **\$28,000.00**
 Owner/Design Engineer Contract Price Contact Person Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

c. Craig Ranch 2007
Project Name and Location Year Built

Hooked up deep well
Describe Scope of Work

Craig International \$20,000.00
Owner/Design Engineer Contract Price Contact Person Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

12. On the projects listed in response to question #11 above, what were the final project change order amounts? Were the projects completed within the specified timeframes (this includes both substantial completion and interim milestone dates)? If not, why not, and were any damages or liquidated damages paid to the Owner as a result of the late completion?

None

13. Background and experience of the Project Manager and Superintendent that will be utilized on this project. Include Owner references and contact names with area code and telephone numbers indicating experience with projects similar in size and to those listed in response to question #11 above.

30 years

14. Will a subcontractor be performing any work for this project? Yes ___ If yes, provide subcontractor's name, address, telephone and provide information to question #s 15, 16, 17 below. (use attachments if necessary)

Earthtech, American Landscape, & Capitol

15. Subcontractor's experience in performing similar work within the past 10 years similar in cost and length to this project. Include, at a minimum, three (3) projects. (use attachments if necessary).

a. Beltline	2011
Project Name and Location	Year Built
Landscaping and irrigation	
Describe Scope of Work	

TOA			
Owner/Design Engineer	Contract Price	Contact Person	Area code and phone number
City Inspector/Contact Number (required)	City Engineer/Contact Number (optional)		

b. Beltway
Project Name and Location Year Built

Landscaping and irrigation
Describe Scope of Work

TOA
Owner/Design Engineer Contract Price Contact Person Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

c. Beltway
Project Name and Location Year Built

Hardscaping
Describe Scope of Work

TOA
Owner/Design Engineer Contract Price Contact Person Area code and phone number

City Inspector/Contact Number (required) City Engineer/Contact Number (optional)

16. On the projects listed in response to question #15 above, what were the final project change order amounts? Were the projects completed within the specified timeframes (this includes both substantial completion and interim milestone dates)? If not, why not, and were any damages or liquidated damages paid to the Owner as a result of the late completion?

None

17. If subcontractor is performing work, provide background and experience of the subcontractor's Project Manager and Superintendent that will be utilized on this project. Include Owner references and contact names with area code and telephone numbers indicating experience with projects similar in size and to those listed in response to question #15 above.

20+ years

18. Have you even been terminated by the Owner of a project? If so, where and why? Give name of Owner.

No

19. List incomplete projects, plus the following information for each project listed:
(use attachments if necessary)

a. N/A
Project _____ Year Built _____

Type(s) of work _____

Owner/Design Engineer	Contract Price	Contact Person	Area code and phone number
_____	_____	_____	_____
City Inspector/Contact Number (required)		City Engineer/Contact Number (optional)	
_____		_____	

b. _____
Project _____ Year Built _____

Type(s) of work _____

Owner/Design Engineer	Contract Price	Contact Person	Area code and phone number
_____	_____	_____	_____
City Inspector/Contact Number (required)		City Engineer/Contact Number (optional)	
_____		_____	

c. _____
Project _____ Year Built _____

Type(s) of work _____

Owner/Design Engineer	Contract Price	Contact Person	Area code and phone number
_____	_____	_____	_____
City Inspector/Contact Number (required)		City Engineer/Contact Number (optional)	
_____		_____	

20. Have you or any present partner(s) or officer(s) failed to complete a contract? No

If yes, name of project _____ Year built _____

Owner/Engineer	Contract price	Contact person	Area code & phone number
_____	_____	_____	_____
Name of owner and/or surety		Contact person	Area code & phone number
_____		_____	_____

21. Are there any unsatisfied demands upon you as to your accounts payable? _____

If yes, give names, amounts, and explanations:

22. Bank reference (use additional sheets of paper, if necessary):

Wells Fargo	Dustin Gibson			
Name of bank	Bank officer			
13297 Josey Lane	Farmers Branch	Dallas	Texas	75234
Mailing address	City	County	State	Zip
972-419-3113	Area code and fax number			
Area code and phone number				

23. Municipality reference (use additional sheets of paper, if necessary):

TOA	Jason Shroyer	Title		
Name of city	Contact person			
Mailing address	City	County	State	Zip
Area code and phone number	Area code and fax number			
Area code and cell phone number	e-mail address			

24. Other credit references:

a. Parrish Hare Electrical Supply	214-905-1001	214-951-8101		
Name	Area code and phone number	Area code and fax number		
P.O. Box 560547	Dallas	Dallas	Texas	75356
Address	City	County	State	Zip
Area code and cell phone number	mgarcia@parrish-hare.com			
	e-mail address			

b. Crawford Electric Supply	972-869-3633	972-869-0533		
Name	Area code and phone number	Area code and fax number		
P.O. Box 847160	Dallas	Dallas	Texas	75284
Address	City	County	State	Zip
Area code and cell phone number	cherrera@cescoltd.com			
	e-mail address			

25. Will you, upon request, fill out a detailed financial statement and furnish any other pertinent information that may be required by the Town of Addison?

Yes, please request by emailing maria@groveselectric.com

26. Please provide OSHA safety record, including a list and status of all OSHA violations.

One violation in the past 5 years. November 7, 2012-Fall Hazard Violation

Pursuant to advertisement for bids and information for prospective bidders for above-mentioned types of projects, the undersigned is submitting the information as required with the understanding that the purpose is for your confidential use, only to assist in determining the **Prequalifications** for this organization to perform the type and magnitude of work designated, and further, guarantee the truth and accuracy of all statements made, and will accept your determination of prequalifications without prejudice. The surety herein named, any other bonding company, bank, subcontractor, supplier, or any other person(s), firm(s), or corporation(s) with whom I (we) have done business, or who have extended any credit to me (us) are hereby authorized to furnish you with any information you may request concerning performance on previous work and my (our) credit standing with any of them; and I (we) hereby release any and all such parties from any legal responsibility whatsoever on account of having furnished such information to you.

CONTRACTOR:

Copy to local underwriting office of proposed surety:

Groves Electrical Service, Inc.

Company name (please type or print)


Signature

President

Title

2/25/16

Date

PCL Bonding Company

Company name (please type or print)

8615 North Freeport Suite 155

Address

Irving

City

Texas

State

75063

Zip

972-459-4749

Area code and phone number

Fax number

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 NOT be submitted electronically.

SECTION CI
INDEMNIFICATION AGREEMENT

**Town of Addison
Indemnification Agreement**

Contractor's Indemnity Obligation. Contractor covenants, agrees to, and shall DEFEND (with counsel reasonably acceptable to Owner), INDEMNIFY, AND HOLD HARMLESS Owner, its past, present and future elected and appointed officials, and its past, present and future officers, employees, representatives, and volunteers, individually or collectively, in both their official and private capacities (collectively, the "Owner Persons" and each being an "Owner Person"), from and against any and all claims, liabilities, judgments, lawsuits, demands, harm, losses, damages, proceedings, suits, actions, causes of action, liens, fees (including attorney's fees), fines, penalties, expenses, or costs, of any kind and nature whatsoever, made upon or incurred by Owner and/or Owner Person, whether directly or indirectly, (the "Claims"), that arise out of, result from, or relate to: (i) the services to be provided by Contractor pursuant to this Agreement, (ii) any representations and/or warranties by Contractor under this Agreement, (iii) any personal injuries (including but not limited to death) to any Contractor Persons (as hereinafter defined) and any third persons or parties, and/or (iv) any act or omission under, in performance of, or in connection with this Agreement by Contractor or by any of its owners, directors, officers, managers, partners, employees, agents, contractors, subcontractors, invitees, patrons, guests, customers, licensees, sublicensees, or any other person or entity for whom Contractor is legally responsible, and their respective owners, directors, officers, directors, officers, managers, partners, employees, agents, contractors, subcontractors, invitees, patrons, guests, customers, licensees, sublicensees (collectively, "Contractor Persons"). **SUCH DEFENSE, INDEMNITY AND HOLD HARMLESS SHALL AND DOES INCLUDE CLAIMS ALLEGED OR FOUND TO HAVE BEEN CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE OR GROSS NEGLIGENCE OF OWNER OR ANY OTHER OWNER PERSON, OR CONDUCT BY OWNER OR ANY OTHER OWNER PERSON THAT WOULD GIVE RISE TO STRICT LIABILITY OF ANY KIND.**

Contractor shall promptly advise Owner in writing of any claim or demand against any Owner Person related to or arising out of Contractor's activities under this Agreement and shall see to the investigation and defense of such claim or demand at Contractor's sole cost and expense. The Owner Persons shall have the right, at the Owner Persons' option and own expense, to participate in such defense without relieving Contractor of any of its obligations hereunder. This defense, indemnity, and hold harmless provision shall survive the termination or expiration of this Agreement.

The provisions in the foregoing defense, indemnity and hold harmless are severable, and if any portion, sentence, phrase, clause or word included therein shall for any reason be held by a court of competent jurisdiction to be invalid, illegal, void, or unenforceable in any respect, such invalidity, illegality, voidness, or unenforceability shall not affect any other provision thereof, and this defense, indemnity and hold harmless provision shall be considered as if such invalid, illegal, void, or unenforceable provision had never been contained in this Agreement. **In that regard, if the capitalized language included in the foregoing indemnity is so determined to be void or unenforceable, the parties agree that:**

(i) the foregoing defense, indemnity, and hold harmless obligation of Contractor shall be to the extent Claims are caused by, arise out of, or result from, in whole or in part, any act or omission of Contractor or any Contractor Persons; and

(ii) notwithstanding the provisions of the foregoing subparagraph (i), to the fullest extent permitted by law, Contractor shall INDEMNIFY, HOLD HARMLESS, and DEFEND Owner and Owner Persons from and against all Claims arising out of or resulting from bodily injury to, or sickness, disease or death of, any employee, agent or representative of Contractor or any of its subcontractors, regardless of whether such Claims are caused, or are alleged to be caused, in whole or in part, by the negligence, or any act or omission, of Owner or any Owner Persons, it being the expressed intent of Owner and Contractor that IN SUCH EVENT THE CONTRACTOR'S INDEMNITY, HOLD HARMLESS, AND DEFENSE OBLIGATION SHALL AND DOES INCLUDE CLAIMS ALLEGED OR FOUND TO HAVE BEEN CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE OR GROSS NEGLIGENCE OF OWNER OR ANY OTHER OWNER PERSON, OR CONDUCT BY OWNER OR ANY OTHER OWNER PERSON THAT WOULD GIVE RISE TO STRICT LIABILITY OF ANY KIND. The indemnity obligation under this subparagraph (ii) shall not be limited by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor under workers compensation acts, disability benefit acts, or other employee benefit acts.

I understand that the indemnification provisions are required of all Town of Addison Contracts. I have read the provisions and agree to the terms of these provisions.

Project/Bid#: _____

Company Name: _____

Signature: _____ Date: _____

SECTION CA
CONTRACT AGREEMENT

CONTRACT AGREEMENT

STATE OF TEXAS

COUNTY OF DALLAS

THIS AGREEMENT is made and entered into this _____ day of _____, 2016, 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 Groves Electrical Service, Inc., of the City of Farmers Branch, County of Dallas, State of Texas, 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:

INFRASTRUCTURE & DEVELOPMENT SERVICES BID NUMBER 16-43

LES LACS POND WATER WELL REBUILDING PROJECT

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, 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 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 **one hundred and fifty (150)** 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, Two Hundred Twenty Four Thousand Five Hundred and Ninety Seven Dollars (\$224,597.00) 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.

SECTION CA

CONTRACT AGREEMENT

CONTRACT AGREEMENT

STATE OF TEXAS

COUNTY OF DALLAS

THIS AGREEMENT is made and entered into this _____ day of _____, 2016, 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 Groves Electrical Service, Inc., of the City of Farmers Branch, County of Dallas, State of Texas, 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:

INFRASTRUCTURE & DEVELOPMENT SERVICES BID NUMBER 16-43

LES LACS POND WATER WELL REBUILDING PROJECT

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, 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 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 **one hundred and fifty (150)** 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, Two Hundred Twenty Four Thousand Five Hundred and Ninety Seven Dollars (\$224,597.00) 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: _____
Wesley Pierson, City Manager

By: _____
Chris Terry, Assistant City Manager

(CONTRACTOR)

ATTEST:

By: _____
Groves Electrical Service, Inc.
2410 Squire Place
Farmers Branch, TX 75234

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

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: _____
Wesley Pierson, City Manager

By: _____
Chris Terry, Assistant City Manager

(CONTRACTOR)

ATTEST:

William H (Bill) Groves, President
By: Bill Groves
Groves Electrical Service, Inc.
2410 Squire Place
Farmers Branch, TX 75234

Dorothy Groves, Business Secretary
By: Dorothy Groves

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

I, Dorothy Groves certify that I am the secretary of the corporation named as CONTRACTOR herein; that William H Groves, who signed this Contract on behalf of the CONTRACTOR is the President (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: Dorothy Groves



PROPOSAL FORM

February 25 _____, 2016

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 BB
Addendum No. 2 BB
Addendum No. 3 BB
Addendum No. 4 BB
Addendum No. 5 BB

The following pages contain all bid items for:

BID SCHEDULE – LES LACS POND WATER WELL REBUILDING PROJECT

BID SCHEDULE

LES LACS POND WATER WELL REBUILDING PROJECT BID NUMBER 16-43

Base Bid – Removal, Site Preparation and Miscellaneous

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
001	1	LS	Mobilization and Town required bonds and insurance, amount not to exceed 5% of the total bid amount, for the sum of <u>Eleven Thousand Two Hundred Twenty Nine</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 11,229.00	\$ 11,229.00
002	1	LS	Pulling and transportation of pump, motor and cable to and from shop. All replaced parts need to be transported back to Town of Addison, complete in place for the sum of <u>Six Thousand One Hundred Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 6,106.00	\$ 6,106.00
003	1	LS	Perform Television Inspection of well casing and screens, complete in place for the sum of <u>Three Thousand Three Hundred Ninety Three</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 3,393.00	\$ 3,393.00
004	1	LS	Traffic control during construction, including barricades, traffic signs and all other materials and incidentals, complete in place for the sum of <u>Five Thousand Seven Hundred Sixty Two</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 5,762.00	\$ 5,762.00
005	1	LS	Furnish, install, and maintain SW3P, Inlet Protection, Site Protection and Erosion Control including permitting, complete in place for the sum of <u>Twelve Thousand Seventy</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 12,070.00	\$ 12,070.00
006	3	EA	Furnish and Install Project Signs as specified in plans, complete in place for the sum of <u>Seven Hundred Sixty Nine</u> Dollars and <u>Zero</u> Cents per Each.	\$ 769.00	\$ 2,307.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
007	1	LS	Remove Existing Electrical Equipment (including Electric Meters, Boxes, and Electrical Wires within Well Area) as indicated in plans, complete in place for the sum of <u>One Thousand Seven Hundred Ninety Eight</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$1,798.00	\$1,798.00
008	1	LS	Remove and dispose of existing brick screening walls and columns according to the plans and specifications, complete in place for the sum of <u>Two Thousand Fifty Eight</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$2,058.00	\$2,058.00
009	15	EA	Remove trees (including shrubs) and grubbing, according to the plans, specifications, and details, complete in place for the sum of <u>One Thousand Seventy Five</u> Dollars and <u>Zero</u> Cents per Each.	\$1,075.00	\$16,125.00
010	10	SY	Sawing, removal and recycling of existing reinforced or non-reinforced concrete sidewalk, complete in place for the sum of <u>Fifty Seven</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$57.00	\$570.00
011	10	SY	Sawing, removal and recycling of existing reinforced or non-reinforced concrete pad, complete in place for the sum of <u>Eighty Five</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$85.00	\$850.00

SUB-TOTAL BASE BID (Items 001-011)

Sixty Two Thousand Two Hundred Sixty Eight Dollars

Zero Cents

Base Bid – Well and Well Area Improvements

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
101	1	LS	Furnish and Install Submersible 21 Stages 80gpm Well Pump @ 935' TDH with 30HP Motor, 460V, 3 Phase. complete in place for the sum of <u>Twenty One Thousand Four Hundred Eighty Four</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$21,484.00	\$21,484.00
102	905	LF	Furnish and Install 1/4" Stainless Steel Airline. complete in place for the sum of <u>Four</u> Dollars and <u>Twenty</u> Cents per Linear Foot.	\$4.20	\$3,801.00
103	1	LS	Furnish and Install motor conductor cable and other incidentals per manufacturer's recommendations, complete in place for the sum of <u>Six Thousand Six Hundred Fifteen</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$6,615.00	\$6,615.00
104	15	EA	Furnish and Install 3" X 20' threaded and coupled stainless steel column pipe sections, complete in place for the sum of <u>Eight Hundred Sixty Five</u> Dollars and <u>Zero</u> Cents per Each.	\$865.00	\$38,925.00
105	2	EA	Furnish and Install 3" in-line stainless steel check valve with plugs and other incidentals, complete in place for the sum of <u>One Thousand Three Hundred Five</u> Dollars and <u>Zero</u> Cents per Each.	\$1,305.00	\$2,610.00
106	1	EA	Furnish and Install Magnetic Flowmeter and other incidentals as necessary, complete in place for the sum of <u>Two Thousand Two Hundred Five</u> Dollars and <u>Zero</u> Cents per Each.	\$2,205.00	\$2,205.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
107	1	EA	Furnish and Install Air Release Valve and other incidentals as necessary, complete in place for the sum of <u>One Thousand Four Hundred Twenty Six</u> Dollars and <u>Zero</u> Cents per Each.	\$ 1,426.00	\$1,426.00
108	1	LS	Reset Pump and motor, return back to service and other incidentals as necessary, complete in place for the sum of <u>Six Thousand One Hundred Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$6,106.00	\$6,106.00
109	1	LS	Test pump (12 HRS). Provide written completion report, which includes: material settings, installation plan and test pump results and written warranty, complete in place for the sum of <u>Eight Hundred Fourteen</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 814.00	\$ 814.00
110	45	LF	Furnish and Install 3" PVC Schedule 80 Pipe and other incidentals as necessary, complete in place for the sum of <u>Twenty Eight</u> Dollars and <u>Twenty</u> Cents per Linear Foot.	\$28.20	\$1,269.00
111	10	SY	Construct 4 inch thick, 3,000 psi reinforced concrete sidewalk including all excavation, forming, expansion joint materials and incidentals necessary according to the plans, specifications, and details for the sum of <u>Sixty Eight</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$68.00	\$ 680.00
112	15	SY	Construct 4 inch thick, 3,000 psi reinforced concrete pad including all excavation, forming, expansion joint materials and incidentals necessary according to the plans, specifications, and details, complete in place for the sum of <u>Sixty Eight</u> Dollars and <u>Zero</u> Cents per Square Yard.	\$68.00	\$1,020.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
113	34	LF	Construct brick screening walls (including columns) according to the plans, specifications, and details, complete in place for the sum of <u>One Hundred Eighty Seven</u> Dollars and <u>Zero</u> Cents per Linear Foot.	\$ 187.00	\$6,358.00
114	1	EA	Furnish and Install 3' long x 6' tall wrought iron swing gate according to the plans, specifications, and details, complete in place for the sum of <u>Seven Hundred Twenty Four</u> Dollars and <u>Zero</u> Cents per Each.	\$724.00	\$724.00
115	1	EA	Furnish and Install 10' long x 6' tall wrought iron sliding gate according to the plans, specifications, and details, complete in place for the sum of <u>Two Thousand Six Hundred Seventy Four</u> Dollars and <u>Zero</u> Cents per Each.	\$2,674.00	\$2,674.00

SUB-TOTAL BASE BID (Items 101-115)

Ninety Six Thousand Seven Hundred Eleven Dollars

Zero Cents

Base Bid – Electrical Improvements

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
201	1	LS	Furnish and Install electrical equipment: a Size 3 starter HOA 30HP, a 100A, 3P Contactor, a 100A Load Center 60A-MCB with (2) 20A Branch Circuits, a 100A Load Center with (6) 1P-20A, splice conductors, required ground boxes and any other incidentals according to the plans, specifications and details, complete in place for the sum of <u>Three Thousand Four Hundred Forty Three</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$3,443.00	\$3,443.00
202	30	LF	Furnish and Install, 4- #3/0, 2" PVC Conduit, according to the plans, specifications and details, complete in place for the sum of <u>Fifty</u> Dollars and <u>Thirty</u> Cents per Linear Foot.	\$50.30	\$1,509.00
203	75	LF	Furnish and Install, 3- #2, #8G, 1 1/2" PVC Conduit to Exist. Vault from ML, according to the plans, specifications and details, complete in place for the sum of <u>Twenty Three</u> Dollars and <u>Ninety Six</u> Cents per Linear Foot.	\$ 23.96	\$1,797.00
204	10	LF	Furnish and Install, LTG Circuits: (2) 4 #12, 3/4" PVC Conduit, according to the plans, specifications and details, complete in place for the sum of <u>Four Hundred Two</u> Dollars and <u>Zero</u> Cents per Linear Foot.	\$40.20	\$402.00
205	10	LF	Furnish and Install, 3- #6, 1" PVC Conduit to Irrigation Meter, according to the plans, specifications and details, complete in place for the sum of <u>Forty One</u> Dollars and <u>Eighty</u> Cents per Linear Foot.	\$41.80	\$418.00
206	10	LF	Furnish and Install, 3- #6, 1" PVC Conduit to Well Pump, according to the plans, specifications and details, complete in place for the sum of <u>Forty One</u> Dollars and <u>Eighty</u> Cents per Linear Foot.	\$41.80	\$418.00

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
207	1	EA	Furnish and Install Millbank Enclosure, according to the plans, specifications and details, complete in place for the sum of <u>Eleven Thousand Seven Hundred Sixty</u> Dollars and <u>Zero</u> Cents per Each.	\$11,760.00	\$11,760.00
208	1	EA	Furnish and Install, Millbank Irrigation Enclosure, according to the plans, specifications and details, complete in place for the sum of <u>Two Thousand Six Hundred Ninety Eight</u> Dollars and <u>Zero</u> Cents per Each.	\$2,698.00	\$2,698.00
209	1	EA	Furnish and Install Panel 'ML' 200A with (3) 100A Frame 3P CB's, 480V, 3 Phase, according to the plans, specifications and details, complete in place for the sum of <u>Seven Hundred Nineteen</u> Dollars and <u>Zero</u> Cents per Each.	\$719.00	\$719.00
210	1	LS	Furnish and Install Cathodic Protection for steel piping according to the plans, specifications and details, complete in place for the sum of <u>Twenty Eight Thousand Two Hundred Sixty Eight</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$28,268.00	\$28,268.00

SUB-TOTAL BASE BID (Items 201-210)

Fifty One Thousand Four Hundred Thirty Two Dollars

Zero Cents

Base Bid – Landscape Improvements

Item No.	Quantity	Unit	Description/Unit Price In Words	Unit Price In Figures	Total
301	650	SF	Furnish and Install, Common Bermuda 'Mid Iron' Sod, according to the plans, specifications and details, complete in place for the sum of <u>Zero</u> Dollars and <u>Forty Six</u> Cents per Square Foot.	\$.46	\$ 299.00
302	430	SF	Furnish and Install, Wood Chips, according to the plans, specifications and details, complete in place for the sum of <u>One</u> Dollars and <u>Forty</u> Cents per Square Foot.	\$ 1.40	\$ 602.00
303	1	LS	Tree Trimming, complete in place for the sum of <u>Two Thousand Two Hundred Sixty One</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 2,261.00	\$ 2,261.00
304	1	LS	Tree Protection, complete in place for the sum of <u>One Thousand Six Hundred Ninety Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 1,696.00	\$ 1,696.00
305	1	LS	90 Day Establishment Period, complete in place for the sum of of <u>One Thousand Six Hundred Ninety Six</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 1,696.00	\$ 1,696.00
306	1	LS	1 Year Maintenance, complete in place for the sum of <u>Seven Thousand Six Hundred Thirty Two</u> Dollars and <u>Zero</u> Cents per Lump Sum.	\$ 7,632.00	\$ 7,632.00

SUB-TOTAL BASE BID (Items 301-306)

Fourteen Thousand One Hundred Eighty Six Dollars

Zero Cents

SUMMARY

**BID SCHEDULE – LES LACS POND WATER WELL
REBUILDING PROJECT**

1. Removal, Site Preparation and Miscellaneous Subtotal	
(Items 001-011)	<u>\$62,268.00</u>
2. Well and Well Area Improvements Subtotal	
(Items 101-115)	<u>\$96,711.00</u>
3. Electrical Improvements Subtotal	
(Items 201-210).....	<u>\$51,432.00</u>
4. Landscape Improvements Subtotal	
(Items 301-306).....	<u>\$14,186.00</u>

TOTAL BID \$224,597.00

Written in Words: Two Hundred Twenty Four Thousand Five Hundred Ninety Seven Dollars and Zero Cents

The pay items included in this proposal form comprise all of the pay items for the project. Any additional required work shall be considered subsidiary to the related pay items provided herein.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY CERTIFICATION OF FILING

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Groves Electrical Service, Inc.
Farmers Branch, TX United States

Certificate Number:
2016-26897

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Town of Addison, Texas

Date Filed:
03/16/2016

Date Acknowledged:

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.
Bid Number 16-43
Electrical Improvements

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO Interested Party.

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.



Maria Groves
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Maria Groves, this the 16th day of March, 2016, to certify which, witness my hand and seal of office.
Leeann May Hawkins

Maria Groves Maria Groves C.F.O.
Signature of officer administering oath Printed name of officer administering oath Title of officer administering oath

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: _____
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

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) year from the date of acceptance of the completed work 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) year 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

**INFRASTRUCTURE & DEVELOPMENT SERVICES BID NUMBER 16-43
LES LACS POND WATER WELL REBUILDING PROJECT**

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 _____, 201_.

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, 4th Edition (2004)*, under Division 100, "General Provisions," Items 101.1 through 109.6 inclusive, as amended or supplemented and except as modified by the Special Provisions, Instructions to Bidders, and Technical Specifications.

SECTION SP

SPECIAL PROVISIONS

SPECIAL PROVISIONS
TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.	Scope of Work	SP - 5
2.	General.....	SP - 5
3.	Examination of Site	SP - 5
4.	Specifications.....	SP - 5
5.	Subsurface Investigation	SP - 6
6.	Compliance with Laws.....	SP - 6
7.	Permits, Licenses and Regulations.....	SP - 6
8.	Rights-of-Way and Easements.....	SP - 6
9.	Restricted Work Hours	SP - 7
10.	Compliance with Immigration Laws.....	SP - 7
11.	Non-Discrimination Policy	SP - 7
12.	Antitrust Laws.....	SP - 7
13.	Abandonment.....	SP - 7
14.	Discrepancies	SP - 7
15.	Preparation of Storm Water Pollution Prevention Plan	SP - 8
16.	Addenda	SP - 8
17.	Pay Items.....	SP - 9
18.	Increase or Decrease in Quantities.....	SP - 9
19.	Subsidiary Work	SP - 9
20.	Qualification of Bids.....	SP - 9
21.	Award and Execution of Contract.....	SP - 10
22.	Explanation of Contract Time.....	SP - 10
23.	Copies of Plans Furnished	SP - 11
24.	Pre-Construction Conference.....	SP - 11
25.	Mobilization.....	SP - 11
26.	General Sequence of Construction.....	SP - 11
27.	Project Representative	SP - 11
28.	Coordination with Others.....	SP - 12
29.	Insurance/Indemnification.....	SP - 12
30.	Workers' Compensation Insurance Coverage.....	SP - 14
31.	Clean Air Act and Clean Water Act.....	SP - 17
32.	Resolution of Disputes	SP - 17
33.	Shop Drawings.....	SP - 17
34.	Project Video	SP - 17
35.	Samples and Tests of Materials	SP - 18
36.	Inspection	SP - 18
37.	Access Routes, Staging Areas and Storage Areas	SP - 18

Section	Title	Page
38.	Property Access.....	SP - 18
39.	Plant, Procedure, Methods and Equipment.....	SP - 19
40.	Parking of Construction Equipment.....	SP - 19
41.	Zoning Requirements.....	SP - 19
42.	Construction in Public Roads and Private Drives.....	SP - 19
43.	Hauling on Town of Addison Streets.....	SP - 20
44.	Existing Power Poles and Guy Wires.....	SP - 20
45.	Safety Restrictions - Work Near High Voltage Lines.....	SP - 20
46.	Protection of Existing Utilities and Structures.....	SP - 21
47.	Public Utilities and Other Property to be Changed.....	SP - 21
48.	Maintenance and Repairs.....	SP - 22
49.	Protection of Work.....	SP - 22
50.	Public Convenience and Safety.....	SP - 22
51.	Protection of Persons and Property.....	SP - 23
52.	Traffic Control.....	SP - 24
53.	Barricades, Warning Signs, Detours and Sequence of Construction.....	SP - 25
54.	Excavation Safety Systems.....	SP - 25
55.	Trench Excavation, Backfill and Compaction.....	SP - 26
56.	Trench Walls.....	SP - 27
57.	Property Lines and Monuments.....	SP - 27
58.	Construction Staking.....	SP - 27
59.	Vendor's Certification.....	SP - 28
60.	PVC Water Pipe.....	SP - 28
61.	Polyethylene Wrapping.....	SP - 28
62.	Pipe Cleaning.....	SP - 28
63.	Plugs.....	SP - 28
64.	Pipe Embedment.....	SP - 28
65.	Removals, Adjustments and Replacements.....	SP - 28
66.	Pavement Repair.....	SP - 29
67.	Water for Construction.....	SP - 29
68.	Existing Stockpiles of Material on Site.....	SP - 29
69.	Borrow Source.....	SP - 29
70.	Excess Material.....	SP - 29
71.	During Construction.....	SP - 30
72.	Contractor's Continuing Obligation.....	SP - 30
73.	Topsoiling, Seeding and Fertilizing.....	SP - 30
74.	Irrigation and Sprinkler Repair.....	SP - 30
75.	Removal of Defective and Unauthorized Work.....	SP - 31
76.	Disposition and Disposal of Materials.....	SP - 31

<u>Section</u>	<u>Title</u>	<u>Page</u>
77.	Clean-up for Final Acceptance	SP - 31
78.	TV Inspection of Sanitary Sewer and Storm Drain Systems	SP - 31
79.	Materials to be Furnished by Franchise Utility Companies	SP - 31
80.	Testing Requirements	SP - 31
81.	Silicone Joint Sealant.....	SP - 32
82.	Claims for Damages or Injury.....	SP - 32
83.	Waiver of Claims	SP - 33
84.	Mechanic's and Material men's Lien.....	SP - 33
85.	Contractor's Affidavit of Bills Paid.....	SP - 33
86.	Project Record Documents	SP - 33
87.	Town of Addison Approval	SP - 34
88.	Use of Explosives	SP - 34
89.	Power for Construction	SP - 34
90.	Liquidated Damages	SP - 34
91.	Prevailing Wage Rates	SP - 34
92.	Reference Specifications.....	SP - 39
93.	Bid Item Descriptions	SP - 39

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, removal, installation, planting, equipment and tools; performing all necessary labor and supervision; and the construction complete, including all work appurtenant thereto, the proposed improvements for: *Les Lacs Pond Water Well Rebuilding Project*.

2. **GENERAL:** This work shall conform to the requirements of the specifications and the details as shown on the Drawings. These Contract Documents are intended to be complementary. Requirements of any of the Contract Documents are as binding as if called for by all. In the event of conflict between the Drawings and the Specifications, the Contractor will be deemed to have assumed the more expensive way of doing the work unless, before submitting a bid, the Contractor shall have asked for and obtained (by addendum) a written decision as to which method or material is intended.

In cases of discrepancies, calculated dimensions shall govern over scaled dimensions; special provisions and special specifications shall govern over both general and standard specifications; and quantities shown on the plans shall govern over those shown in the proposal.

3. **EXAMINATION OF SITE:** The Contractor acknowledges that he has investigated and satisfied himself 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.

4. **SPECIFICATIONS:** Construction improvements shall be governed by the following published specifications and details (except as modified by these Special Provisions):

Standard Specifications for Public Works Construction, North Central Texas - North Central Texas Council of Governments (latest edition);

Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges – Texas Department of Transportation, 2004;

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.

5. **SUBSURFACE INVESTIGATION:** There is no subsurface geotechnical report prepared for this project. 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 plan 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. **COMPLIANCE WITH LAWS:** The Contractor shall familiarize himself with the nature and extent of the specifications, 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.
7. **PERMITS, LICENSES. AND REGULATIONS:** Permits and licenses for the prosecution of the Work shall be secured and paid for 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.**
8. **RIGHTS-OF-WAY AND EASEMENTS:** No right-of-way acquisition or easements are required for this project. However, 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 his 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 himself or his employees.

There shall be no work performed on private property. If necessary, 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 his 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 and property shall be cleaned up after use and restored to their original conditions or better.

9. **RESTRICTED WORK HOURS:** Construction may only occur from 7 a.m. to 7 p.m. Monday through Friday and from 8 a.m. to 7 p.m. on Saturdays. No work shall occur on Sundays or on legal Holidays, as determined by the Town of Addison. It is in the interest of the public safety and convenience for the work under this project to occur within the standard work hours. As a submittal, the Contractor must present a detailed work schedule to the Town for approval prior to construction.
10. **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.
11. **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.
12. **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).
13. **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.
14. **DISCREPANCIES:** If the Contractor, in the course of the Work, finds any discrepancy between the Contract Documents and the physical conditions of the locality, or any errors or omissions in drawings 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.

15. **PREPARATION OF STORM WATER POLLUTION PREVENTION PLAN:** A Storm Water Pollution Prevention Plan (SW3P) will be prepared by the Contractor in accordance with the Texas Pollution Discharge Elimination System, General Permit Number TXR150000 relating to Discharges from Construction Activities issued by the Texas Commission on Environmental Quality (TCEQ). The SW3P will include the following information as required by the TCEQ Permit: Project description that includes: description of the construction activities, intended schedule or sequence of major soil disturbing activities, number of total acres of the project area and number of acres where soil will be disturbed, estimate of the runoff coefficient of the site for pre-construction and post-construction conditions, data describing the soil, a general location map, the name of receiving waters at or near the site, and a copy of the TPDES General Permit.

A Best Management Plan is provided in the plans with minimum elements for perspective Bidders. The contractor is required to prepare a detailed site map will be prepared showing drainage patterns and approximate slopes after grading, areas where soil disturbance will occur, locations of major structural controls, locations where stabilization practices are expected to be used, surface waters, and locations where storm water discharges from the site directly to a surface water.

The Contractor shall prepare a SW3P and submit a Notice of Intent (NOI) as required by the TPDES Permit if the total disturbed area is 5 acres or more.

A three-ring SW3P binder will be prepared containing all information and reports that are required as part of the SW3P. The Contractor will be required to prepare and utilize the SW3P as listed above, and maintain all records on-site during the project including performing inspections and maintaining all required documentation required by the TPDES General Permit.

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.

The SW3P plan provided by the Contractor shall be designed, signed, and sealed by a professional engineer registered in Texas.

16. **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 three (3) working days prior to the date set for the Bid opening. The ability to ask questions will close at 2:00 pm, February 15, 2016. Answers to all such requests will be issued in the form of Addenda and a copy of such Addenda will be released through www.bidsync.com. It will be the responsibility of each person who has been issued as set of Bidding Documents to secure all Addenda from www.bidsync.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 he be in doubt as to their meaning, he shall at once notify the Engineer in writing in order that a written addendum may be sent to all Bidders.

17. **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.

See Special Provisions 93. Bid Item Descriptions for reference specifications, plans, and details.

18. **INCREASE OR DECREASE IN QUANTITIES:** The quantities shown in the proposal are approximate. Final payment will be based on quantities determined by measurement methods described for each work item.

When the quantity of work to be done or materials to be furnished under any major pay item or contract is more than 125% of the quantity stated in the contract, whether stated by Town of Addison or by Contractor, then either party to the contract, upon demand, shall be entitled to negotiate for revised consideration on the portion of work above 125% of the quantity stated in the contract.

When the quantity of the work to be done or materials to be furnished under any major pay item of the contract is less than 75% of the quantity stated in the contract, whether stated by Town of Addison or by Contractor, then either party to the contract, upon demand, shall be entitled to negotiate for revised consideration on the portion of work below 75% of the quantity stated in the contract. This paragraph shall not apply in the event Town of Addison deletes a pay item in its entirety from this contract.

19. **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 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.

20. **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 resolved in favor of the correct sum.

To be considered responsive, the apparent three lowest bidders are required to submit the Statement of Experience per Spec 00 45 16 within 5 days.

The apparent low three bidders will be notified by the Engineer to request the information.

21. **AWARD AND EXECUTION OF CONTRACT:** For the purpose of award, each bid submitted shall consist of two 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:

- **Base Bid – Parts 001 thru 306**

The method of Award will be as shown below:

Award = Total Base Bid

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 **150** calendar days for 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 regardless of weather, weekends, 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 provisions above, the Town shall deduct from the moneys due the Contractor the Liquidated Damages as shown in provision 95 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 11" x 17" and one (1) electronic copy of the plans shall be furnished to the successful Contractor, at no charge, for construction purposes. Additional copies may be obtained at cost of \$150.00 per set upon request.
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 for each party, testing requirements, submittals, 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.
25. **MOBILIZATION:** The work specified in this item consists of the preparatory work and operations in mobilizing for beginning work on the project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site, and for the establishment of temporary offices, utilities, and other facilities, if necessary, for the construction of proposed improvements. The provisions of TxDOT Standard Specification Item (TxDOT Item) 500 "Mobilization" shall apply, except the maximum amount allowed will be 5% of the total bid amount.
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 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 residences and businesses must be maintained at all times unless otherwise authorized in writing by the Town of Addison. Erosion control devices must be properly installed and maintained during all stages of construction.

The Contractor must comply with all lane closure and traffic movement restrictions as indicated in the plans unless specifically authorized in writing by the Town of Addison.

The general intent is for the contractor to begin at one end and steadily progress limiting the area of construction to minimize disruptions to the traveling public, residences and businesses along the route.

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

Attached as separate documents are the required insurance and indemnification forms. These forms must be signed and included in the bid.

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.

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 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.

30. 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 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,
- 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."

31. **CLEAN AIR ACT AND CLEAN WATER ACT:** Include in all construction contracts 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."

32. **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 agreement, 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. 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.

33. **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, latest edition. The Contractor shall furnish a minimum of four and a maximum of six copies of shop drawings for review by the Engineer, who will review, approve and forward to the Town of Addison for acceptance. Approved submittals will be returned as follows:

Two (2) – Town of Addison

One (1) – Contractor

Two (2) – Halff Associates, Inc.

Maximum size of submittals shall be 11 x 17 inch. No fax copies are acceptable. Shop drawings shall include all items to be installed in the project, including:

- | | | |
|---------------------------------------|-----------------------------------|--------------------------------|
| • Concrete Mix Designs | • Backfill Materials | • Traffic Control Plan |
| • Irrigation Fittings & Appurtenances | • Structures & Other Improvements | • Construction Entrance Layout |
| • Operation Site Layout | • Electrical Equipment | • Pump & Motor |
| • Piping | • Meters | • Finishes |

34. **PROJECT VIDEO:** Prior to the start of construction, Contractor shall video the construction area and property adjacent to construction in the presence of the Project Manager. 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.

35. **SAMPLES AND TESTS OF MATERIALS:** The Contractor 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 Contractor, including any and all re-testing. As a guide, the Contractor shall be responsible for providing any test required by the specifications.

All samples and tests shall be performed in accordance with the Standard Specifications for Public Works Construction, North Central Texas Council of Governments (Latest Edition) as amended or supplemented. The Town of Addison may elect to have its own independent lab if it so desires.

36. **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 (at least 48 hours) 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.

37. **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 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.
38. **PROPERTY ACCESS:** Access to adjacent properties 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.

39. **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 Construction Agreement. Only such 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.**

40. **PARKING OF CONSTRUCTION EQUIPMENT:** At night and during all other periods of time when equipment is not being actively used on the construction work, the Contractor shall park the equipment at locations, within project limits, which are approved by the Town of Addison or the Engineer. 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.
41. **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.
42. **CONSTRUCTION IN PUBLIC ROADS AND PRIVATE DRIVES:** No public road shall be entirely closed overnight (except as shown in plans). 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. No interference with traffic flow on city streets shall be permitted during the hours of 6:30 a.m. to 9:30 a.m. and 3:30

p.m. to 7:30 p.m., Mondays through Fridays (except as shown in plans).

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 Town 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 such reconstruction. 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.

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.

43. **HAULING ON TOWN OF ADDISON STREETS:** The Contractor shall receive approval of his 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.
44. **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 construction of this project prior to beginning his 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.
45. **SAFETY RESTRICTIONS - WORK NEAR HIGH VOLTAGE LINES:** The following procedures shall be followed for work near high voltage lines on this contract:
 - a. A warning sign not less than five (5) inches by seven (7) inches, painted yellow with black letters that are legible at twelve (12) feet shall be placed inside and outside vehicles such as cranes, derricks, power shovels, drilling rigs, pile driver, hoisting equipment or similar apparatus. The warning sign shall read as follows: "Warning - Unlawful to Operate This Equipment within Six Feet of High Voltage Lines."
 - b. Equipment that may be operated within ten (10) feet of high voltage lines shall have an insulating cage guard protecting the boom or arm, except backhoes or dippers, and insulator links on lift hook connections.

- c. When necessary to work within six (6) feet of high voltage electric lines, notify the power company who will erect temporary mechanical barriers, de-energize the line, or raise or lower the line. All such work done by the power company shall be at the expense of the Contractor. The Contractor shall maintain an accurate log of all such calls to the power company.
- d. The Contractor is required to make arrangements with the power company for the temporary relocation or raising of high voltage lines at the Contractor's sole expense.
- e. No person shall work within six (6) feet of high voltage lines without protection measures having been taken as outlined in Paragraph c.

46. 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 his 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 his 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.

47. 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 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 his operations to all existing utility lines, public property, and private property, whether it is below ground or above ground, and he shall settle in total the cost of all damage suites which may arise as a result of his 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.

48. **MAINTENANCE AND REPAIRS:** The Contractor shall maintain and keep in good repair all work contemplated under these plans, specifications, and drawings 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 his 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.

49. **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 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.

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

The Contractor, material, and equipment shall stay within the project limits. 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, his employees, agents or Subcontractors, or at any time due to defective work or materials, or due to his 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 his own cost and expense such property to a condition equal to or better than 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 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 his surety shall reimburse the Town of Addison for all such costs.

51. **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 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 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 his 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.

52. 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.
- b. The Contractor shall prosecute his 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 and Engineer 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. 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 comprehensive plan shall reflect the Contractor's proposed construction phasing and methodology and include the design layout for all proposed detour and traffic situations.

53. **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 his work sequence in a manner that will cause minimum interference with traffic 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 his 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.

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 his hauling operation clear and free of dirt, mud, silt, 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.

54. **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.

D. Measurement and Payment: Measurement and payment of Trench Safety Systems shall be based on lump sum for the entire project. The payment shall be full compensation for all planning, engineering, materials, equipment, fabrications, installation, recovery and all incidental work required. All excavation and backfill in addition to that specified elsewhere in these specifications shall be considered subsidiary to this bid item.

55. TRENCH EXCAVATION, BACKFILL AND COMPACTION: Trench excavation, backfill and compaction of storm drain and utility trenches shall be in accordance with Town of Addison Standards and with details shown on the Construction Drawings.

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 Conditions 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. NCTCOG, Type B backfill, item 504.2.3.3 or native material meeting the requirements of Type B backfill are considered the minimum requirement.

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).

56. **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.

57. **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.

58. **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.
59. **VENDOR'S CERTIFICATION:** All materials used in construction shall have a vendor's certified test report. Test reports shall be delivered to the Engineer before permission will be granted for use of the material. All vendors' test reports shall be subject to review by the Engineer, and shall be subject to verification by testing of samples of materials as received for use on the project. In the event additional tests are required, they shall be performed by an approved independent testing laboratory and shall be paid for by the Contractor.
60. **PVC WATER PIPE:** All water mains three-inch (3") diameter and smaller shall be PVC Schedule 80 pressure pipe with cast iron o.d. or when pipe penetrates meter vault walls it shall be ductile iron. Pipe joints shall be rubber ring and integral thickened bell, assembled with a factory supplied lubricant. Water mains shall have a minimum class rating of 165-psi for domestic use. Joint material for PVC shall conform to ASTM D1784.
61. **POLYETHYLENE WRAPPING:** All valves, ductile iron pipe, cast iron fittings, and specials, shall be polyethylene wrapped. Payment for the polyethylene wrapping for these components shall be subsidiary to the various items bid for the furnishing and installing pipe complete in place. Polyethylene wrap shall precede blocking.
62. **PIPE CLEANING:** Joints shall be wiped and then inspected for proper installation by the inspectors. Each joint shall be swept daily and kept clean during installation. A temporary night plug shall be installed on all exposed pipe ends during any period of work stoppage.
63. **PLUGS:** Pipe plugs for water and wastewater lines shall be considered incidental and shall not be a separate pay item.
64. **PIPE EMBEDMENT:** All storm drain and utility construction shall be installed with embedment per the Town of Addison Standard Details shown on the plans for the appropriate pipe size, pipe material, depth and soil condition unless otherwise directed by the Town of Addison or the Engineer.
65. **REMOVALS, ADJUSTMENTS AND REPLACEMENTS:** Existing pavements, driveways, curbs, gutters, sidewalks, etc., to be removed to facilitate the construction of the improvements shall be broken up and disposed of. Care shall be exercised to leave a neat, uniform edge or joint at the excavation limits or sections removed where only portions are to be removed. The Engineer will designate the limits to be removed. Where pavements,

driveways, curbs, gutters, sidewalks, etc., shall be replaced, then said replacements shall be to the standard of the previously removed portion or better. Re-sawing of damaged edges will be at the Contractor's expense.

Existing structures such as manholes, inlets, cleanouts, valve boxes, etc. which are not the property of a private firm or company, or an individual required to move their own property, shall be adjusted, altered or reset to the required elevation and alignment. New materials and workmanship necessary shall conform to the requirements of these Specifications covering the particular Work. Salvaged materials in good condition may be used in rebuilding such structures, provided the materials are thoroughly cleaned before their use. These items shall be subsidiary to other bid items unless quantified in the proposal as a separate bid item.

All private obstructions which are indicated on the Plans to be moved, will be removed and replaced, or moved to new permanent locations by the Contractor, without additional payment to the Contractor. Any such additional item which the Contractor moves or causes to be moved for his own convenience shall be at his own expense.

66. **PAVEMENT REPAIR:** The unit price bid under the appropriate bid item of the proposal shall cover all cost for providing pavement repair per the pavement repair detail provided in the plans.
67. **WATER FOR CONSTRUCTION:** The Contractor shall acquire a meter and make the necessary arrangements with the Town of Addison for securing and transporting all water required for construction, including water required for mixing of concrete, sprinkling, testing or flushing. There will be no separate pay item for connection into the existing water system and quantity of water required for construction purposes. The Town of Addison will not furnish water for initial cleaning and sterilization of water lines. All additional water used by the Contractor for compaction or any other purpose incidental to this project may be obtained from existing hydrants along adjacent roadways. Note that the Contractor will be responsible for supplying chlorine gas or chlorinated lime (HTH) for water line sterilization.
68. **EXISTING STOCKPILES OF MATERIAL ON SITE:** There shall be no stockpiling of silt material on site.
69. **BORROW SOURCE:** If additional sources of earthen material are required to complete the project to the alignment, grades and cross sections indicated on the plans, Contractor will be required to locate, obtain, excavate, deliver and place suitable fill material from an off-site source. Borrow materials should be compatible with existing on-site materials and shall be tested by the Geotechnical Engineer (employed and paid for by the Contractor) for acceptance as an approved source of borrow prior to borrow operations. Item 3.6 - Borrow of the Standard Specifications for Public Works Construction, North Central Texas Council of Governments shall apply for all work performed.
70. **EXCESS MATERIAL:** Suitable excess material (if any) may not be disposed of on this site. Tree stumps and limbs, concrete debris, discarded materials and all unsuitable excess spoil material, including rock measuring larger than 12" in the largest dimension, shall become the

property of the Contractor and shall be removed from the site and disposed of by the Contractor at his expense. The Contractor shall also comply with all applicable laws governing spillage of debris while transporting to a disposal site, and shall indemnify and save harmless the Town of Addison and the Engineer from all suits, actions, or claims of any character resulting from his arrangements for the disposal of spoil.

71. **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 Contractor under his contract; or where sufficient contract funds are unavailable for this purpose, the Contractor or his surety shall reimburse the Town of Addison for all such costs.
72. **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.
73. **TOP SOILING, SODDING AND FERTILIZING:** This item shall cover the topsoiling, sodding, fertilizing, watering and required maintenance for the grassing of all unpaved areas of the right-of-way and the easements, and all other areas of the project site that have been disturbed by this Contractors' operations including batch plant site, haul roads, etc. excluding building pad sites and lots which will not require seeding and fertilizing. The pay item shall only include that area which is within the right-of-way and the easements. All other disturbed areas requiring seeding and fertilizing shall be considered subsidiary to the cost of the project. Top soiling, sodding and fertilizing shall be provided in accordance with NCTCOG Items 202.2, 202.5 and 202.4, respectively and as amended by the Special Provisions and Technical Specifications Section 32 92 23 "Sodding".
74. **IRRIGATION AND SPRINKLER REPAIR:** The Contractor shall maintain all existing irrigation systems within the limits of the project during the duration of the contract. 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 his own cost.

After construction is complete, the Contractor shall reinstall the sprinkler heads. The Town will test the sprinkler system. Any defects due to construction shall be the Contractor's responsibility.

75. **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 Drawings 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 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 to the Contractor under his contract; or where sufficient contract funds are unavailable for this purpose, the Contractor or his surety shall reimburse the Town of Addison for all such costs.
76. **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.
77. **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.
78. **TV INSPECTION OF WATER WELL SYSTEM:** TV inspection of the well casing pipe and screens is required for this project. Refer to Technical Specification 11005: "Well Pump and Motor" for more details.
79. **MATERIALS TO BE FURNISHED BY FRANCHISE UTILITY COMPANIES:** No franchise utility materials are to be furnished for this project.
80. **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 Contractor shall coordinate with the Town of Addison, and shall 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) Compressive strength tests on concrete.
- (2) Gradation soil tests on backfill as may be required.
- (3) Providing test results from manufacturer as specified in Town of Addison Specifications.
- (4) Well pump testing per plans and specifications.

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

82. **CLAIMS FOR DAMAGES OR INJURY:** 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 his 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.

83. **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.
84. **MECHANICS AND MATERIALMEN'S LIEN:** The Contractor shall be required to execute a release of mechanics and materialmen's liens upon receipt of payment.
85. **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.
86. **PROJECT RECORD DOCUMENTS:** The Contractor shall maintain record drawings 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 Drawings, 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 Drawings: 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 Drawings.

- 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.

Submittal: At the completion of the project, the Contractor shall deliver record drawings 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 his authorized representative.

- 87. **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 drawings are given to the Town of Addison.
- 88. **USE OF EXPLOSIVES:** The use of explosives by the Contractor to complete the Work shall be prohibited.
- 89. **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 lighting, machinery operation, or temporary offices. There will be no separated pay item for connection into the existing power system or for the power required for construction purposes.
- 90. **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 \$ 500 for each calendar day of delay until the work is completed or accepted.
- 91. **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 hereto under Davis & Bacon Wage Determinations for Heavy Highway.

PREVAILING WAGE RATES

General Decision Number: TX160028 01/08/2016 TX28

Superseded General Decision Number: TX20150028

State: Texas

Construction Type: Heavy

Counties: Collin, Dallas, Denton, Ellis, Kaufman and Rockwall
Counties in Texas.

Water and Sewer Lines/Utilities (Including Related Tunneling
where the Tunnel is 48" or Less in Diameter)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the 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 \$10.15 (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 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0 01/08/2016

* PLUM0100-002 07/01/2013

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 28.88	8.83

SUTX1991-004 09/23/1991

	Rates	Fringes
--	-------	---------

Laborers:

Common.....	\$ 7.25
Utility.....	\$ 7.467

Pipelayer..... \$ 7.828

Power equipment operators:

Backhoe.....\$ 10.804

Crane.....\$ 10.942

Front End Loader.....\$ 9.163

Tunneling Machine (48" or
less).....\$ 9.163

TRUCK DRIVER.....\$ 8.528

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

=====
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).

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 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 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 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

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

92. **BID ITEMS/REFERENCE SPECIFICATIONS:** The requirements of NCTCOG standard specifications for Public Works construction 4th Edition dated 2004, and TxDOT standard specifications for construction and maintenance of highways, streets and bridges, dated 2004, shall apply as described.

93. **BID ITEM DESCRIPTIONS:** The series of numbers shown after the description are for either the Texas Department of Transportation (TxDOT) Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges (2004), the North Central Texas Council of Governments (NCTCOG) Standard Specifications for Public Works Construction, Fourth Edition (October 2004), or technical specifications number provided with this document.

Description of Bid Items

Bid Item #001

Mobilization

The provisions of TxDOT Item 500, "Mobilization", shall apply except as modified or clarified below:

- A. Partial payments of the lump sum bid for mobilization shall be per the provisions of TxDOT Item 500.
- B. Measurement for this bid item shall be for Lump Sum.
- C. Payment for this bid item shall be paid for at the unit price bid for "Mobilization".

Bid Item #002**Transportation of Pump**

"Transportation of pump, motor and cable to and from shop. All replaced parts need to be transported back to Town of Addison, complete in place for the sum of"

No additional description.

Bid Item #003**TV Inspection of Well casing and screens**

Perform Television Inspection of well casing and screens, complete in place for the sum of

This item shall consist of all labor, tools, equipment, materials and incidentals necessary for performing television inspection of the well casing pipe and screens.

Bid Item #004**Traffic Control**

The following provisions shall apply:

- A. Contractor shall submit proposed traffic control plan (TCP) to the Engineer and Town for approval. The TCP must conform to guidelines established in the Texas Manual of Uniform Traffic Control Devices (TMUTCD).
- B. This item includes all labor, equipment, materials and incidentals required to provide traffic control as necessary. Materials include but are not limited to signage including full time changeable message signs, traffic control devices, barricades, low profile concrete barrier, temporary striping, and any other items called for in the plans or necessary for the safe and efficient operation of traffic.
- C. Contractor shall provide access to existing driveways at all times, except when concrete is curing. Gravel shall be placed at driveways and sidewalks once existing pavement has been removed for construction. Gravel material is incidental to this bid item.
- D. Street access shall be maintained at all times for emergency vehicles.
- E. Measurement for this bid item shall be per Lump Sum.
- F. Payment for this bid item shall be paid for at the unit price bid for "Traffic Control".

Bid Item #005**SW3P Including Maintenance, Site Protection and Erosion Control**

The provisions of NCTCOG Item 201, "Temporary Erosion, Sedimentation, and Water Pollution Prevention and Control", shall apply except as modified or clarified below:

- A. This item includes all labor, equipment, materials, planning, excavating, compacting, testing and incidentals required to complete the work in accordance with plans and specifications.
- B. Refer to NCTCOG Item 201.3, "Preconstruction Submittals", and Special Provisions, Number 15, "Preparations of Storm Water Pollution Prevention Plan," for additional specification on submitting the Storm Water Pollution Prevention Plan prior to the beginning of construction.
- C. Refer to NCTCOG Item 201.4, "Construction Requirements", for additional specification on erosion control during construction.
- D. Refer to NCTCOG Item 201.5, "Silt Fence", for additional specification regarding inlet protection.
- E. Refer to NCTCOG Item 201.14, "Inlet Protection", for additional specification regarding inlet protection.
- F. Contractor shall refer to the Stormwater Pollution Prevention Plan (SWPPP) for requirements of all temporary and permanent erosion control measures. Preparation of the SWPPP shall be subsidiary to these bid items.
- G. Measurement for this bid item shall be per Lump Sum, including silt fence, inlet protection, sidewalk protection, and SW3P maintenance and erosion control.
- H. Payment for this bid item shall be paid for at the unit price bid for "SW3P Including Maintenance, Site Protection and Erosion Control".

Bid Item #006**Project Signs**

The provisions of NCTCOG Item 107.20, "Project Signs", shall apply except as modified or clarified below:

- A. The Contractor shall be responsible for furnishing the project signs per the specifications shown on the Project Sign Detail Sheet (see Section PS of this Contract Documents and Specifications book).
- B. Measurement for this bid item shall be for Each.
- C. Payment for this bid item shall be paid for at the unit price bid for "Project Signs".

Bid Item #007

Remove Electrical Equipment

The provisions of NCTCOG Item 203, "Site Preparation", shall apply except as modified or clarified below:

- A. Refer to Technical Specification Section 01732, "Demolition" for additional requirements.
- B. Refer to Demolition Plan for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, compacting, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum, which includes electric meters, electric boxes, electrical wires and any other electrical appurtenances.
- E. Payment for this bid item shall be paid for at the unit price bid for "Remove Existing Electrical Equipment (including Electric Meters, Boxes, and Electrical Wires within Well Area)"

Bid Item #008

Remove and Dispose of Screening Walls and Columns

The provisions of NCTCOG Item 203, "Site Preparation", shall apply except as modified or clarified below:

- A. Refer to Technical Specification Section 01732, "Demolition" for additional requirements.
- B. Refer to Demolition Plan for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, compacting, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum (concrete box fountain).
- E. Payment for this bid item shall be paid for at the unit price bid for "Remove and dispose of existing brick screening walls and columns".

Bid Item #009

Tree Removal and Grubbing

The provisions of TxDOT Item 752, "Tree and Brush Removal", and NCTCOG Item 202.1, "Removal, Protection, and Replacement of Trees, Shrubbery, Plants, Sod, and Other Vegetation", shall apply except as modified or clarified below:

- A. Refer to Removal Plans for locations, general notes, and details of trees to be removed.
- B. No trees are to be replaced.
- C. Measurement for this bid item shall be per Each.
- D. Payment for this bid item shall be paid for at the unit price bid for "Tree Removal and Grubbing".

Bid Item #010

Remove Existing Concrete Sidewalk

The provisions of TxDOT Item 104, "Removing Concrete", shall apply except as modified or clarified below:

- A. This item includes all labor, equipment, materials and incidentals required to eliminate existing concrete in accordance with plans and specifications.
- B. All concrete to be removed shall be sawcut. Sawcut shall be subsidiary to removal bid items.
- C. This item when called for in the plans shall include saw cutting the concrete and disposal of the material at an approved location outside of the project limits. This surplus material shall become property of the Contractor.
- D. Concrete shall be properly disposed of at an off-site location by the Contractor.
- E. Measurement for this bid item shall be per Square Yard.
- F. Payment for this bid item shall be paid for at the unit price bid for "Remove Existing Concrete Sidewalk."

Bid Item #011**Remove Existing Concrete Pad**

The provisions of TxDOT Item 104, "Removing Concrete", shall apply except as modified or clarified below:

- A. This item includes all labor, equipment, materials and incidentals required to eliminate existing concrete in accordance with plans and specifications.
- B. All concrete to be removed shall be sawcut. Sawcut shall be subsidiary to removal bid items.
- C. This item when called for in the plans shall include saw cutting the concrete and disposal of the material at an approved location outside of the project limits. This surplus material shall become property of the Contractor.
- D. Concrete shall be properly disposed of at an off-site location by the Contractor.
- E. Measurement for this bid item shall be per Square Yard.
- F. Payment for this bid item shall be paid for at the unit price bid for "Remove Existing Concrete Pad."

Bid Item #101**Well Pump and Motor**

The following provisions shall apply:

- A. The pump and motor shall meet the performance and design requirements outlined per this Contract Documents and Specifications book. Refer to Technical Specification Section 11005, "Well Pump and Motor Replacement" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, compacting, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for "Well Pump and Motor".

Bid Item #102**Stainless Steel Airline**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11005, "Well Pump and Motor" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Linear Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "Stainless Steel Airline".

Bid Item #103**Motor Conductor Cable**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11005, "Well Pump and Motor Replacement" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for "Motor Conductor Cable".

Bid Item #104**3"x20' Threaded and Coupled Stainless Steel Column Pipe**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11005, "Well Pump and Motor Replacement" for additional

details.

- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "3"x20' Threaded and Coupled Stainless Steel Column Pipe".

Bid Item #105**3" In-Line Stainless Steel Check Valves**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11005, "Well Pump and Motor Replacement" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "3" In-Line Stainless Steel Check Valves".

Bid Item #106**Magnetic Flowmeter**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11280, "Electromagnetic Flowmeter" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "Magnetic Flowmeter".

Bid Item #107**3" Air Release Valve**

The following provisions shall apply:

- A. Refer to Technical Specification Section 15141, "Air Valves for Potable Water Systems" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "3" Air Release Valve".

Bid Item #108**Reset Pump and Motor**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11005, "Well Pump and Motor Replacement" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum.

- E. Payment for this bid item shall be paid for at the unit price bid for "Reset Pump and Motor".

Bid Item #109 **Pump Testing**

The following provisions shall apply:

- A. Refer to Technical Specification Section 11005, "Well Pump and Motor Replacement" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for "Pump Testing".

Bid Item #110 **3" PVC Schedule 80 Piping**

The following provisions shall apply:

- A. Refer to Plans for location, details, and general notes.
- B. This item includes all labor, equipment, materials, testing and incidentals required to complete the work in accordance with plans and specifications.
- C. Measurement for this bid item shall be per Linear Foot.
- D. Payment for this bid item shall be paid for at the unit price bid for "3" PVC Schedule 80 Piping".

Bid Item #111 **Concrete Sidewalk**

The provisions of NCTCOG Item 305.2, "Sidewalks", shall apply except as modified or clarified below:

- A. Refer to Technical Specification Section 03312, "Cast-in-Place Concrete" for additional details.
- B. This item includes all labor, equipment, materials, grading and incidentals required to provide a finished concrete pavement section including any required saw joints and expansion joints in accordance with the specifications. Any concrete sidewalk which tests below the required strength or is out of alignment or is of insufficient thickness, is subject to removal and replacement at the Engineer's sole discretion at the Contractor's expense.
- C. Sidewalks shall have a thickness of four inches (4").
- D. Concrete shall be Class 'C' concrete designed to meet a minimum compressive strength of 3,600 psi at 28 days.
- E. Measurement for this bid item shall be per Square Yard.
- F. Payment for this bid item shall be paid for at the unit price bid for "Concrete Sidewalk".

Bid Item #112 **Concrete Pad**

The provisions of NCTCOG Item 305, "Miscellaneous Roadway Construction", shall apply except as modified or clarified below:

- A. Refer to Technical Specification Section 03312, "Cast-in-Place Concrete" for additional details.
- B. This item includes all labor, equipment, materials, grading and incidentals required to provide a finished concrete pavement section including any required saw joints and expansion joints in accordance with the specifications. Any concrete sidewalk which tests below the required strength or is out of alignment or is of insufficient thickness, is subject to removal and replacement at the Engineer's sole discretion at the Contractor's expense.
- C. Sidewalks shall have a thickness of four inches (4").
- D. Concrete shall be Class 'C' concrete designed to meet a minimum compressive strength of 3,600

- psi at 28 days.
- E. Measurement for this bid item shall be per Square Yard.
- F. Payment for this bid item shall be paid for at the unit price bid for "Concrete Pad".

Bid Item #113 **Screening Walls and Columns**

The following provisions shall apply:

- A. Refer to Plans for location, details, and general notes.
- B. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- C. Measurement for this bid item shall be per Linear Foot.
- D. Payment for this bid item shall be paid for at the unit price bid for "Screening Wall and Columns".

Bid Item #114 **3' Wrought Iron Swing Gate**

The following provisions shall apply:

- A. Refer to Plans for location, details, and general notes.
- B. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- C. Measurement for this bid item shall be per Each.
- D. Payment for this bid item shall be paid for at the unit price bid for "3' Wrought Iron Swing Gate".

Bid Item #115 **10' Wrought Iron Sliding Gate Manhole**

The following provisions shall apply:

- A. Refer to Plans for location, details, and general notes.
- B. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- C. Measurement for this bid item shall be per Each.
- D. Payment for this bid item shall be paid for at the unit price bid for "3' Wrought Iron Swing Gate".

Bid Item #201 **Basic Electrical Materials**

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 00 50, "Basic Electrical Materials and Methods" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for "Basic Electrical Materials".

Bid Item #202 **#3/0- 2" PVC Conduit**

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 05 19, "Low-Voltage Electrical Power Conductors and Cables" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.

- D. Measurement for this bid item shall be per Linear Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "#3/0- 2" PVC Conduit".

Bid Item #203

#2- #8G, 1 1/2" PVC Conduit

The following provisions shall apply:

- A. Refer to Technical Specification Section 260519, "Low-Voltage Electrical Power Conductors and Cables" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Linear Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "#2- #8G, 1 1/2" PVC Conduit".

Bid Item #204

LTG Circuits: (2) 4 #12, 3/4" PVC Conduit

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 05 19, "Low-Voltage Electrical Power Conductors and Cables" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Linear Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "LTG Circuits: (2) 4 #12, 3/4" PVC Conduit".

Bid Item #205

#6- 1" PVC Conduit (Irrigation Meter)

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 05 19, "Low-Voltage Electrical Power Conductors and Cables" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Linear Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "#6- 1" PVC Conduit (Irrigation Meter)".

Bid Item #206

#6- 1" PVC Conduit (Well Pump)

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 05 19, "Low-Voltage Electrical Power Conductors and Cables" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Linear Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "#6- 1" PVC Conduit (Well Pump)".

Bid Item #207

Millbank Power Distribution Enclosure

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 29 13, "Enclosed Controllers" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "Millbank Power Distribution Enclosure".

Bid Item #208

Millbank Irrigation Enclosure

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 29 13, "Enclosed Controllers" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "Millbank Irrigation Enclosure".

Bid Item #209

Panel 'ML'

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 24 16, "Panelboards" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, excavating, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "Panel 'ML'".

Bid Item #210

Cathodic Protection

The following provisions shall apply:

- A. Refer to Technical Specification Section 26 42 00, "Cathodic Protection" for additional details.
- B. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, testing and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Each.
- E. Payment for this bid item shall be paid for at the unit price bid for "Cathodic Protection".

Bid Item #301

Bermuda 'Mid Iron' Sod

The following provisions shall apply:

- A. Refer to Technical Landscape Specification Section 32 92 23, "Sodding" for additional requirements.
- B. Refer to Plans for location and general notes.
- C. This item includes all labor, equipment, materials, excavating, compacting, and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be per Square Foot.
- E. Payment for this bid item shall be paid for at the unit price bid for "Common Bermuda Mid Iron Sod".

Bid Item #302**Wood Chips**

The following provisions shall apply:

- A. Refer to Plans for location and general notes.
- B. This item includes all labor, equipment, materials, excavating, compacting, and incidentals required to complete the work in accordance with plans and specifications.
- C. Measurement for this bid item shall be per Square Foot.
- D. Payment for this bid item shall be paid for at the unit price bid for "Wood Chips".

Bid Item #303**Tree Trimming**

The following provisions shall apply:

- A. Refer to Technical Specification Section 32 93 00, "Landscape Planting" for additional requirements.
- B. Tree trimming shall occur within the project limits. Refer to Plans for location, details, and general notes.
- C. This item includes all labor, equipment, materials, disposal, and incidentals required to complete the work in accordance with plans and specifications.
- D. Measurement for this bid item shall be Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for "Tree Trimming".

Bid Item #304**Tree Protection**

The provisions of NCTCOG Item 202.1, "Removal, Protection, and Replacement of Trees, Shrubbery, Plants, Sod, and Other Vegetation" shall apply except as modified or clarified below:

- A. All trees not noted in Demolition plans as to be removed shall be protected.
- B. This item includes all labor, equipment, materials, excavating, compacting, and incidentals required to complete the work in accordance with plans and specifications.
- C. Measurement for this bid item shall be per Lump Sum.
- D. Payment for this bid item shall be paid for at the unit price bid for "Tree Protection".

Bid Item #305**90 Day Establishment Period**

The following provisions shall apply:

- A. Refer to Technical Specification Section 32 01 90, "90 Day Establishment Planting" for additional requirements.
- B. Refer to Construction Plans for details, and general notes.
- C. This item includes all labor, equipment, materials, and incidentals required to implement landscape maintenance program for a period of 90days after planting in accordance with plans and specifications.
- D. Measurement for this bid item shall be Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for "90 Day Establishment Period".

Bid Item #306**1 Year Maintenance**

The following provisions shall apply:

- A. Refer to Technical Specification Section 32 01 92, "Landscape Maintenance - 1 Year" for additional requirements.

- B. Refer to Construction Plans for details, and general notes.
- C. This item includes all labor, equipment, materials, and incidentals required to implement landscape maintenance program for a period of 1 year after final acceptance from Town in accordance with plans and specifications.
- D. Measurement for this bid item shall be Lump Sum.
- E. Payment for this bid item shall be paid for at the unit price bid for Implementation of Landscape Maintenance Program for a Period of (1) Year from Date of Final Acceptance.

SECTION PS
PROJECT SIGN

PROJECT SIGN

1. Quantity

Three (3) 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.

3.5 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260050 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.6 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.
 - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 - 2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 26 24 16

PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Distribution panelboards.
2. Lighting and appliance branch-circuit panelboards.

1.2 DEFINITIONS

- A. MCCB: Molded-case circuit breaker.
- B. SPD: Surge protective device.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of panelboard.
- B. Shop Drawings: For each panelboard and related equipment.
 1. Include dimensioned plans, elevations, sections, and details.
 2. Detail enclosure types including mounting and anchorage, environmental protection, knockouts, corner treatments, covers and doors, gaskets, hinges, and locks.
 3. Detail bus configuration, current, and voltage ratings.
 4. Short-circuit current rating of panelboards and overcurrent protective devices.
 5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
 6. Include wiring diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Panelboard schedules for installation in panelboards.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.6 FIELD CONDITIONS

- A. Service Conditions: NEMA PB 1, usual service conditions, as follows:
1. Ambient temperatures within limits specified.
 2. Altitude not exceeding 6600 feet (2000 m).

1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace panelboards that fail in materials or workmanship within specified warranty period.
1. Panelboard Warranty Period: **18** months from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANELBOARDS COMMON REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NEMA PB 1.
- C. Comply with NFPA 70.
- D. Enclosures: **Surface**-mounted, dead-front cabinets.
1. Rated for environmental conditions at installed location.
 - a. Wet or Damp Locations: NEMA 250, Type 4.
 2. Height: 84 inches (2.13 m) maximum.
 3. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box. Trims shall cover all live parts and shall have no exposed hardware.
 4. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover. Trims shall cover all live parts and shall have no exposed hardware.
- E. Incoming Mains Location: Top, Bottom or Convertible between top and bottom.
- F. Phase, Neutral, and Ground Buses: Hard-drawn copper, 98 percent conductivity.
- G. Conductor Connectors: Suitable for use with conductor material and sizes.
1. Material: Hard-drawn copper, 98 percent conductivity.
 2. Main and Neutral Lugs: Compression type, with a lug on the neutral bar for each pole in the panelboard.
 3. Ground Lugs and Bus-Configured Terminators: Compression type, with a lug on the bar for each pole in the panelboard.

4. Feed-Through Lugs: Compression type, suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.
- H. NRTL Label: Panelboards shall be labeled by an NRTL acceptable to authority having jurisdiction for use as service equipment with one or more main service disconnecting and overcurrent protective devices. Panelboards shall have meter enclosures, wiring, connections, and other provisions for utility metering. Coordinate with utility company for exact requirements.
- I. Future Devices: Panelboards shall have mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- J. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. Assembly listed by an NRTL for 100 percent interrupting capacity.

2.2 POWER PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 1. Eaton.
 2. General Electric Company; GE Energy Management - Electrical Distribution.
 3. Siemens Energy.
 4. Square D; by Schneider Electric.
- B. Panelboards: NEMA PB 1, distribution type.
- C. Doors: Secured with vault-type latch with tumbler lock; keyed alike.
 1. For doors more than 36 inches (914 mm) high, provide two latches, keyed alike.
- D. Mains: Circuit breaker.
- E. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes 125 A and Smaller: Bolt-on circuit breakers or Plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.
- F. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers or Plug-in circuit breakers where individual positive-locking device requires mechanical release for removal.
- G. Contactors in Main Bus: NEMA ICS 2, Class A, mechanically held, general-purpose controller, with same short-circuit interrupting rating as panelboard.
 1. External Control-Power Source: 120-V branch circuit.

2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Eaton.
 - 2. General Electric Company; GE Energy Management - Electrical Distribution.
 - 3. Siemens Energy.
 - 4. Square D; by Schneider Electric.
- B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.
- C. Mains: Circuit breaker.
- D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- E. Contactors in Main Bus: NEMA ICS 2, Class A, mechanically held, general-purpose controller, with same short-circuit interrupting rating as panelboard.
 - 1. External Control-Power Source: 120-V branch circuit.
- F. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

2.4 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Eaton.
 - 2. General Electric Company; GE Energy Management - Electrical Distribution.
 - 3. Siemens Energy.
 - 4. Square D; by Schneider Electric.
- B. MCCB: Comply with UL 489, with interrupting capacity to meet available fault currents.
 - 1. Thermal-Magnetic Circuit Breakers:
 - a. Inverse time-current element for low-level overloads.
 - b. Instantaneous magnetic trip element for short circuits.
 - c. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
 - 2. GFCI Circuit Breakers: Single- and double-pole configurations with Class A ground-fault protection (6-mA trip).
 - 3. GFEP Circuit Breakers: Class B ground-fault protection (30-mA trip).
 - 4. MCCB Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Breaker handle indicates tripped status.
 - c. UL listed for reverse connection without restrictive line or load ratings.
 - d. Lugs: Compression style, suitable for number, size, trip ratings, and conductor materials.

- e. Application Listing: Appropriate for application; Type HID for feeding fluorescent and HID lighting circuits.
- f. Shunt Trip: 120-V trip coil energized from separate circuit, set to trip at 55 percent of rated voltage.
- g. Handle Padlocking Device: Fixed attachment, for locking circuit-breaker handle in on or off position.

2.5 IDENTIFICATION

- A. Panelboard Label: Manufacturer's name and trademark, voltage, amperage, number of phases, and number of poles shall be located on the interior of the panelboard door.
- B. Breaker Labels: Faceplate shall list current rating, UL and IEC certification standards, and AIC rating.
- C. Circuit Directory: Directory card inside panelboard door, mounted in metal frame with transparent protective cover.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with NECA 1.
- B. Install panelboards and accessories according to NECA 407 or NEMA PB 1.1.
- C. Mount panelboard cabinet plumb and rigid without distortion of box.
- D. Install overcurrent protective devices and controllers not already factory installed.
- E. Make grounding connections and bond neutral for services and separately derived systems to ground. Make connections to grounding electrodes.
- F. Install filler plates in unused spaces.
- G. Arrange conductors in gutters into groups and bundle and wrap with wire ties.

3.2 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems."
- B. Create a directory to indicate installed circuit loads; Obtain approval before installing. Handwritten directories are not acceptable. Install directory inside panelboard door.
- C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

- D. Device Nameplates: Label each branch circuit device in power panelboards with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
- E. Install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems" identifying source of remote circuit.

3.3 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- C. Tests and Inspections:
 - 1. Perform each visual and mechanical inspection and electrical test for low-voltage air circuit breakers stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- D. Panelboards will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results, with comparisons of the two scans. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 26 29 13
ENCLOSED CONTROLLERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes the following enclosed controllers rated 600 V and less:
 - 1. Full-voltage magnetic.

1.2 DEFINITIONS

- A. CPT: Control power transformer.
- B. MCCB: Molded-case circuit breaker.
- C. MCP: Motor circuit protector.
- D. N.C.: Normally closed.
- E. N.O.: Normally open.
- F. OCPD: Overcurrent protective device.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of enclosed controller.
- B. Shop Drawings: For each enclosed controller. Include dimensioned plans, elevations, sections, details, and required clearances and service spaces around controller enclosures.
 - 1. Wiring Diagrams: For power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.6 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 FULL-VOLTAGE CONTROLLERS

- A. General Requirements for Full-Voltage Controllers: Comply with NEMA ICS 2, general purpose, Class A.
- B. Combination Magnetic Controller: Factory-assembled combination of magnetic controller, OCPD, and disconnecting means.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Eaton.
 - b. General Electric Company.
 - c. Siemens Industry, Inc.
 - d. Square D; by Schneider Electric.
 - 2. Nonfusible Disconnecting Means:
 - a. NEMA KS 1, heavy-duty, horsepower-rated, nonfusible switch.
 - b. Lockable Handle: Accepts three padlocks and interlocks with cover in closed position.
 - c. Auxiliary Contacts: N.O./N.C., arranged to activate before switch blades open.

2.2 ENCLOSURES

- A. Enclosed Controllers: NEMA ICS 6, to comply with environmental conditions at installed location.
 - 1. Outdoor Locations: Type 4X.
 - 2. Wet or Damp Indoor Locations: Type 4.

2.3 ACCESSORIES

- A. Push Buttons, Pilot Lights, and Selector Switches: NEMA ICS 5; heavy-duty type; factory installed in controller enclosure cover unless otherwise indicated.
- B. Control Relays: Auxiliary and adjustable time-delay relays.

- C. Phase-Failure, Phase-Reversal, and Undervoltage and Overvoltage Relays: Solid-state sensing circuit with isolated output contacts for hard-wired connections. Provide adjustable undervoltage, overvoltage, and time-delay settings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Wall-Mounted Controllers: Install enclosed controllers on walls with tops at uniform height, and with disconnect operating handles not higher than 79 inches (2006 mm) above finished floor, unless otherwise indicated, and by bolting units to wall or mounting on lightweight structural-steel channels bolted to wall. For controllers not at walls, provide freestanding racks.
- B. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- C. Install heaters in thermal overload relays. Select heaters based on actual nameplate full-load amperes after motors have been installed.
- D. Comply with NECA 1.

3.2 IDENTIFICATION

- A. Identify enclosed controllers, components, and control wiring. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
 - 1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 - 2. Label each enclosure with engraved nameplate.
 - 3. Label each enclosure-mounted control and pilot device.

3.3 CONTROL WIRING INSTALLATION

- A. Install wiring between enclosed controllers and remote devices.
- B. Bundle, train, and support wiring in enclosures.
- C. Connect selector switches and other automatic-control selection devices where applicable.
 - 1. Connect selector switches to bypass only those manual- and automatic-control devices that have no safety functions when switch is in manual-control position.
 - 2. Connect selector switches with enclosed-controller circuit in both manual and automatic positions for safety-type control devices such as low- and high-pressure cutouts, high-temperature cutouts, and motor overload protectors.

3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each enclosed controller, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- C. Tests and Inspections:
 - 1. Inspect controllers, wiring, components, connections, and equipment installation. Test and adjust controllers, components, and equipment.
 - 2. Test insulation resistance for each enclosed-controller element, component, connecting motor supply, feeder, and control circuits.
 - 3. Test continuity of each circuit.
 - 4. Verify that voltages at controller locations are within plus or minus 10 percent of motor nameplate rated voltages. If outside this range for any motor, notify Owner before starting the motor(s).
 - 5. Test each motor for proper phase rotation.
 - 6. Perform each electrical test and visual and mechanical inspection stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 7. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 - 8. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Enclosed controllers will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

- A. Set field-adjustable switches and overload-relay pickup and trip ranges.
- B. Adjust the trip settings of thermal-magnetic circuit breakers with adjustable instantaneous trip elements. Initially adjust to six times the motor nameplate full-load ampere ratings and attempt to start motors several times, allowing for motor cooldown between starts. If tripping occurs on motor inrush, adjust settings in increments until motors start without tripping. Do not exceed eight times the motor full-load amperes (or 11 times for NEMA Premium Efficient motors if required). Where these maximum settings do not allow starting of a motor, notify Owner before increasing settings.

3.6 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain enclosed controllers.

END OF SECTION

SECTION 26 42 00

CATHODIC PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes passive cathodic protection systems that use magnesium or zinc anodes to protect iron and steel piping.

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design, supervise, test, and inspect the installation of cathodic protection systems, including comprehensive engineering analysis by a qualified professional engineer Registered in the State of Texas, using performance requirements and design criteria indicated.
 - 1. Design cathodic protection for column pipe according to NACE RP0169. No cathodic protection for well pump is included.
- B. Survey site and determine soil or water corrosivity (resistivity), current requirements, potential surveys, stray currents, and water chemistry/corrosivity (pH).
- C. Select anodes and accessories relevant to level of protection. Design anodes for an estimated life of 30 years before replacement.
- D. Cathodic protection systems shall provide protective potential that complies with referenced NACE standards. Insulators are required if needed to insulate protected metals from other structures.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For cathodic protection. Include plans, evaluations, sections, details, and attachments to other work.
 - 1. Detail locations of cathodic protection equipment, devices, and outlets, with characteristics and cross-references to products.
 - 2. Include calculations and details of anode designs.
 - 3. Include labeling and identifying scheme for wires, cables, and test boxes.

- C. Delegated-Design Submittal: For cathodic protection system indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified corrosion engineer responsible for their preparation.
 - 1. Conduct site tests necessary for design, including soil resistivity, close-interval potential surveys, testing during construction, interference testing, and training of Owner's personnel.
 - 2. Provide system design calculations, stating the maximum recommended anode current output density, and the rate of gaseous production, if any, at that current density.

1.5 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Plans, drawn to scale, and coordinating connections to piping.
- B. Qualification Data: For qualified professional engineer. Submit evidence of current license, corporate authorization (if applicable) of the engineering business, and NACE certifications.
- C. Warranty: Sample of special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: In addition to items specified in Section 260050 "Operation and Maintenance Data," include the following:
 - 1. Basic system operation, outlining the step-by-step procedures required for system startup, operation, adjustment of current flow, and shutdown.
 - 2. Instructions for pipe-to-reference cell potential measurements and frequency of monitoring.
 - 3. Instructions for dielectric connections, interference and sacrificial-anode bonds; and precautions to ensure safe conditions during repair of pipe, tank or other metallic systems. Instructions shall be neatly bound.
 - 4. Locations of all anodes, test stations, and insulating joints.
 - 5. Structure-to-reference cell potentials as measured during the tests required by "Field Quality Control" Article.
 - 6. Recommendations for maintenance testing, including instructions for pipe-to-reference cell potential measurements and frequency of testing.
 - 7. Precautions to ensure safe conditions during repair of pipe system.

1.7 QUALITY ASSURANCE

- A. Corrosion Engineer Qualifications: A qualified professional engineer Registered in the State of Texas, who has education and experience in cathodic protection of buried and submerged metal structures and has NACE accreditation or certification as a Corrosion Specialist or Cathodic Protection Specialist.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect anodes from exposure to rain and direct sunlight.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace permanent reference electrodes that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: 30 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MAGNESIUM ANODES, TYPE II

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Corrpro Companies, Inc.
 - 2. Cott Manufacturing Company.
 - 3. CPMasters, Inc.
 - 4. ELTECH Systems Corporation USA.
 - 5. Farwest Corrosion Control Company.
 - 6. Loresco International.
 - 7. MESA Products, Inc.
- B. Comply with ASTM B 843.
- C. Chemical composition as percent of weight shall be as follows:
 - 1. Aluminum: 0.010 maximum.
 - 2. Manganese: 0.50 to 1.3.
 - 3. Zinc: 0.05 maximum.
 - 4. Silicon: 0.50 maximum.
 - 5. Copper: 0.02 maximum.
 - 6. Nickel: 0.001 maximum.
 - 7. Iron: 0.03 maximum.
 - 8. Other Impurities: 0.05 each; 0.3 maximum total.
 - 9. Magnesium: Remainder.
- D. Anode Core: Galvanized steel with anode wire silver-soldered to the core. Connection shall be recessed and epoxy insulated for 600-V rating. Connection shall be covered with heat-shrinkable tubing, and insulation shall be extended over connection.
- E. Anode Wires: Factory-installed cables, with copper conductors, suitable for direct burial; not less than No. 10 AWG with Type THWN insulation according to ASTM D 1248 and NEMA WC 70/ICEA S-95-658; long enough to extend to accompanying junction box without splicing.
- F. Anode Backfill: Backfill materials packaged in water-permeable fabric sack or cardboard container. Anodes shall be factory installed in packaged backfill using methods that result in dense packing of fill with factory-installed anode spacers to ensure centering of anode in

packaged anode backfill. Backfill material shall have the following chemical composition by weight:

1. Hydrated Gypsum: 75 percent.
2. Bentonite Clay: 20 percent.
3. Anhydrous Sodium Sulfate: 5 percent.

2.2 MAGNESIUM/MANGANESE ALLOY ANODES

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Corpro Companies, Inc.
2. Cott Manufacturing Company.
3. CPMasters, Inc.
4. ELTECH Systems Corporation USA.
5. Farwest Corrosion Control Company.
6. Loresco International.
7. MESA Products, Inc.

B. Chemical composition as percent of weight shall be as follows:

1. Aluminum: 0.01 maximum.
2. Manganese: 0.50 to 1.3.
3. Copper: 0.02 maximum.
4. Nickel: 0.001 maximum.
5. Iron: 0.03 maximum.
6. Other Impurities: 0.05 each; 0.3 maximum total.
7. Magnesium: Remainder.

C. Bare Anode Weight: 40 lb, not including core, and a nominal length of 60 inches.

D. Anode Wires: Factory-installed cables, with copper conductors, suitable for direct burial; not less than No. 10 AWG with Type THWN insulation according to ASTM D 1248 and NEMA WC 70/ICEA S-95-658; long enough to extend to accompanying junction box without splicing.

E. Anode Backfill: Backfill materials packaged in water-permeable fabric sack or cardboard container. Anodes shall be factory installed in packaged backfill using methods that result in dense packing of fill with factory-installed anode spacers to ensure centering of anode in packaged anode backfill. Backfill material shall have the following chemical composition by weight:

1. Hydrated Gypsum: 75 percent.
2. Bentonite Clay: 20 percent.
3. Anhydrous Sodium Sulfate: 5 percent.

2.3 ZINC ANODES FOR BURIED SERVICE, TYPE Z-1

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Corpro Companies, Inc.
 - 2. Cott Manufacturing Company.
 - 3. CPMasters, Inc.
 - 4. ELTECH Systems Corporation USA.
 - 5. Farwest Corrosion Control Company.
 - 6. Loresco International.
 - 7. MESA Products, Inc.
- B. Comply with ASTM B 418, Type II.
- C. Chemical composition as percent of weight shall be as follows:
 - 1. Aluminum: 0.005 maximum.
 - 2. Cadmium: 0.003 maximum.
 - 3. Iron: 0.0014 maximum.
 - 4. Zinc: Remainder.
- D. Bare Anode Ingot Weight: 30 lb, 2 inches square and 30 inches long. Packaged weight of anode bag shall be 70 lb.
- E. Anode Wires: Factory-installed cables, with copper conductors, suitable for direct burial; not less than No. 10 AWG with Type THWN insulation according to ASTM D 1248 and NEMA WC 70/ICEA S-95-658; long enough to extend to accompanying junction box without splicing.
- F. Anode Backfill: Backfill materials packaged in water-permeable fabric sack or cardboard container. Anodes shall be factory installed in packaged backfill using methods that result in dense packing of fill with factory-installed anode spacers to ensure centering of anode in packaged anode backfill. Backfill material shall have the following chemical composition by weight:
 - 1. Hydrated Gypsum: 75 percent.
 - 2. Bentonite Clay: 20 percent.
 - 3. Anhydrous Sodium Sulfate: 5 percent.

2.4 PERMANENT REFERENCE ELECTRODES

- A. Copper/copper sulfate (Cu/CuSO₄), suitable for direct burial. Electrode shall be guaranteed by supplier for 30 years' service in the installed environment.

2.5 WIRE AND CABLE

- A. Anode Header Cable: Single-conductor, Type HMWPE, insulated cable specifically designed for direct-buried dc service in cathodic protection installations.

1. Conductor: Stranded, annealed, uncoated copper, not less than No. 8 AWG, complying with ASTM B 3 and ASTM B 8.
2. Insulation: High-molecular-weight polyethylene, complying with NEMA WC 70/ICEA S-95-658.
3. Minimum Average Thickness of Insulation: 110 mils for Nos. 8 through 2 AWG, and 125 mils for Nos. 1 through 4/0 AWG; rated at 600 V.
4. Connectors: Exothermic welds.

B. Conductors and Cables: Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

1. Bonding Conductors for Joint and Continuity Bonds: Not less than No. 8 AWG, stranded, Type THWN copper conductors.
2. Flexible Pipe Coupling Bonds: Flexible copper straps with electrical resistance equal to No. 1/0 AWG stranded copper wire and with five holes for five exothermic welds to pipe.
3. Test Wires: No. 12 AWG, Type THWN copper conductors.
4. Resistance Wires: No. 16 or No. 22 AWG nickel-chromium wire.
5. Cables for Installation in Conduit: Type THWN copper conductors.

2.6 TEST STATIONS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Corpro Companies, Inc.
2. Cott Manufacturing Company.
3. MESA Products, Inc.

B. Plastic Test Stations: Flush-mounted type, manufactured of high-impact-resistant PVC or polycarbonate with watertight conduit connections and cover and removable terminal board having at least five terminals.

C. Test Station Mounting Enclosures:

1. Non-Traffic-Area Boxes: Comply with requirements in Section 260533 "Raceways and Boxes for Electrical Systems."

2.7 SEALING, POTTING, AND DIELECTRIC COMPOUNDS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. 3M.
2. Chase Corporation - Chase Specialty Coatings.

B. Sealing and Dielectric Insulating Compound: Comply with NACE RP0188. Black, rubber based, soft, permanently pliable, tacky, moldable, and unbacked; 0.5 inch thick.

- C. Potting Compound: Comply with NACE RP0188. Cast-epoxy, two-package type; fabricated for this purpose and covered with heat-shrinkable tape.
- D. Pressure-Sensitive, Vinyl-Plastic Electrical Tape: Comply with UL 510.

2.8 EXOTHERMIC WELDING MATERIALS

- A. Exothermic Weld Kits: Specifically designed by manufacturer for welding materials and shapes required.
- B. Exothermic Weld Caps: Dome of high-density polyethylene, 10-mil minimum thickness, filled with mastic and containing a tunnel portion to separate lead wire from exothermic weld.

2.9 COATING REPAIR MATERIALS

- A. Touchup Coating Materials: Comply with Manufacturer's Recommendation requirements in Section 260050.
- B. Adhesive-Applied Coating Materials: Coating materials shall be compatible with factory-applied coating system.
 - 1. Nominal thickness of coating materials shall be not less than 8 mils, plus or minus 5 percent.
 - 2. Coating materials shall be one of the following supplied by factory-applied coating system manufacturer:
 - a. Polyvinyl-chloride, pressure-sensitive, adhesive tape.
 - b. High-density polyethylene/bituminous rubber compound tape.
 - c. Butyl rubber tape.
 - d. Coal-tar epoxy.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with ANSI/IEEE C2 and NFPA 70.
- B. Make connections to ferrous pipe using exothermic welding.
- C. Coat welds with the coating repair material and apply an exothermic weld cap.

3.2 MAGNESIUM ANODE INSTALLATION

- A. Install magnesium anodes at locations that clear obstructions. Install at least 36 inches and no more than 10 feet from pipe to be protected or as required by Cathodic report. Install in augered holes with top of anode a minimum of 36 inches below finished grade. In soils that will collapse into augered holes, use casing of galvanized sheet steel.

- B. Install anodes in a dry condition after plastic or waterproof protective covering has been completely removed from water-permeable permanent container that houses anode metal. Do not use anode-connecting wire for lowering anode into hole. Backfill annular space around anode with fine earth in 6-inch layers; compact each layer using hand tools. Do not strike anode or connecting wire during backfilling and compacting. After backfilling and compacting to within 6 inches of finished grade, pour approximately 5 gal. of water into each filled hole. After water has been absorbed by earth, complete backfilling to finished level.
- C. If rock strata are encountered before achieving specified augured hole depth, install anodes horizontally at depth at least as deep as bottom of pipe to be protected.
- D. Install anodes spaced as indicated, connected through a test station to the pipeline, allowing slack in connecting wire to compensate for movement during backfill operation.
- E. Do not use resistance wires to reduce current output of individual or group anodes.

3.3 ZINC ANODE INSTALLATION

- A. Install zinc anode horizontally in a hole at least 3 inches larger than anode. Install anode under new copper water tubing, including service lines, blowoffs, and air releases. Separate piping and anode by at least 24 inches, but not more than 60 inches.
- B. Install anode midway between both ends of piping. Install anode wire in piping trench and connect to piping at an accessible location. Install anode wire in PVC conduit where rising out of the ground to the aboveground connection.

3.4 INSTALLATION OF REFERENCE ELECTRODES

- A. Install directly beneath the buried metallic component being protected.

3.5 CABLE AND WIRE INSTALLATION

- A. Install conductors, except anode wires, in PVC conduit with waterproof PVC junction boxes. Comply with requirements in Section 260533 "Raceways and Boxes for Electrical Systems" for conduit and its installation.
- B. Anode Wire Installation: Cover trench bottom for the anode wire with 3-inch layer of sand or stone-free earth. Center wire on backfill layer and do not stretch or kink the conductor. Place backfill over wire in layers not exceeding 6 inches deep, and compact each layer. Use clean fill, free from roots, vegetable matter, and refuse. Place cable underground-line warning tape within 18 inches of finished grade, above cable and conduit.
- C. Bonding Conductors: Install conductors on metallic pipe, to and across buried flexible couplings, mechanical joints, and flanged joints except at places where insulating joints are specified. Welded and threaded joints are considered electrically continuous and do not require bonding.
 - 1. Install at least two bonds between parts requiring bonding.

2. Bonding conductors must contain sufficient slack for anticipated movement between structures. Bonding conductors across pipe joints shall have not less than a 4-inch slack for pipe expansion, contraction, and soil stress.
 3. Connect bonding conductors to pipe, coupling follower rings and coupling middle ring or sleeve. Connect bonding conductors with exothermic welds.
- D. For wire splicing, use compression connectors or exothermic welds.

3.6 TEST STATIONS

- A. Install test stations as follows:
1. At insulating joints.
 2. At both ends of casings when casing material is included in the cathodic protection system.
 3. Where pipe crosses other metal pipes.
 4. Where pipe connects to existing piping system.
 5. Where pipe connects to dissimilar metal pipe.
- B. Install test stations on backfill complying with requirements for trench bottom fill for anode wires unless otherwise indicated.
- C. Terminate test conductors on terminal boards and install a spare set of test leads at each testing location.

3.7 PIPE JOINTS

- A. Insulating Flange Sets: Cover flanges with sealing and dielectric compound.
- B. Insulating Unions: Install electrical isolation at each building entrance and at other locations indicated on approved Delegated-Design Drawings. Cover unions with sealing and dielectric compound.

3.8 DISSIMILAR METALS

- A. Underground Dissimilar Piping: Coat insulating joint and pipe at joints of dissimilar piping material with sealing and dielectric compound for a minimum distance of 10 pipe diameters on both sides of joint.
- B. Underground Dissimilar Valves: Coat dissimilar ferrous valves and pipe with sealing and dielectric compound for a minimum distance of 10 pipe diameters on both sides of valve.
- C. Aboveground Dissimilar Pipe and Valves: If dissimilar metal pipe joints and valves are not buried and are exposed only to atmosphere, coat connection or valve, including pipe, with sealing and dielectric compound for a minimum distance of three pipe diameters on both sides of junction.

3.9 COATINGS

- A. Field Joints: Apply adhesive-applied coating system in a thickness to achieve corrosion protection equal to adjacent factory-applied coating.

3.10 IDENTIFICATION

- A. Comply with requirements in Section 260553 "Identification for Electrical Systems."
 - 1. Identify anode wires and anode header cables with marker tape.
 - 2. Identify underground wires and cables with underground-line warning tape.
 - 3. Identify text boxes with engraved, laminated acrylic or melamine label, permanently attached to text box.

3.11 FIELD QUALITY CONTROL

- A. Comply with NACE RP0169 and NACE RP0285.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installation, including connections.
- C. Tests and Inspections:
 - 1. Static Pull Test: Choose, at random, one completed anode of each type for this destructive test. Demonstrate that anode wire connections have enough strength to withstand a minimum tensile load of 300 lb. If test fails, replace all anodes and repeat test at another randomly selected anode.
 - 2. Insulation Testing: Before anode system is connected to pipe, test insulation at each insulating joint and fitting. Demonstrate that no metallic contact, or short circuit, exists between the two insulated sections of pipe. Replace defective joints or fittings.
 - 3. Bonding Tests: Test for electrical continuity across all bonded joints. Repair or add additional bonds until electrical continuity is achieved.
 - 4. Baseline Potentials: After backfilling of pipe and anodes is completed, but before anodes are connected to pipe, measure the static potential of pipe to soil. Record initial measurements.
 - 5. Anode Output: Measure electrical current as anodes or groups of anodes are connected to pipe. Use a low-resistance ammeter. Record current, date, time, and location of each measurement.
 - 6. Pipe-to-Reference Electrode Potential Measurements: On completion of installation of entire cathodic protection system, make electrode potential measurements according to NACE RP0169, using a copper/copper-sulfate reference electrode and a potentiometer-voltmeter, or a dc voltmeter with an internal resistance (sensitivity) of not less than 100,000 ohms per volt and a full scale of 1 or 2 V. Make measurements at same locations as those used for baseline potentials. Record voltage, date, time, and location of each measurement, using one of the following two methods:
 - a. 0.85 V Negative Voltage: With cathodic system in operation, measure a negative voltage of at least minus 0.85 V between pipe and a saturated copper/copper-sulfate reference electrode contacting the earth directly over pipe.

- b. 100-mV Polarization Voltage: Determine polarization voltage shift by interrupting protective current and measuring polarization decay. An immediate voltage shift will occur if protective current is interrupted. Use voltage reading, after immediate shift, as base reading from which to measure polarization decay. Measure at least a minimum polarization voltage shift of 100 mV between pipe and a saturated copper/copper-sulfate reference electrode contacting the earth directly over pipe.
- D. Location of Measurements for Piping: For coated piping or conduit, measure from reference electrode in contact with the earth directly over pipe. Measure at intervals not exceeding 400 feet. Make additional measurements at each distribution service riser, with reference electrode placed directly over service line.
- E. Location of Measurements for Tanks: For underground tanks, measure from reference electrode located as follows:
 - 1. Directly over center of tank.
 - 2. At a point directly over tank and midway between each pair of anodes.
 - 3. At each end of tank.
- F. Interference Testing: Test interference with cathodic protection from any foreign pipes in cooperation with Owner of foreign pipes. Report results and recommendations.
- G. Stray Current Measurements: Perform at each test station. Mitigate stray currents due to lightning or overhead ac power transmission lines as provided for in NACE standards.
- H. Inspect coatings; comply with NACE RP0188. Repair imperfections of factory-applied coatings as specified in "Coatings" Article.
 - 1. Use electronic holiday detectors to detect coating imperfections.
 - 2. All damage to the protective coating during transit and handling shall be repaired before installation.
 - 3. Repair factory-applied coatings to have equal or better corrosion resistance than the factory-applied coating system. Field-repair material shall be of the type approved by, and shall be applied as recommended by, manufacturer of the coating material.

3.12 ADJUSTING

- A. Adjust cathodic current using resistors as recommended by corrosion engineer who prepared the Delegated-Design Submittal in Part 1.
- B. During the first year after Substantial Completion, test, inspect, and adjust cathodic protection system every three months to ensure its continued compliance with specified requirements.

3.13 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain cathodic protection system.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK