

TOWN OF ADDISON

CONSTRUCTION SPECIFICATIONS AND CONTRACT DOCUMENTS

MORRIS AVENUE EXTENSION

ADDISON
ENGRG
COPY

HUITT-ZOLIARS

**3131 McKinney Avenue, Suite 600, Dallas, Texas 75204
(OFFICE) 214-871-3311**

December 22, 2000

Review Copy

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SECTION AB
ADVERTISEMENT FOR BIDS

SECTION AB
ADVERTISEMENT FOR BIDS

1. Sealed bids addressed to the Town of Addison, Texas, for Paving and Utility Improvements for the MORRIS AVENUE EXTENSION for the Town of Addison, Texas, hereinafter called "Town" in accordance with plans, specifications and contract documents prepared by Huitt-Zollars, Inc., will be received at the office of Clyde Johnson, Purchasing Manager, Finance Building, 5350 Belt Line Road, Addison, Texas until **2:00 p.m. on 14th day of February, 2001**. 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 MORRIS AVENUE EXTENSION.
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, 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 three (3) business days after notice of award of contract to him.
4. Plans, specifications and bidding documents may be secured beginning at 9:00 A.M. Monday, January 22, 2001 from Clyde Johnson, Purchasing Manager, Finance Building, 5350 Belt Line Road, Addison, Texas. The first set will be available at no charge and any additional sets may be obtained for a non-refundable sum of \$20.00 per set.
5. The right is reserved by the Mayor and the Town Council as the interest of the Town may require to reject any or all bids and to waive any informality in bids received.
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. The performance and payment bonds shall name the Town of Addison as obligee (or such other entities as may be designated at the time a contract is executed).
8. For information on bidding or to secure bid documents, call Clyde Johnson (972) 450-7090. For information on the work to be performed, call Steven Z. Chutchion, P.E., Assistant City Engineer, (972) 450-2886 or David E. Meyers, P.E., Huitt-Zollars, Inc., (214) 871-3311.
9. This project consists of providing paving, and water improvements as shown on the plans and in accordance with the specifications.
10. A Pre-Bid Meeting will be held at 2:00 p.m. on Friday, February 2, 2001 at the Addison Service Center, 16801 Westgrove Drive, Addison, Texas 75001, 972-450-2871. All bidders are encouraged to attend.

TOWN OF ADDISON, TEXAS

SECTION 1B
INSTRUCTIONS TO BIDDERS

SECTION IB

INSTRUCTIONS TO BIDDERS

- A. **PROJECT: MORRIS AVENUE EXTENSION PAVING AND UTILITY IMPROVEMENTS**, in the Town of Addison.

The bids will be evaluated as stated in Section "O" of the Instructions to Bidders.

- B. **PROJECT DESCRIPTION:** This project consists of providing paving, and water improvements as shown on the plans and in accordance with the specifications.
- C. **PROPOSALS:** Proposals must be in accordance with these instructions in order to receive consideration.
- D. **DOCUMENTS:** Documents include the Bidding Requirements, including the advertisement for Bids, these Instructions to Bidders, Proposal Forms, Contract Agreement, General Provisions, Special Provisions, Technical Specifications, Drawings, and Addenda which may be issued by the Consultant 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 first-hand 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.
- 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 Consultant, not later than seven (7) calendar days 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 Consultant 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 mailed, faxed or delivered to each person who has been issued a set of the Bidding Documents. 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 sent by telegram, certified or registered mail, or hand delivered to all prospective bidders (at the respective addresses furnished for such purposes) 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:** A reasonable completion time has been established by the Owner and is described in more detail in Section 'Q' - CONSTRUCTION SCHEDULE.
- 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 prices written in the bid and those given in the figures, the price in writing will be considered as the bid. 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" X 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: SPREAD SHEET OPTION IS FOR THE CONVENIENCE OF THE BIDDER, NO WORDING IN THE SPREAD SHEET 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 SPREAD SHEET SHALL PRESENT EACH ITEM IN THE ORDER AND NUMBER AS SHOWN IN THE CITY'S PROPOSAL AND BID SCHEDULE FOR THIS PROJECT. THE SPREAD SHEET SHALL BE IN A COLUMN FORMAT WITH THE FOLLOWING COLUMNS:

1. ITEM NUMBER
2. QUANTITY
3. UNIT OF MEASURE
4. DESCRIPTION
5. UNIT PRICE
6. EXTENDED AMOUNT

- 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 Consultant. Submit proposal in an opaque, sealed envelope addressed to the Owner and plainly mark on the outside of the envelope the project name, and the name and address of the bidder. The envelopes shall be marked with the following project names:

Morris Avenue Extension

The Bid Bond must be completed and signed by each bidder and submitted with the bid. A separate bid must be submitted for each discipline that a contractor wishes to be awarded. 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.

- 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 Consultant. The bidder will be required to establish to the satisfaction of the Owner and the Consultant 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 Consultant, in making his 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.

Alternate items may or may not be awarded. Addition or deletion of other items or schedules will be governed by NCTCOG, Item 1.37 "Changes or Modification of Contract".

- P. **EXECUTION OF THE CONTRACT:** The successful bidder will be required to enter into a contract with the Owner within three (3) business 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 five (5) calendar days of the issuance of the Notice to Proceed."

In no instance shall the number of calendar days for completion of the work measured from the Notice To Proceed' exceed 90 calendar days.

- R. **LIQUIDATED DAMAGES:** The time of completion is of the essence for this contract. Notwithstanding any other provision of the Documents comprising the construction contract for the Morris Avenue Extension project, for each calendar day that any work shall remain uncompleted after the time specified as described in the "Instruction To Bidders, Section Q, Construction Schedule", proposal and the contract, or the increased time granted by the Owner, or as equitably increased by additional work or materials ordered after the contract is signed, the sum per day given in the following schedule shall be deducted from the monies due the Contractor:

\$500 per Calendar Day

The sum of money thus deducted for such delay, failure or non-completion is not to be considered as a penalty, but shall be deemed, taken and treated as reasonable liquidated damages, per calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work. The said amounts are fixed and agreed upon by and between Owner and Contractor because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner in such event would sustain; and said amounts are agreed to be the amounts of damages which the Owner would sustain and which shall be retained from the monies due, or that may become due, the Contractor under this contract; and if said monies be insufficient to cover the amount owing, then the Contractor or his surety shall immediately pay any additional amounts due. If the Contractor finds it impossible, for reasons beyond his control, to complete the work within the contract time as specified, the Contractor may make a written request for an extension of time in accordance with the General Provisions. In the case of any conflict, the terms of this paragraph regarding liquidated damages shall control.

- 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 and payment bonds 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 reliable 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 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.
- X. **FINAL PAYMENT:** The general provisions for Final Payment shall be as stated in Item 1.51.4 of the North Central Texas Standard Specifications for Public Works Construction (1983 Edition) 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 Item 5 of the Special Provisions.
 4. A two(2) year Maintenance Bond in accordance with Section MB.
- 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.

END OF SECTION IB

SECTION PF
PROPOSAL FORM

PROPOSAL FORM

_____, 19__

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:

ACKNOWLEDGEMENT OF ADDENDA:

The Bidder acknowledges receipt of the following addenda:

Addendum No. 1 Dated	_____
Addendum No. 2 Dated	_____
Addendum No. 3 Dated	_____
Addendum No. 4 Dated	_____
Addendum No. 5 Dated	_____
Addendum No. 6 Dated	_____

General Notes and Supplemental Specifications For Bidding

THE FOLLOWING NOTES PROVIDE ADDITIONAL CLARIFICATION OF CERTAIN BID ITEMS SUPPLEMENTAL TO THE PLANS AND TECHNICAL SPECIFICATIONS.

General

All excess trench spoil from utility installations are to be disposed of off-site. All unclassified street excavation is to be disposed of off-site.

All unit prices for utility lines shall include value for required embedment. No separate pay item.

Unit prices shall include value for required bonds, insurance, taxes, etc. No separate pay items are provided for these elements.

Mobilization

An item for mobilization is included in bid package. The amount bid for this item will not be limited by a percentage of the total bid amount.

SCHEDULE I

Item No. 102 - Full Depth Sawcut

The quantity indicated for full depth sawcut is only the amount needed to isolate all pavement removal sections at one time. Sequencing of the project may, however, necessitate additional interim sawcuts and removals which will be incidental to the contract.

Item No. 104 - 6" Thick Lime Stabilized Subgrade

Item No. 105 - Hydrated Lime

Based on geotechnical investigation for the area, there should be no excavation for streets that encounters gray limestone. Tan limestone may be present in some areas but it can be a desirable material if properly processed and compacted. The contractor should not assume that subgrade material must be undercut and replaced with select fill. If such conditions are encountered, they will be dealt with by change order.

Item No. 107 - 6" thick 650 PSI Flex @ 28 days reinforced concrete drop slab

This item is defined as the recessed pavement area required to accept brick or other enhanced paving materials in streets.

Item No. 113 - Furnish Vehicular Brick Paver Materials, Delivered to Site

This item consists of the specified vehicular bricks "C". Note that many dimensions are noted in increments of brick (or "wythe"). Vehicular bricks shall meet or exceed ASTM C1272-94 for Heavy Vehicular Paving Brick Type R. An acceptable material has been identified as equal to the following:

Type "C" - 2³/₄" x 3¹/₂" x 7¹/₂" Acme Color "Tulsa Blend 2, Garnet Red

The unit cost for this item shall include only the purchase and delivery of the pavers to the site

Item No. 114 - Furnish Bedding Materials and Install Vehicular Brick Pavers

This item is for the costs associated with furnishing and installing the bedding materials and the cost associated with installing the pavers. The materials and delivery costs of the pavers is covered in Item No.'s 113.

PROPOSAL FORM

_____, 19__

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: _____

ACKNOWLEDGEMENT OF ADDENDA:

The Bidder acknowledges receipt of the following addenda:

- Addendum No. 1 Dated _____
- Addendum No. 2 Dated _____
- Addendum No. 3 Dated _____
- Addendum No. 4 Dated _____
- Addendum No. 5 Dated _____
- Addendum No. 6 Dated _____

**PAVING IMPROVEMENTS
SCHEDULE I
MORRIS AVENUE EXTENSION**

ITEM NO	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
101	1	L.S.	Mobilization, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
102	104	L.F.	Full depth sawcut existing concrete, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
103	21	S.Y.	Remove and dispose of existing concrete pavement, including curb, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
104	976	S.Y.	Furnish and place and compact 6" thick lime stabilized subgrade, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
105	16.1	TON	Furnish and place hydrated lime (33 lbs/sy), Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		

ITEM NO.	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
106	910	S.Y.	Furnish and place 6" thick 650 PSI flex @ 28 days reinforced concrete pavement, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
107	138	S.Y.	Furnish and place 6" thick 650 PSI flex @ 28 days reinforced concrete drop slab (street), Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
108	500	L.F.	Furnish and place 6" thick 650 PSI Flex @ 28 days integral concrete curb, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
109	120	S.Y.	Furnish and place 6" thick 650 PSI Flex @ 28 days reinforced concrete drive pavement, with or without drop slab, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
110	65	S.Y.	6" HMA CP Base Course Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		

ITEM NO.	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
111	65	S.Y.	2" HMA CP Surface Course Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
112	83	L.F.	Furnish and construct reinforced concrete street header, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
113	1,242	S.F.	Furnish Acme vehicular brick paver materials, delivered to site, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
114	1242	S.F.	Furnish and place bedding materials and place vehicular brick pavers, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
115	14	L.F.	Furnish and place 24" wide Thermoplastic Stop Line, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
116	1	EA.	Furnish and install street & traffic control signs, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		

ITEM NO.	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
117	2	EA.	Furnish and install Street Name Sign and mounting hardware and appurtenances, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
118	1	EA.	Furnish and install Unistrut-Telespar street sign post, foundation, mounting hardware and appurtenances, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
119	40	L.F.	Remove Existing Street Barricade and posts, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
120	1	L.S.	Furnish, place and maintain barricading, signing and traffic control, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		
121	670	C.Y.	Unclassified Street Excavation including disposal, Complete in Place, for the Sum of _____ _____ Dollars and Cents per unit.		

ITEM NO.	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
122	1	E.A.	<p>Furnish and Install Black Steel stop sign pole with TxDOT Triangular Break-Away Base</p> <p>Complete in Place, for the Sum of</p> <p>_____</p> <p>_____</p> <p>Dollars and</p> <p>_____</p> <p>Cents per unit.</p>		
123	1	E.A.	<p>Install Addison Circle finial on Black steel pole finial to be supplied by the town.</p> <p>Complete in Place, for the Sum of</p> <p>_____</p> <p>_____</p> <p>Dollars and</p> <p>_____</p> <p>Cents per unit.</p>		
124	29,100	E.A.	<p>Furnish and plant Bermuda hydroseed,</p> <p>Complete in Place, for the Sum of</p> <p>_____</p> <p>_____</p> <p>Dollars and</p> <p>_____</p> <p>Cents per unit.</p>		
125	320	E.A.	<p>Furnish and place 4" thick 3000 PSI compressive @ 28 days reinforced concrete sidewalk,</p> <p>Complete in Place, for the Sum of</p> <p>_____</p> <p>_____</p> <p>Dollars and</p> <p>_____</p> <p>Cents per unit.</p>		

PAVING IMPROVEMENTS
SCHEDULE I
MORRIS AVENUE EXTENSION

TOTAL AMOUNT BID FOR MATERIALS AND SERVICES,
SCHEDULE I, ITEMS 101 THROUGH 125, INCLUSIVE

\$ _____

**UTILITY IMPROVEMENTS
SCHEDULE II
MORRIS AVENUE EXTENSION**

ITEM NO.	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
201	2.0	C.Y.	Furnish and install concrete blocking, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
202	0.7	TON	Furnish and install D.I. fittings, CL. 250, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
203	51	L.F.	Furnish and install 6" dia. PVC AWWA C900, DR 18, CL 150 water pipe, including embedment, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
204	295	L.F.	Furnish and install 8" dia. PVC AWWA C900, DR 18, CL 150 water pipe, including embedment, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		
205	3	EA.	Furnish and install 6" dia. resilient seat gate valve/box, Complete in Place, for the Sum of _____ Dollars and _____ Cents per unit.		

ITEM NO.	ESTIM QTY	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
206	1	EA.	Furnish and install 8" dia. resilient seat gate valve/box, Complete in Place, for the Sum of _____ Dollars and Cents per unit.		
207	1	EA.	Furnish and install fire hydrant, Complete in Place, for the Sum of _____ Dollars and Cents per unit.		
208	1	EA.	Connect to existing water main (all sizes), Complete in Place, for the Sum of _____ Dollars and Cents per unit.		
209	1	EA.	Furnish and install 24"x 8" Tapping Sleeve and Valve Complete in Place, for the Sum of _____ Dollars and Cents per unit.		
210	260	EA.	Furnish and install 4" schedule 40 PVC sleeve Complete in Place, for the Sum of _____ Dollars and Cents per unit.		
211	732	L.F.	Furnish and install trench safety for construction, Complete in Place, for the Sum of _____ Dollars and Cents per unit.		

ITEM NO.	ESTIM. QTY.	UNIT	DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE \$	AMOUNT BID \$
212	1	L.S.	Perform water test, Complete in Place, for the Sum of _____ _____ Dollars and _____ Cents per unit.		

UTILITY IMPROVEMENTS
SCHEDULE II
MORRIS AVENUE EXTENSION

TOTAL AMOUNT BID FOR MATERIALS AND SERVICES,
SCHEDULE V, ITEMS 201 THROUGH 212, INCLUSIVE

\$ _____

If BIDDER is:

An Individual

By _____ (Seal)
(Individual's Name)

doing business as _____

Business address: _____

Phone No. _____ Fax No. _____ TIN _____

A Partnership

By _____ (Seal)
(Firm Name)

(General Partner)

doing business as _____

Business address: _____

Phone No. _____ Fax No. _____ TIN _____

A Corporation

By _____

(Corporation Name)

(State of Incorporation)

By _____

(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest _____

(Secretary)

Business address: _____

Phone No. _____ Fax No. _____ TIN _____

A Joint Venture

By _____

(Name)

(Address)

By _____

(Name)

(Address)

(Each joint venturer 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 CA
CONTRACT AGREEMENT

SECTION CA
AGREEMENT

STATE OF TEXAS

COUNTY OF DALLAS

THIS AGREEMENT is made and entered into this ____ day of _____, 19__, by and between the Town of Addison, of the County of Dallas and State of Texas, acting through its Mayor, thereunto duly authorized so to do, Party of the First Part, hereinafter termed the OWNER, and _____, of the City of _____, County of _____, State of _____, Party of the Second Part, hereinafter termed CONTRACTOR.

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

Morris Avenue Extension

and all extra work in connection therewith, under the terms as stated in the General and Specific Provisions 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 five (5) calendar days after the date of written notice to do so shall have been given to him, and to substantially complete the work within _____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 \$_____ 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
(OWNER)

ATTEST:

By: _____

City Secretary

Party of the Second Part
(CONTRACTOR)

ATTEST:

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 _____ of said corporation; that said _____ (official title) Contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Signed: _____

Corporate Seal

SECTION PtB
PERFORMANCE BOND

SECTION PrB
PERFORMANCE BOND

STATE OF TEXAS

COUNTY OF DALLAS

Date Bond Executed: _____

PRINCIPAL: _____

SURETY: _____

PENAL SUM OF BOND (express in words and figures): _____

DATE OF CONTRACT: _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held firmly bound unto _____, hereinafter called the OWNER, in the penal sum of the amount stated above, for the payment of which sum and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas the PRINCIPAL entered into a certain Contract with the OWNER, numbered and dated as shown above and attached hereto;

NOW THEREFORE, if the PRINCIPAL shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term of said Contract and any extension thereof that may be granted by the OWNER, with or without notice to the SURETY, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications of said SURETY being hereby waived, then this obligation to be void, otherwise in full force and effect.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

SEAL

CONTRACTOR

By: _____

Address: _____

WITNESS _____

SEAL

ATTEST:

SURETY

By: _____

Address: _____

Title: _____

(Surety to Attach Power of Attorney)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the secretary of the corporation named as PRINCIPAL in the within bond that _____, who signed the said bond on behalf of the PRINCIPAL, is the _____ said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing body.

(Corporate Seal)

SECTION PyB
PAYMENT BOND

SECTION PyB
PAYMENT BOND

STATE OF TEXAS

COUNTY OF DALLAS

Date Bond Executed: _____

PRINCIPAL: _____

SURETY: _____

PENAL SUM OF BOND (express in words and figures): _____

DATE OF CONTRACT: _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held firmly bound unto _____, hereinafter called the OWNER, in the penal sum of the amount stated above, for the payment of which sum and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH that, whereas the PRINCIPAL entered into a certain Contract with the OWNER, numbered and dated as shown above and attached hereto;

NOW THEREFORE, if the PRINCIPAL shall promptly make payment to all persons supplying labor and materials in the prosecution of the work provided for in said Contract, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the SURETY being hereby waived, then this obligation to be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

SEAL

CONTRACTOR

By: _____

Address: _____

WITNESS _____

SEAL

ATTEST:

SURETY

By: _____

Address: _____

Title: _____

(Surety to Attach Power of Attorney)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the secretary of the corporation named as PRINCIPAL in the within bond that _____, who signed the said bond on behalf of the PRINCIPAL, is the _____ of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing body.

(Corporate Seal)

SECTION MB
MAINTENANCE BOND

SECTION MB
MAINTENANCE BOND

STATE OF TEXAS

COUNTY OF DALLAS

That _____ as principal and _____
_____, a corporation organized under the laws of _____ and _____ as sureties, said
sureties being authorized to do business in the State of Texas, do hereby expressly acknowledge
themselves to be held and bound to pay unto the Town of Addison, Texas, a duly incorporated home rule
municipal corporation under the laws of the State of Texas, the sum of _____

_____ (\$
_____) for the payment of which sum will and truly to be made unto said Town of Addison and
its successors, said principal and sureties do hereby bind themselves, their assigns and successors, jointly
and severally.

This obligation is conditioned, however, that whereas said

has this day entered into a written contract with the said Town of Addison to build and construct the

which contract and the Plans and Specifications therein mentioned adopted by the Town of Addison, are hereby expressly made a part hereof as though the same were written and embodied herein.

WHEREAS, under the Plans, Specifications and Contract it is provided that the Contractor will maintain and keep in good repair the work herein contracted to be done and performed for a period of two (2) years from the date of acceptance, and to do all necessary backfilling that may arise on account of sunken conditions in ditches, or otherwise, and to do and perform all necessary work and repair any defective condition growing out of or arising from the improper joining of the same, or on account of any breaking of the same caused by the said Contractor in laying or building the same, or on account of any defect arising in any of said part of said work laid or constructed by the said Contractor, or on account of improper excavation or backfilling; it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by the said Contractor; and in case the said Contractor shall fail to do, it is agreed that the City may do said work and supply such materials, and charge the same against the said Contractor and sureties on this obligation, and the said Contractor and sureties hereon shall be subject to the liquidated damages mentioned in said contract for each day's failure on its part to comply with the terms of the said provisions of said contract; planting materials (trees, shrubs, ground cover, grasses and perennials) and the completed irrigation system will be warranted for one (1) year from the time of final completion and acceptance by the Town of Addison.

NOW THEREFORE, if the said Contractor shall keep and perform its said agreement to maintain said work and keep the same in repair for the said maintenance period of two (2) years, as provided, then these presents shall be null and void and have no further effect; but if default shall be made by the said Contractor in the performance of its contract to so maintain and repair said work, then these presents shall have full force and effect, and said Town of Addison shall have and recover from the Contractor and its sureties damages in the premises, as provided, and it is further understood and agreed that this obligation shall be a continuing one against the principal and sureties hereon and that successive recoveries may be had hereon for successive breaches until the full amount shall have been exhausted; and it is further understood that the obligation herein to maintain said work shall continue throughout said maintenance period, and the same shall not be changed, diminished, or in any manner affected from any cause during said time.

IN WITNESS WHEREOF, the said _____ has caused these presents to be executed by _____ and the said _____ has hereunto set his hand this the ____ day of _____, 19__.

SURETY

PRINCIPAL

By: _____

By: _____
Attorney in Fact

ATTEST

By: _____
Surety

Secretary

Agency and Address

NOTE: Date of Maintenance Bond must not be prior to date of Contract.

SECTION BP
CONTRACTOR'S AFFIDAVIT OF BILLS PAID

SECTION BP
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

(Project No.)

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 _____, 19__.

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

1. The General Provisions of the Contract shall be as stated in the Standard Specifications for Public Works Construction, North Central Texas Council of Governments (1983), under Part I, "General Provisions," Items 1.0 through 1.63 inclusive, as amended or supplemented and except as modified by the Special Provisions.

SECTION SP
SPECIAL PROVISIONS

SECTION SP
SPECIAL PROVISIONS

1. OWNER

The Town of Addison, herein referred to as Owner, party of the First Part of these Contract Documents, or as may be otherwise established through assignment of the contract.

2. ENGINEER

Huitt-Zollars, Inc., Engineer of the Owner, or other representative as may be authorized by said Owner to act in any particular position.

3. FORMS, PLANS AND SPECIFICATIONS

Forms of Proposal, Contract, Bonds and Plans may be obtained from the office of Mr. Clyde Johnson, Purchasing Agent, Finance Building, 5350 Belt Line Road, Addison, Texas.

4. COPIES OF PLANS FURNISHED

Ten (10) sets of Plans shall be furnished to the Contractor, at no charge, for construction purposes. Additional copies may be obtained at cost of reproduction upon request.

5. PRODUCT RECORD DOCUMENTS

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 Owner.

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 Drawings. The Contractor shall maintain the Shop Drawings as 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.

Submittal. At the completion of the project, the Contractor shall deliver record drawings to the Owner. 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.

6. HORIZONTAL AND VERTICAL SURVEY CONTROL

The Contractor will be responsible for horizontal and vertical survey control for this project. Benchmarks and alignment centerline coordinates are provided on the plans.

7. PERMITS, LICENSES, AND REGULATIONS

Permits and licenses of a temporary nature necessary for the prosecution of the Work shall be secured and paid for by the Contractor. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. If the Contractor observes that the Drawings and Specifications are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in Work. 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 Owner harmless therefrom.

8. REFERENCE SPECIFICATIONS

Where reference is made to specifications compiled by others, such are hereby made a part of these Specifications.

9. REVIEW OF WORK

The Owner and his representatives shall have the right to review the Work while such Work is in progress to ascertain that the Work is being accomplished in compliance with the standards and requirements set forth in the Contract Documents. It is also contemplated that similar review will be conducted by governmental inspectors. Notwithstanding such review, the Contractor will be held responsible for the finished Work, and any acceptance of the Work by the Owner or governmental agencies will not relieve the Contractor from responsibility for the Work. The Owner reserves the right to place full-time construction observers at the site of the Work.

The Owner and his representatives shall at all times have access to the Work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access, and for review. If the Specifications, the Owner's instructions, laws, ordinances, or any public authority require any Work to be specially tested, the Contractor shall give the Owner timely notice of its readiness for testing,

and if the testing is by an authority other than the Owner, of the date fixed for such testing. Tests by the Owner shall be made promptly, and where practicable at the source of supply.

Re-examination of any Work may be ordered by the Owner, and, if so ordered, the Work must be uncovered by the Contractor. If such Work is found to be in accordance with the Contract Documents, the Owner shall pay the cost of re-examination and replacement. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such cost.

10. INSPECTION

Notwithstanding the foregoing, the Town of Addison reserves the right to inspect, test, measure or verify the construction work for this project as the Town deems necessary.

11. SCOPE OF WORK

The Work for this Project consists of furnishing all materials, labor, equipment, tools and incidentals necessary to construct, in accordance with the Plans and Specifications, the proposed improvements for Morris Avenue Extension.

12. PROPERTY LINES AND MONUMENTS

All property corners, control monumentations, construction and survey stakes and marks shall be carefully preserved by the Contractor, and in case of careless destruction or removal by Contractor or his employees, such stakes or marks shall be replaced at the Contractor's expense as required by the Owner.

13. 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 be not in compliance with any building code or other requirement of any governmental body, he shall immediately inform the Owner in writing, and the Owner shall promptly verify the same. Any Work done after such discovery, until authorized, will be done at the Contractor's risk.

14. TIME ALLOTTED FOR COMPLETION

All items of Work included under these contracts shall be completed within the time stipulated in the Proposal. The time shall commence on the date specified in the Notice to Proceed. The Notice to Proceed shall consist of a written request by the Owner for the Contractor to proceed with construction of the Project.

15. EXISTING STRUCTURES

The Plans show the location of all known surface and subsurface structures. However, the Owner assumes no responsibility for failure to show any or all of these structures on the Plans, or to show them in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation or 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 require the building of special work, provisions for which are not made in the Plans and Proposal, in which case the provisions in these Specifications for extra work shall apply.

16. EXISTING UTILITIES AND SERVICE LINES

The Contractor shall contact all the utility companies which have facilities in the vicinity of the proposed improvements to confirm the horizontal and vertical locations of their respective facilities prior to

commencing work. Where a conflict with the proposed improvements is encountered, the Contractor shall notify the Engineer immediately prior to proceeding with the work.

The Contractor shall be responsible for the protection of all existing utilities or service lines crossed or exposed by his construction operation. Where existing utilities or service lines are cut, broken or damaged, the Contractor shall replace the utilities or service lines with the same type of original construction, or better, at his own cost and expense. All replacement, backfill and compaction shall be accomplished in strict accordance with the requirements of the owner of the utility or service line.

17. PUBLIC UTILITIES AND OTHER PROPERTY TO BE CHANGED

In case it is necessary to change or move the property of any owner or of a public utility, such property shall not be moved or interfered with until authorized by the utility company and approved by the Owner. The right is reserved to the owner of public utilities to enter upon the limits of the Project for the purpose of making such changes or repairs of this contract.

18. LIGHTS AND POWER

The Contractor shall provide, at his own expense, temporary lighting and power facilities required for the proper execution of the Work.

19. PERMITS AND RIGHTS-OF-WAY

The Owner will provide rights-of-way for the purpose of construction without cost to the Contractor by securing permits in areas of public dedication or by obtaining easements across privately-owned property. 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. The Contractor shall obtain a right-of-way permit from the Town of Addison.

20. PRECONSTRUCTION CONFERENCE

The successful Contractor(s) and Owner shall meet at the call of the Owner on this Project. Prior to the meeting, the Contractor(s) shall prepare schedules showing the sequencing and progress of their work and its effect on others. These schedules shall be delivered to the Owner in advance of the meeting for his review. The general nature of the work, materials used, and methods of construction as well as the schedules will be discussed at the meeting. A final composite schedule will be prepared during this conference to allow an orderly sequence of project construction.

21. 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 seven (7) calendar days prior to the date set for the Bid opening). Answers to all such requests will be given in writing to all Bidders in addendum form and all 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.

22. 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 in the construction, including water required for mixing of concrete, sprinkling, testing or flushing. Water required for construction shall be paid for by the Contractor at the Town of Addison prevailing rates. There will be no separate pay item for connection into the existing water system and quantity of water required for construction purposes.

23. EXCAVATION

The Contractor shall exercise precautions to insure that drainage from adjacent properties is not blocked by his excavations.

24. CONTRACTOR'S BID

The Contractor's Bid shall be on a Unit Price basis for construction of the Project as shown on the Plans and described in the Specifications.

25. OWNER'S STATUS

The Owner shall perform technical review of the Work. He shall also have authority to reject all Work and materials which do not conform to the Contract and to decide questions which arise in the execution of the Work.

26. OWNER'S DECISIONS

The Owner shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the Contractor and on all other matters relating to the execution and progress of the Work or the interpretation of the Contract Documents.

27. LANDS FOR WORK

The Owner shall provide as indicated on the Plans for this Project, the lands upon which the Work under this Contract is to be done, right-of-way for access to same, and such other lands which are designated on the Plans or in the Specifications for the use of the Contractor. Such lands and rights-of-way shall be adequate for the performance of the Contract. Should the Contractor be delayed as the result of lack of access, this shall be cause for an extension of time but not for additional cost.

The Contractor shall provide at his own expense and without liability to the Owner any additional land and access thereto that may be required for temporary construction facilities.

28. CLEANING UP

The Contractor shall remove at his own expense all temporary structures, rubbish and waste materials resulting from his operations. These requirements shall not apply to property used for permanent disposal of rubbish or waste materials in accordance with permission of such disposal granted to the Contractor by the Owner thereof.

29. LIQUIDATED DAMAGES FOR DELAY BY CONTRACTOR

The time of completion is of the essence in this contract. For each calendar day that any Work shall remain uncompleted after the time specified the contract, liquidated damages shall be deducted from the monies due the Contractor in the amount of \$500.00 per day.

30. USE OF EXPLOSIVES

Use of explosives will not be allowed.

31. PROJECT MAINTENANCE

The Contractor shall maintain, and keep in good repair, the improvements covered by these Plans and Specifications during the life of his contract.

32. DISPOSAL OF WASTE AND SURPLUS EXCAVATION

All asphalt, concrete, rock or excavated material, or other debris shall be removed from the property and the Town of Addison. Any required disposal permits shall be the sole responsibility of the Contractor.

33. 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 Owner 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.

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.

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.

34. TOWN OF ADDISON APPROVAL

This project is subject to final approval and acceptance by Town of Addison.

35. TRAFFIC CONTROL

The Contractor shall be responsible for providing traffic control during the construction of this Project consistent with the provisions set forth in the latest edition of the "Texas Manual on Uniform Traffic Control Devices for Streets and Highways" issued under the authority of Sections 542.202, 544.001 and 544.002 of the Texas Transportation Code. The Contractor will not remove any regulatory sign, instructional sign, street name sign, or other sign which has been erected by the City. If it is determined that a sign must be removed to permit required construction, the Contractor shall contact the Town of Addison to remove the sign. In the case of regulatory signs, the Contractor must replace the permanent sign with a temporary sign meeting the requirements of the above-referenced manual, and such a temporary sign must be installed prior to the removal of the existing sign. The Contractor shall submit a Traffic Control Plan at least five (5) calendar days prior to commencing work for review and approval by the Town of Addison.

36. CERTIFICATION

The Contractor shall submit a manufacturer's certification that the material was manufactured and tested in accordance with the referenced Specifications and a report of test results. The certification shall be submitted prior to material shipment.

37. FINAL ACCEPTANCE OF WORK

Final acceptance of the Work is subject to final testing and approval of the Work by the Town of Addison.

38. WORK AREA

Contractor shall restrict his construction activity to the project site.

39. 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.

40. 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.

41. SAMPLES AND TESTS OF MATERIALS

Modify the General Provisions, Section GP 5.16, Samples and Tests of Materials.

"The Contractor shall designate and pay a recognized testing laboratory to perform all concrete design for this project. Such designation shall be subject to the approval of the Owner. Samples of all materials for tests shall be taken by the Contractor's authorized representative at the discretion of the Owner.

"All samples and tests shall be performed in accordance with the Standard Specifications for Public Works Construction, North Central Texas Council of Governments (1983) as amended or supplemented."

All concrete mix designs and supporting data shall be submitted to the Owner for approval and accepted at least ten (10) days prior to placing concrete.

42. CONSTRUCTION STAKING

Construction staking will not be provided by the Owner or Engineer.

43. COMPLIANCE WITH GENERAL RULES AND LAWS

36. CERTIFICATION

The Contractor shall submit a manufacturer's certification that the material was manufactured and tested in accordance with the referenced Specifications and a report of test results. The certification shall be submitted prior to material shipment.

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42. CONSTRUCTION STAKING

Construction staking will not be provided by the Owner or Engineer.

43. COMPLIANCE WITH GENERAL RULES AND LAWS

"Contractor shall familiarize himself with the nature and extent of the specifications, site conditions, traffic and safety requirements, and comply with all federal, state and local laws, ordinances, rules and regulations. Contractor shall determine how compliance with requirements, laws, rules, and regulations will affect his cost, progress or performance of the Work."

44. 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."

45. 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.

46. GENERAL SEQUENCE OF CONSTRUCTION

Prior to the start of work, the contractor shall develop a detailed construction schedule and sequence of construction, to be submitted to the Town of Addison for approval, 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 two lanes of traffic (one in each direction) and access to all side streets and driveways must be maintained at all times unless otherwise authorized in writing by the Town of Addison.

Barricades, temporary pavement markings, and channelizing devices conforming to the current edition of the Texas M.U.T.C.D. shall be used during all stages of construction to control traffic flow through the work zones. Sidewalks and/or clear passage ways must be provided at all times for pedestrian traffic in the area.

Erosion control devices must be properly installed and maintained during all stages of construction.

47. SPECIAL CONSTRUCTION SEQUENCING

Addison Circle Phase II-B is located in an area that hosts several special events throughout the year. These events will continue to be held during the construction and certain provisions must be made to accommodate them. The dates, durations and operating hours of events vary from year to year and it is therefore not possible to specify all restrictions prior to execution of the construction contract. The following information should, however, aid the Contractor in evaluating the impact of such events on his schedule.

The major events and scheduled dates are as follows:

- a. Taste of Addison: May 20 & 21, 2001;
- b. Addison's Kaboom Town: July 3rd 2001

c. Addison's Oktoberfest: Sept. 14-17, 2001

d. Run for the Children: Sept. 16, 2001

Most events occur along Addison Circle between Addison Road and Quorum Drive, occupying areas several hundred feet north and south of the roadway.

For bidding purposes, the Contractor should assume that no work can occur on the project during an event. At least two weeks prior to a scheduled event the Contractor shall be required to coordinate through the Town of Addison's Director of Public Works with the managers of the event and inform them of his planned construction activities during the event. Depending upon the nature and timing of the Contractor's activities with respect to the event's activities, a determination will be made by the Director as to whether construction will be temporarily suspended entirely or in the immediate vicinity of the event.

During the event, special effort must be made to secure the construction site and provide for the safety of the public. Though the standard specifications and normal construction practices dictate measures to be employed, during an event, the public will be moving about in a manner that is not typical relative to this type of construction project.

48. CONSTRUCTION STAKING

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 100 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.

49. GEOTECHNICAL INFORMATION

Geotechnical information such as boring locations and tan & gray limestone profiles as shown on the plans are approximations and were taken from the "Geotechnical Investigations, Proposed Addison Circle, Phase II-B, Addison, Texas", Report No. 0781-1341 dated February 1999 and prepared by Saad M. Hineidi, P.E. of Fugro-McClelland (Southwest), Inc., 2880 Virgo Lane, Dallas, Texas 75229, 214-484-8301. A complete copy of this report is bound herein.

50. GRASS REPAIR

No separate pay shall be made for repair of damaged grass areas, not indicated on the plans, but such work shall be subsidiary to the various other items bid.

51. IRRIGATION AND SPRINKLER REPAIR

The contractor shall maintain all irrigation systems within the limits of the project during the duration of the contract. The contractor 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.

52. 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, owner-operators, employees of any such entity or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

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 Owner 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 Owner, showing that the coverage has been extended.
- E. The Contractor shall obtain from each person providing services on the project, and provide to the Owner:
- (1) a certificate of coverage, prior to that person beginning work on the project, so that the Owner 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 Owner 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 Owner 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 Owner 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 Owner to declare the contract void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the Owner.

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."

53. PROJECT TRAILER

"The Owner will not provide the Contractor with a storage area or project trailer. The Contractor is responsible for providing his own storage area between the proposed roadway extension and Avis. The Contractor will not be required to provide a job trailer for meetings, phone conversations and other day to day activities. Meetings can be held at the Town of Addison Service Center. Costs for the storage area shall be included in mobilization.

54. 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.

55. COORDINATION BETWEEN CONTRACTORS

There is the potential that three separate public contracts will be awarded with this project. In addition, construction of certain private improvements will be underway simultaneous with the public improvements. The public contractors shall coordinate and sequence their construction with each other and the private contractors through the owner. The award of three separate contracts in no way relieves a single contractor from ensuring that the total project is coordinated and sequenced to stay on schedule.

56. RESTRICTED WORK HOURS

Per the Town of Addison Building Regulations, "It shall be unlawful for a person, firm or corporation to excavate, erect, build, construct, alter, repair or demolish any building or structure which has been issued or which is required to be issued a building permit by the Town of Addison between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday, and between the hours of 7:00 p.m. and 8:00 a.m. on Saturday and Sunday, if such activity is performed within a residential, apartment, or townhouse zoned area, or within three hundred (300) feet of an occupied residence, except in cases of urgent necessity or in the interest of public safety and convenience, and then only by permit of the city manager."

Site Work and Utility Construction

The following wages apply to workers engaged in site or construction beyond live feet of buildings.

General Decision Number TX910045

Superseded General Decision No. TX910045

State: TEXAS

Construction Type:
Heavy
Highway

County(ies):

COLLIN	GRAYSON	ROCKWALL
DALLAS	JOHNSON	TARRANT
DENTON	KAUFMAN	WICHITA
ELLIS	PARKER	

HEAVY AND HIGHWAY CONSTRUCTION PROJECTS IN WICHITA COUNTY ONLY.

HIGHWAY CONSTRUCTION PROJECTS ONLY FOR REMAINING COUNTIES

Modification Number 0 Publication Date 02/19/1993

COUNTY (ies):

COLLIN	GRAYSON	ROCKWALL
DALLAS	JOHNSON	TARRANT
DENTON	KAUFMAN	WICHITA
ELLIS	PARKER	

SUTX2043A 11/18/1991

	Rate	Fringes
AIR TOOL OPERATOR	\$7.554	
ASPHALT BAKER	8.569	
ASPHALT SHOVELER	8.255	
BATCHING PLANT HEIGHER	9.371	
BATTERBOARD SETTER	8.970	
CARPENTER	9.447	
CARPENTER HELPER	7.695	
CONCRETE FINISHER-PAVING	9.345	
CONCRETE FINISHER HELPER PAVING	8.146	
CONCRETE FINISHER-STRUCTURES	9.058	
CONCRETE FINISHER HELPER STRUCTURES	7.494	
CONCRETE RUDDER	7.713	
ELECTRICIAN	17.761	
ELECTRICIAN HELPER	8.436	
FLAGGER	5.200	
FORM BUILDER-STRUCTURES	8.717	
FORM BUILDER HELPER STRUCTURES	7.550	
FORM LINER-PAVING & CURB	8.911	
FORM SETTER-PAVING & CURB	8.686	
FORM SETTER HELPER PAVING & CURB	7.787	
FORM SETTER STRUCTURES	8.427	
FORM SETTER HELPER STRUCTURES	7.356	
LABORER-COMMON	6.402	
LABORER-UTILITY	7.481	
MANHOLE BUILDER	11.000	
MECHANIC	10.658	
MECHANIC HELPER	8.345	
OILER	8.698	
SERVICER	8.104	
PAINTER-STRUCTURES	10.913	
PAINTER HELPER-STRUCTURES	8.000	
PILEDRIVER	7.500	
PILEDRIVER HELPER	7.000	
PIPE LAYER	8.509	
PIPE LAYER HELPER	7.017	
BLASTER	11.333	
BLASTER HELPER	7.250	
ASPHALT DISTRIBUTOR OPERATOR	8.404	
ASPHALT PAVING MACHINE	9.853	
BROOM OR SWEEPER OPERATOR	7.908	

BULLDOZER, 150 HP & LESS	8.703
BULLDOZER, OVER 150 HP	9.360
CONCRETE PAVING CURING MACHINE	8.213
CONCRETE PAVING FINISHING MACHINE	9.453
CONCRETE PAVING FORM GRADER	8.900
CONCRETE PAVING JOINT MACHINE	9.042
CONCRETE PAVING JOINT SEALER	7.350
CONCRETE PAVING FLOAT	7.875
CONCRETE PAVING SAN	9.280
CONCRETE PAVING SPREADER	9.750
PAVING SUB-GRADER	9.000
SLIPFORM MACHINE OPERATOR	9.000
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL LESS THAN 1 1/2 C.Y.	9.513
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL, 1 1/2 C.Y. & OVER	10.517
CRUSHER OR SCREENING PLANT OPERATOR	9.500
FORM LOADER	12.000
FOUNDATION DRILL OPERATOR CRAWLER MOUNTED	10.000
FOUNDATION DRILL OPERATOR TRUCK MOUNTED	13.138
FOUNDATION DRILL OPERATOR HELPER-TRUCK/CRAWLER	8.688
FRONT END LOADER 2 1/2 C.Y. & LESS	8.823
FRONT END LOADER OVER 2 1/2 C.Y.	9.311
HOIST - DOUBLE DRUM	8.917
MELTING MACHINE OPERATOR	6.650
MIXER (OVER 16 C.F.)	9.000
MIXER (16 C.F. & LESS)	7.913
MIXER - CONCRETE PAVING	9.500
MOTOR GRADER OPERATOR FINE GRADE	10.248
MOTOR GRADER OPERATOR	9.891
PAVEMENT MAKING MACHINE	6.402
ROLLER, STEEL WHEEL PLANT-MIX PAVEMENTS	8.339
ROLLER, STEEL WHEEL OTHER FLATWHEEL OR TAMPING	7.961
ROLLER, PNEUMATIC, SELF-PROPELLED	7.403
SCRAPER-17 C.Y. & LESS	8.138
SCRAPER-OVER 17 C.Y.	8.205
SIDE BOOM	7.793
TRACTOR-CRAWLER TYPE 150 HP & LESS	8.440
TRACTOR-CRAWLER TYPE OVER 150 HP	8.673
TRACTOR-PNEUMATIC	7.735
TRAVELING MIXER	7.815
TRENCHING MACHINE-LIGHT	8.188

TRENCHING MACHINE-HEAVY	12.498
POST HOLE DRILLER OPERATOR	9.000
WAGON-MILL, HOING MACHINE	9.000
REINFORCING STEEL SETTER PAVING	7.218
REINFORCING STEEL SETTER STRUCTURES	11.548
REINFORCING STEEL SETTER HELPER	8.665
STEEL WORKER-STRUCTURAL	12.060+3.450
SIGN ERECTOR	11.436
SIGN ERECTOR HELPER	6.402
SPREADER BOX OPERATOR	6.988
WAPICAGE SERVICER ZONE WORK	6.402
MOUNTED SIGN INSTALLER PERMANENT GROUND	6.402
TRUCK DRIVER-SINGLE AXLE LIGHT	7.465
TRUCK DRIVER-SINGLE AXLE HEAVY	8.067
TRUCK DRIVER-TANDUM AXLE SEMI TRAILER	7.836
TRUCK DRIVER-LANDBOY/FLOAT	9.653
TRUCK DRIVER-TRANSIT MIX	7.507
TRUCK DRIVER-WIPCH	8.208
VIBRATOR OPERATOR	7.000
WELDER	10.659
WELDER HELPER	9.000

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 (29 CFR 5.5(a) 1(1)).

END OF GENERAL DECISION

SECTION T
TECHNICAL SPECIFICATIONS

SECTION T
TECHNICAL SPECIFICATIONS

I. GENERAL

All materials and construction methods for this project shall be in conformance with Town of Addison standards and specifications and the North Central Texas Council of Governments "Standard Specifications for Public Works Construction" (1983), as amended or supplemented. Where conflicts exist, Town of Addison standards and specifications shall govern.

II. SUPPLEMENTAL STANDARDS

Amendments to the North Central Texas Council of Governments Standard Specifications for Public Works Construction.

III. MOBILIZATION

IV. DEMOLITION

V. EARTHWORK

VI. SUPPLEMENTAL LANDSCAPE AND IRRIGATION SPECIFICATIONS

A. Tree Protection

B. Lawns and Grasses

VII. NPDES - STORM WATER POLLUTION PREVENTION PLAN

VIII. BRICK PAVER INSTALLATION IN VEHICULAR AREAS

IX. MISCELLANEOUS DETAILS

II. SUPPLEMENTAL STANDARDS

AMENDMENTS TO
NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

1.22-CONTRACTOR'S RESPONSIBILITIES, 1.22.2-INDEMNIFICATION: Delete the two paragraphs comprising the section and replace with the following:

"The Contractor and sureties shall indemnify the Town of Addison, Texas, Post Properties, Inc., and Gaylord Properties, Inc. (for purposes of this indemnification herein referred to together as the Owner), their officials, officers, employees and agents against, and hold the Owner, their officials, officers, employees and agents harmless from, any and all liability, actions, causes of action, lawsuits, judgements, claims, damages, costs or fees, including attorney's fees, for any injury to or death of any person, or damage to or destruction of any property, resulting from or based upon, in whole or in part, any act or omission of the Contractor (including, but not limited to, the failure to provide any necessary barricades, warning lights or signs), its officers, employees agents, or subcontractors under, in connection with, or in the performance of this construction contract for the Addison Circle Phase II-B project. The provisions of this paragraph shall survive the termination of this construction contract."

1.24 PROTECTION OF WORK AND OF PERSONS & PROPERTY

1.24.3 Add the following to this section:

(a) Description:

This section covers excavation and supporting systems for trenches to protect the safety of workers and property adjacent to the site. This specification shall govern for construction of all types of trenches and excavations less than 15 feet in width. These specifications were developed in general conformance with the Occupational Safety and Health Administration (OSHA) standards as contained in Subpart P, Part 1926 of the Code of Federal Regulations. Other OSHA construction standards shall be followed where applicable.

(b) Products:

The CONTRACTOR shall submit to the OWNER prior to the beginning of any trench excavation, for approval, design calculations and fabrication drawings for the proposed trench shoring system to be used on the project certified by an engineer registered in the State of Texas.

(c) Execution:

(1) General: These specifications apply to any trench excavation which is over five (5) feet in depth from the ground surface, or trench excavations that are less than five feet in depth located in areas where unstable soil conditions are present. (Ref. OSHA, Safety and Health Regulations, Part 1926, Subpart P, Paragraph 1926.652, Subparagraph (b). "Unstable" soil conditions refers to soils which will slough or move under load or vibration.) These specifications also apply to shored trenches and excavations less than 15 feet in width.

(2) CONTRACTOR'S Responsibility:

- (A) These specifications address the safety of workers in a trench excavation and it, in no way, relieves the CONTRACTOR of his responsibility and liability to insure the safety of the project and workers.
 - (B) The CONTRACTOR must identify a qualified person in the CONTRACTOR's firm responsible for performing adequate inspections of the trench excavations to assure that conditions have not changed that may make the trench excavation or bracing less safe.
 - (C) It is the CONTRACTOR's responsibility to insure that all excavation work and site conditions are within the regulations as established by OSHA. Any property damage or bodily injury (including death) that arises from use of the trench shoring system, from CONTRACTOR's negligence in performance of contract work, or from the OWNER's failure to note exceptions to the trench safety system shall remain the sole responsibility and liability of the CONTRACTOR.
 - (D) The CONTRACTOR must notify the OWNER verbally immediately and in writing within three (3) working days of discrepancies in the soil conditions encountered during the excavation from those denoted on drawings. The OWNER or OWNER's representative will evaluate the soil conditions to determine if changed conditions warrant modification to the scope of contract. It is the CONTRACTOR's responsibility to take immediate action to assure the safety of the workers and adjacent property.
- (3) Trench Design:
- (A) The CONTRACTOR's registered professional engineer shall design the trench shoring system to accommodate any anticipated live load surcharge.
 - (B) All trenches over five (5) feet deep shall be sloped, shored, sheeted, braced or otherwise supported. Trenches less than five (5) feet deep located in areas of hazardous ground movement, shall be effectively protected. If soil conditions warrant in deep excavations, the sides of the trench above a 5-foot level may be sloped to preclude collapse. In trenches wider than six (6) feet, a minimum bench four (4) feet wide shall be provided on both sides of the excavation at the toe of the sloped portion.
 - (C) Alternate designs for use of steeper slopes or the use of supporting systems; i.e., piling, cribbing, shoring, sliding trench box etc., may be submitted in drawing form, designed and sealed by a professional engineer registered in the State of Texas to the OWNER for review. The OWNER will review for general compliance to the requirements set forth by House Bills 662 and 665. OWNER's review does not constitute acceptance, and the sole liability for the design rests with

the CONTRACTOR and CONTRACTOR's engineer. These drawings must meet accepted engineering requirements and standards as well as all applicable OSHA standards and regulations.

(4) Inspection:

(A) OWNER: If questions arise concerning interpretation of subsurface conditions, test excavations may be performed to familiarize the CONTRACTOR and/or his representative with soil types and stratification.

(B) Contractor:

(1) The CONTRACTOR is responsible for familiarizing on-site personnel with soil conditions shown so that changed conditions can be identified.

(2) The designated on-site safety person (as identified in Section 3.02B) must perform daily inspections of the trench faces and bottom and/or any structural systems utilized for supporting the trench walls prior to personnel entering into the excavation.

(3) Any variations in soil or groundwater conditions must be reported verbally immediately to the OWNER and in writing within three (3) working days. The OWNER or his representative will review the conditions with the CONTRACTOR for the purpose of evaluating changed conditions with respect to contract.

(5) Trench Excavation Requirements:

(A) Prior to Trench Excavation: Known underground installations are shown on the plans. It is the CONTRACTOR's responsibility to verify locations in the field.

(B) During Excavation

(1) During excavation, the exact location of existing underground installations shall be determined by the CONTRACTOR and when uncovered, proper precautions and supports provided so as not to interrupt existing service.

(2) Before any individual enters the bottom of the trench excavation, the trench will be inspected by the CONTRACTOR's on-site safety person as identified in Section 3.02B. to assure that trench excavation has been performed according to the design standard and OSHA Regulations and that no anomalies are observed that may affect the safety of the trench or project.

(3) Adequate inspections of excavation shall be made and an inspection log prepared by the CONTRACTOR's designated safety person as identified in Section 3.02B. If there is evidence of soil movement

creating the possibility of cave-ins or slides, all work in the excavation shall cease until the necessary precautions have been taken to assure the safety of the trench. Inspection of shoring, bracing, underpinning or other trench shoring systems shall include checking all shim plates, braces and stringers for tightness.

- (4) Excavations shall be inspected by the CONTRACTOR's designated safety person after every rainstorm or other hazard-increasing occurrence to assure the safety of the trench. Protection against slides and cave-ins shall be increased as necessary to protect against changed conditions.
- (5) Excavated material shall be stockpiled a distance away from the trench so as not to affect the trench stability. The CONTRACTOR's registered professional engineer shall determine the allowable surcharge. As a minimum to protect workers from falling debris, the toe of the stockpiled soil shall not be closer than five (5) feet to the top of the excavation.
- (6) All precautions must be made to prevent surface water from entering the trench excavation. Adequate drainage must be provided in the area adjacent to the excavation.
- (7) Operation of heavy equipment adjacent to the edge of the trench excavation may cause instability. The CONTRACTOR is responsible for the means and methods of excavation, and therefore, for loads imposed on the trench excavation and for shoring design to contain imposed live loads or surcharge.
- (8) When mobile equipment is utilized or allowed adjacent to excavations, substantial stop logs or barricades shall be installed. If possible, the grade shall be away from the excavation.
- (9) The CONTRACTOR must take precautions to protect the face of the excavation from exposure to excessive drying, water, or freezing when excavations are to remain open for more than two (2) calendar weeks.
- (10) Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition and of adequate dimensions. Timbers shall be sound and free of large or loose knots.
- (11) When installing a support system, shoring will be applied by starting from the top of the trench excavation and working down. All cross beams or trench jacks will be placed in true horizontal positions.
- (12) If shoring is utilized in trench excavations, installation will closely follow the excavation work. Trenches will not be left unsupported for a period longer than two (2) calendar days.

- (13) When employees are required to be in trenches four (4) feet deep or more, an adequate means of exit such as a ladder or steps, shall be provided and located so as to require no more than 25 feet of lateral travel.
 - (14) Adequate physical barrier protection, such as guardrails, fences, or barricades shall be provided at all locations where animal or human life may inadvertently enter the trench excavation. In addition, warning lights shall be maintained from sunset to sunrise to further provide protection from the dangers of the open trench.
 - (15) Walkways or bridges with guardrails shall be provided where people or equipment are required or permitted to cross over trench excavations.
- (6) Special Considerations:
- (A) Precautions shall be taken by decreasing the slope or increased shoring of the sides of trench excavations adjacent to a previously backfilled excavation or fill area. This includes areas where the separation between the fill and the excavation is less than the depth of the excavation.
 - (B) If groundwater is encountered, it shall be adequately controlled to a point such that no water seepage occurs on the excavation slopes or bottom. The use of tight sheeting, pumping, drainage or similar control measures shall be planned and directed by the CONTRACTOR. Consideration shall be given by the CONTRACTOR to the existing moisture balances in surrounding soils and the effects on foundations and structures if it is disturbed.
 - (C) In rock excavations, the face and slope of the excavation shall be inspected by the CONTRACTOR's safety person for joints and seams or other discontinuities that may cause block failures. Vertical slopes (90°), without bracing or use of a trench box, will not be allowed in any rock material except as shown.

(7) Definitions:

Reference: OSHA Safety and Health Regulations, Part 1926, Subpart P, Paragraph 1926.653.)

"Braces" - The horizontal members of the shoring system whose ends bear against the uprights or stringers.

"Changed conditions" - Where soil conditions such as moisture content, groundwater, development of desiccation cracks or joints, or soil stratigraphy change from those originally designated in the boring logs or following initial excavation.

"Dewatering System" - A mechanical system which artificially lowers the static groundwater to a level which prevents groundwater seepage into the excavation. These

include well-points, sumps, pumping wells, or cut-off walls.

"Groundwater" - Water that is present in the soil in sufficient quantities that it will flow and collect at a point. This includes a natural aquifer water level or a perched groundwater on top of an impervious layer.

"Lagging" - Horizontal boards supported by the flanges of two H-piles that are used to separate the natural soil from the excavation.

"Rock" - A mass of soil particles that cannot be excavated by hand. This includes any weathered rock that contains soil seams. Shale is to be considered a rock material.

"Running Soil" - Soils that possess a fluid behavior generally brought about by excess moisture or imbalanced hydrostatic (water) conditions.

"Sheet Pile" - A pile or sheeting that may form one of a continuous interlocking line, or a row of timber, concrete, or steel pile, driven in close contact to provide a tight wall to resist the lateral pressure of water, adjacent earth or other materials.

"Sides" - Also referred to as "Walls" or "Faces". The vertical or inclined earth surfaces formed as a result of excavation work.

"Slope" - The angle with the horizontal at which a particular earth material will stand indefinitely without movement.

"Stringers" - Also referred to as "Wales". The horizontal members of a shoring system whose sides bear against the uprights or earth.

"Trench" - An Excavation made below the surface of the ground whereby the depth is greater than the width, but the width is less than 15 feet. A trench may consist of the void between unsupported earth and the wall of a structure if the wall is within 15 feet of the unsupported earth.

"Trench Shield" - A shoring system composed of steel plates and bracing, welded or bolted together, which support the walls of a trench from the ground level to the trench bottom and which can be moved along the trench bottom as work progresses.

"Uprights" - Vertical members of a shoring system.

1.26-INSURANCE: Add the following new paragraph:

"ITEM 1.26.6-OWNER DEFINED: For purposes of this Item 1.26 'Owner' shall mean and include the Town of Addison, Texas, Post Properties, Inc., and Gaylord Properties, Inc."

1.27-MATERIALS AND WORKMANSHIP; WARRANTIES AND GUARANTEES, 1.27.4-SPECIAL WARRANTY: Change the word "one" in the first sentence to the word "two".

1.48-CLAIMS AGAINST OWNER AND ACTION THEREON: Amend the first line of the section to read as follows:

"No claim against the Owner (including the Town of Addison, Texas) under the contract or for breach of

the ..."

The remainder of the section remains unchanged.

1.49-OWNER'S OFFICERS, EMPLOYEES OR AGENTS, 1.49.1-CLAIM AGAINST OFFICERS, EMPLOYEES OR AGENT OF THE OWNER: Delete the paragraph comprising the section and replace with the following:

"No claim whatsoever shall be made by the Contractor against any officer, employee or agent of the Owner (including the Town of Addison, Texas) for, or on account of, anything done or omitted to be done in connection with this contract."

1.51-MONTHLY ESTIMATE, PARTIAL PAYMENTS, RETAINAGE, FINAL INSPECTION, ACCEPTANCE AND FINAL PAYMENT, 1.51.4-FINAL PAYMENT: Delete the second paragraph and replace with the following:

"The acceptance of the Contractor of the final payment as aforesaid shall operate as and shall be a release to the Owner (including the Town of Addison, Texas, its' officers, employees and agents) from all claims or liabilities under the contract, including all subcontractor claims, for anything done or furnished or relating to the work under the contract or for any act or neglect of said Owner relating to or connected with the contract."

2.2 PORTLAND CEMENT CONCRETE AND RELATED MATERIALS

2.2.10 Replace this entire section with the following:

(a) Description of Work: This item shall consist of providing and installing a resilient and adhesive joint sealing filler capable of effectively sealing joints and cracks in pavements.

(b) Products:

(1) Joint Sealers: The sealant shall have a minimum of 75 percent extensibility at a temperature range of minus 50 degrees F. to 200 degrees F.

The sealants shall be Dow Corning 888 or Dow Corning 890-SL silicone highway joint sealant as manufactured by Dow Corning Corp., Midland, Michigan 48647.

Before installation of either of these materials, the Contractor must supply certification by an independent testing laboratory that the material meets the requirements of Table 1.

(2) The backer rod shall be a joint filler stop of closed cell polyethylene foam of sufficient size to provide a tight seal. The backer rod shall be sized such that when installed in a saw cut joint it shall prevent the sealant from flowing to the bottom. The backer rod shall be compatible with the joint sealant to act as a bond breaker, and sized according to the manufacturer's recommendations.

A bond breaking polyethylene tape will be required on top of all expansion joint fillers, cork or redwood to prevent the sealer from bonding to the expansion joint filler. The

tape shall be of sufficient width to completely cover the expansion joint filler. The tape shall be compatible with the joint sealant to act as a bond breaker and installed per the manufacturer's recommendations.

- (3) Expansion joint filler shall be either cork meeting the requirements of AASHTO M153, Type II or redwood boards meeting the requirements of NCTCOG. The filler for each joint shall be furnished in a single piece for full depth and width required for joint, unless otherwise specified by the City. When the use of more than one piece is authorized for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the City.

Each lot or batch of sealing compound shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, and the safe heating temperature and shall be accompanied by the manufacturer's certification stating that the compound meets the requirements of this specification.

(c) Execution

- (1) Time of Application: The joints shall be sealed immediately following the curing period of the concrete, weather permitting, and prior to opening to traffic. During application of joint sealant, the weather shall not be rainy or foggy and the temperature shall be above 40 degrees F.
- (2) Equipment: Equipment necessary for construction of this work shall be in first-class working condition and approved by the City prior to beginning work. The equipment shall be as recommended by the joint sealant manufacturer.

The joint sealant equipment shall consist of power-driven apparatus capable of extruding the material at a continuous feed. The extruding nozzle tip of the machine shall be designed to fill the joint uniformly.

The equipment for cleaning joint openings shall consist of plows, powered brooms or wire brushes, air compressors, and joint cleaning and grooving machines necessary to produce a clean and dry joint.

TABLE I - SILICONE SPECIFICATIONS

<u>Test Method</u>	<u>Test</u>	<u>Material Requirement</u>
As Supplied		
MIL-S-8802	Flow, maximum, inches	0.2
MIL-S-8802	Extrusion Rate, grams per minute	90 to 250
MIL-S-8802	Tack-Free Time, minutes	35 to 75
ASTM D 1475	Specific Gravity	1.450 to 1.515
Upon Complete Cure		
ASTM D 2240	Durometer ¹ , Shore A	15 to 25
ASTM D 412, Die C	Modulus, at 150% elongation ¹ , psi maximum	45
ASTM D 412	Elongation ¹ , % minimum	1200
ASTMD 3583 ² (Modified)	Adhesion to Concrete ¹ , minimum % elongation	500
Performance		
ASTM C 719	Movement, 10 cycles @ +100/-50%	No Failure
ASTM C 793-75	Accelerated Weathering, at 5,000 hours	No Cracks, Blisters or Bond Loss

¹Sample cured 7 days at 25° +/- 1° C(77° +/- 2°F) and 50 +/- 5% relative humidity. Proper joint design and proper joint preparation are necessary for maximum performance.

²Joint design uses 1/2 inch x 1/2 inch x 2 inch configuration.

- (3) Preparation of Joints: The cut faces of the joint shall be thoroughly cleaned of all foreign materials, as may be required for proper installation and bonding of the joint sealer or filler, including residue from water flushing operations, by sandblasting as required. The use of a portable hand saw will not be permitted for cleaning joint faces.

After complete drying, the joint shall be sandblasted. The sandblaster nozzle shall be attached to a mechanical aiming device so as to direct the sandblast at approximately a 45 degree angle and at a maximum of two (2) inches from the faces of the joint. Both joint faces shall receive sandblasting.

After sandblasting the joints shall be blown out using filtered, oil free and moisture free, air at a minimum of 90 psi and 120 cfm. Blowing out of the joint shall be accomplished by using an approved blow tube which will fit into the joint.

After blowing, the joint shall be checked for any residual dust or coating. If any is found, the sandblasting and blowing operations shall be repeated until the joint is cleaned. The cleaned joints shall be sealed the same day as cleaned. Joints left open overnight shall be recleaned prior to sealing.

- (4) Applicable Test Methods:

ASTM D2240 Tests for Rubber Properties - Durometer Hardness

ASTM D3583 Joint Sealant, Hot applied, Elastomeric Type, for Portland Cement Concrete Pavements or Joint Sealant, Hot Applied, Elastomeric, Jet-Fuel-Resistant Type, for Portland Cement Concrete Pavements, Testing.

ASTM C719 Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants under Cyclic Movement (Hockman cycle)

ASTM D793 Test Method for Effects of Accelerated Weathering on Elastomeric Joint Sealants.

2.13 VALVES

- 2.13.1.(a) Add the following to the end of the second paragraph:

Valves smaller than 3" shall be brass.

- 2.13.1.(s) Add the following to the end of this section:

All 3"-12" valves shall have a minimum operating pressure of 175 psi. Valves greater than 12" shall have a minimum operating pressure of 150 psi. Gate valve connections shall conform to AWWA C111 and ANSI A21.11.

4.2 ROLLING

- 4.2.1 Revise Section, Adding:

Rolling shall continue until no further compression can be obtained and all roller marks are eliminated. The Contractor shall be required to use both a steel wheel roller conforming to Item 4.2.2 (NCTCOG Specs.) and a pneumatic tire roller conforming to Item 4.2.4 (NCTCOG Specs.).

4.2.2 Delete 1st and 2nd Sentences. Revise Section, Adding:

Rolling shall be considered incidental work and shall not be paid for as a separate item.

4.9 PORTLAND CEMENT MODIFICATION OF SUBGRADE SOILS

4.9.4.(f) Add the following section:

Surface Tolerance: Subgrade surfaces after completion of lime stabilization operations shall be smooth and within the tolerance of plus .05 and minus 0.1 foot of grades and levels required from the construction shown.

4.9.4.(g) Add the following section:

CONTRACTOR shall notify the OWNER'S representative for routine testing in conjunction with the work of this section. The compacted subgrade should be tested for in place density and moisture content at a frequency of one test per 5000 square feet within 48 hours prior to pavement construction.

5.8 PORTLAND CEMENT CONCRETE PAVEMENT

5.8.2.(g) Add the following to the beginning of this section:

Remove impounded water and debris from spaces to be occupied by concrete, before depositing any concrete. Wet wood forms with water.

5.8.3.(e) Add the following to the end of this section:

Forms shall remain in place at least 12 hours after the concrete has been placed. Remove forms without injuring concrete. Satisfactorily repair any concrete found defective after form removal.

Curbs shall be backfilled within twelve (12) hours after the removal of forms.

5.8.6.(c) Revise "Item 5.8.7.(2)" in eighth paragraph to read "Item 5.8.6.(b)".

6.7 UNDERGROUND CONDUIT INSTALLATION

6.7.3.(c) Add the following to the end of the third paragraph:

Valves shall be installed with the opening stem upright. Valve boxes shall be of sufficient length to provide an unobstructed vertical opening from the ground surface to the operating nut. The top of the valve box shall be installed at finish grade with a 12"x12"x4" thick level concrete pad surrounding the top.

6.7.3.(s).(B).(2).(i) Add the following to the end of this section:

The flushing velocity in the water line shall be at least 2.5 feet per second. The water piping shall then be disinfected using a chlorine solution in water of at least 50 mg/l available chlorine. The chlorinated water solution shall remain in the piping for at least 24 hours, and at the end of this period the chlorine concentration shall be at least 25 mg/l. Final flushing shall then be accomplished to remove chlorine concentrations greater than 2.0 mg/l. All requirements of AWWA Specifications C601 "Disinfecting Water Mains" shall apply. The requirements of this paragraph apply equally to new pipe and fittings, and to existing pipe lines into which connections have been made, or which may have been otherwise disturbed to the extent that contamination may have occurred.

6.7.4.(b).(1) Add the following to the end of this section:

Provide two copies of materials certificates signed by the material producer and the CONTRACTOR certifying that each material item complies with, or exceeds, specified requirements. The certificates shall be provided at the site with delivery of the materials.

6.7.4.(b).(9) Replace first paragraph with the following:

Joints in Storm Sewers: Reinforced concrete pipe joints shall be tongue and groove with either cold applied preformed plastic gaskets or rubber gaskets in accordance with TxDOT Item 464. Gasket material shall be placed in the tongue and groove and compressed.

6.7.4.(c).(2).(C) Add the following section:

Cleaning up and Repairing. The sewers shall be kept clean during the progress of the work, and upon completion shall be thoroughly cleaned. All needed repairs shall be made before this final cleaning. The CONTRACTOR shall provide suitable tools and labor to clean the sewers at his own expense. Any excessive leakage of water into the sewers, or any deviation from proper grade alignment such as to make the work, in the opinion of the ENGINEER, not consistent with first class work, shall be promptly corrected by the CONTRACTOR at his own expense. After a section of line is installed and backfilled, restoration of affected property shall not be delayed; cleanup shall progress with the work. All materials, tools, temporary structures, and excess excavation shall be removed, cleaned, smoothed, graded, and/or finished in a workmanlike manner at the completion of the work.

6.7.4.(f).(3) Add the following to the end of this section:

Tops of junction boxes shall be set flush with finish grade. Joints in precast sections shall be watertight and sealed with an elastomeric or mastic sealant. Wall openings around pipes shall be sealed on the outside with a fillet of concrete or grout and on the inside with grout. Inverts shall be formed with grout or concrete to permit a smooth flow through the structure and prevent deposition of solids or sediment.

6.7.4.(g).(2).(C) Add the following section:

Tops of manholes shall be set flush with finish grade. Joints in precast sections shall be watertight and sealed with an elastomeric or mastic sealant. Wall openings around pipes shall be sealed on the outside with a fillet of concrete or grout and on the inside with grout. Inverts shall be formed with grout or concrete to permit a smooth flow through the structure and prevent deposition of solids or sediment.

END OF SECTION

8.9 PAINING

8.9.3.(a) Add the following to the beginning of this section:

Detailed mixing, thinning and application instructions, minimum and maximum application temperature, and curing time and drying time between coats shall be furnished by the manufacturer and strictly followed by the CONTRACTOR.

8.9.3.(a) Add the following to the end of this section:

Special Surface Preparation:

- (1) Ferrous Metal Surfaces: Rust and mill scale shall be removed by power tool cleaning, as specified by the Steel Structures Painting Council.
 - (A) All weld fluxes shall be power tool cleaned as specified by the Steel Structures Painting Council and washed thoroughly with water to remove all weld flush spatters and alkali contaminants.
 - (B) Shop primer coats that have been ruptured or marred shall be wire brushed to bare metal and reprimed with primer specified.
 - (C) Surface preparation for submerged ferrous metal surfaces shall be a near white metal blast in accordance with Steel Structures Painting Council SSPC-10-63T. Metal surfaces in critical areas (non-submerged) shall be given a SSPC-8-6-63 commercial blast cleaning.
- (2) Concrete and Masonry Surfaces: Surfaces shall be allowed to dry at least 30 days before painting. Glaze, efflorescence, laitance, dirt, grease, oil, asphalt, surface deposits of free iron and other foreign matter shall be removed prior to paintings.

8.9.3.(m) Add the following section:

Pavement markings consist of lane striping, stop bars and turn lane markings. Traffic lane striping shall be white extruded thermoplastic 10' long by 4" wide with 30' skip and white/red dual reflective Stimsonite reflectors at 80' centers. Turn lanes shall be marked with dual white ceramic reflectors at 36" centers for the entire length of storage. Stop bars shall be 18" wide crossing all traffic lanes and be located at all major intersections.

III. MOBILIZATION

MOBILIZATION

PART 1 - GENERAL

1.01 Description of Work:

- A. The value allocated to mobilization will not be limited by a percentage of the total bid amount.
- B. Mobilization and preparatory work shall include assembly and delivery to the site equipment, materials, and supplies necessary for the prosecution of the Work; and clearing of and preparation of the Contractor's work area; the complete assembly in working order, of equipment necessary to perform the required Work; personnel services and equipment rental on work preparatory to commencing actual work; plus other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the terms of the Contract.
- C. The Contractor shall conduct his work in accordance with the requirements described in these Specifications.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

PART 4 - METHOD OF MEASUREMENT

4.01 Measurement for Mobilization will be made on a lump sum basis wherein no measurement will be made.

PART 5 - BASIS OF PAYMENT

5.01 Payment:

- A. The value allocated to mobilization will not be limited by a percentage of the Total bid amount.
- B. Payment for mobilization will be made in equal portions on the first three (3) progress payments, provided the Owner is satisfied the Contractor is making a reasonable effort to mobilize for construction in a timely manner.

END OF SECTION

IV. DEMOLITION

DEMOLITION

General

1. **Description:** Provide demolition, salvage and protection of existing structures and trees as shown on Drawings or specified.
2. **Related Work specified elsewhere:**
 - A. Tree Protection
 - B. Earthwork
3. **Notification of Owners of Utility Lines and Equipment:** Notify any corporation, company, individual or local authority owning conduits, wires, pipes or equipment on site affected by Demolition work. Cap lines in accordance with instructions of governing authorities. This is to include existing irrigation lines and related wiring.
4. **Protections:** Protect existing surfaces of building equipment or other materials scheduled to remain. Protect trees and other vegetation.
5. **Examination of Site:** Before submitting proposal, visit and examine site to ascertain actual nature and scope of demolition and salvage work. Claims for extra compensation on account of additional labor, materials or equipment required for difficulties encountered in demolition and salvage work will not be recognized.

Execution

1. **Demolition Operations:**
 - A. Prior to demolition operations, disconnect and cap off irrigation and utility service lines not required for new construction in accordance with requirements of governing authorities, applicable ordinances and regulations. If Owner deems necessary, ball and burlap predetermined plant material and relocate to Owner approved site.
 - B. Erect necessary barricades and protective measures as required. Verify that tree protection devices are in place.
 - C. Execute demolition of surfaces in a careful and orderly manner with least possible disturbance or damage to adjoining surfaces.
 - D. Materials and debris resulting from demolition operations will be removed from the site.
 - E. Remove pavements, structures, utilities, and the like to the depth of their structure.
 - F. Leave construction areas clean and ready for other trades.
 - G. Remove pavements sub-base to the depth of the base material.
 - H. Do not remove or damage trees or other vegetation unless noted to be removed.

Salvage: Salvage items discussed in preconstruction meeting. Clean and deliver to Town of Addison. If Owner deems necessary, have predetermined plant material professionally balled and burlapped by reputable and Owner approved company and relocated to Owner approved site. Here these items are to be professionally planted, staked, mulched, and deep-watered. A written Letter of Guarantee of one year shall accompany all such material.

Final Grading: Refer to Earthwork for final grading requirements.

End of Section

V. EARTHWORK

EARTHWORK

General

1. **Description:** Provide complete topsoil stripping and stockpiling, earth excavation, filling, grading, trenching, and backfilling.
2. **Related Work Specified Elsewhere:**
 - A. Tree Protection
 - B. Landscaping
3. **Submittals:** Submit adequate samples of each proposed backfill to the site for Owner's review and approval.
4. **Job Conditions:**
 - A. **Protections:**
 1. Protect reference points, bench marks and monuments from damage or discoloration. Replace or repair immediately points damaged, destroyed or dislocated.
 2. Protect and maintain conduits, drains, inlets, sewers, pipes and wires that remain on property.
 3. Do not leave temporary wood in concrete or fill.
 4. Cover holes and trenches when work is not in progress. Fence or barricade changes of plane more than 45 degrees horizontally and more than 3 feet vertically.
 5. Provide dewatering and drainage to keep excavations free of water.
 6. Protect adjacent surfaces and improvements outside grading limits. Repair any damage immediately.
 - B. **Coordination:** If applicable, coordinate backfill operations with installation of subsurface drainage systems.
 - C. **Soil Classification:** Excavated materials are not classified as to type. Excavation includes all material encountered at site including rock rubble and debris.

Materials

1. **Select Fill:** Cohesive fill with liquid limit of less than 35 percent and plasticity index ranging from 5 to 15. Select fill shall be free of any lumps or stones larger than 1 1/2 inches diameter.
2. **Imported Topsoil:**
 - A. Friable, dark loamy soil, fertile, free from rubble, stones, clay lumps, extraneous material, plant roots and reasonably free of weeds. Topsoil containing Nutgrass or Dallisgrass will be rejected.
 - B. Physical properties as follows:

Clay - Between 7 - 27 percent.
Silt - Between 28 - 50 percent.
Sand - Less than 52 percent.

3. Site Topsoil:

- A. Suitable topsoil material is excavated from on site.
- B. Suitable soil is defined as dark brown sandy clay loam or dark brown blackland topsoil free of rocks greater than 1" in diameter, weeds, roots and other objectional materials. Suitable soil will be determined by the Engineer/Owner.

4. Subsoil Material: Soil excavated from construction areas free of rocks (larger than 2 1/2 inches) and construction debris.

5. Stock Piles: Topsoil and excess subsoil material cut from construction areas which is suitable for backfilling shall be stockpiled in separate piles as directed by Engineer/Owner. Location of stock piles shall be subject to approval of Owner.

6. Surplus Materials: Remove from site any excess materials and excavated materials unsuitable for use as fill and backfill. Materials containing rubbish or debris shall be immediately removed and legally disposed of off-site.

Execution

1. Preparation:

- A. Remove abandoned, inactive utilities to point not less than 3 feet below finish grade. Plug or cap remaining lines in manner acceptable to utility company.
- B. Report encounter of active utilities not indicated by the Contract Documents to Architect/Owner. Disposition shall be as directed with adjustment in Contract amount. Extra payment will not be authorized for work that could have been foreseen by careful examination of site.
- C. Notify respective utility companies of damage caused to active utilities and protect active utilities pending instruction for disposition.
- D. Strip and stockpile site topsoil and subsoil material for future use.
- E. If applicable, verify that drainage system is complete.
- F. Verify that waterproofing is complete.

2. Backfilling/Filling:

- A. General:
 - 1. Before filling, clean area debris, large rocks, formwork and loose material. Area to be filled shall be approved by Architect/Owner before filling is started.
 - 2. Prior to filling under pavements proof-roll subgrade with a rubber tired roller of sufficient weight. Weak areas or areas where excessive pumping is noted shall be removed and replaced with Select Fill. Once the subgrade is uniformly stable, compact the area as noted herein.
 - 3. Brace retaining walls and grade beams while placing fill or backfill material.

- B. **Select Fill:**
 - 1. Place under pavements in a uniform thickness.
 - 2. Place in maximum 8" lift compacted to approximately 95% of Standard Proctory density between 0% and 3% of optimum moisture content.
- C. **Backfill - Site:**
 - 1. Prior to placing backfill, scarify surface of ground to a depth of 4 inches. Moisture content of loosened material shall be such that first layer of fill will readily bond to surface. Do not place fill on subgrade that is muddy, frozen or contains frost.
 - 2. Place in 8 inch maximum lift and compact to approximately 95 percent of Standard Proctor density.
- D. **Backfill - Under Pavements:** Follow procedures noted in C. above, except compact lifts to 95% of Standard Proctor density.

3. Finish Grading:

- A. Grade uniformly with rounded surfaces at tops and bottoms of abrupt changes in plane. Hand-grade steep slopes and areas that are inaccessible for machine work and areas around existing trees. DO NOT cut or fill around trees unless approved by the Architect and Owner.
- B. Protect graded areas from undue erosion. Repair and regrade if required. Refill and compact where settlement occurs.
- C. Grade areas to elevations and slopes indicated without depressions causing pocketing of surface water or humps, producing localized runoff and gulying. Ponding of water on-site is not allowed. Finish surfaces to be not more than 0.10 foot above or below established grade as follows:
 - 1. Lawn Areas - Provide a minimum of 6" of Imported Topsoil or Site Topsoil over the lawn. If rock is encountered, overexcavate to a dept the one (1) foot and backfill with Topsoil.
 - 2. In areas where fill will exceed 6" (except where Select Fill is called for), place Imported Topsoil or Site Topsoil to a minimum depth of two (2) feet. If more than two (2) feet of fill is required, Subsoil Material may be used to within two (2) feet of finish grade.
 - 3. Planting Beds - Grade these areas to a subgrade of 6" below finish grade. Complete final backfill with prepared soil mix as provided in the landscaping section.

- 4. **Cleanup:** Remove excess materials from site promptly to prevent large accumulations. Store reusable material neatly in designation locations. Upon completion of the project any remaining surplus materials must be removed and legally disposed of off site.

End of Section

VI. SUPPLEMENTAL LANDSCAPE AND IRRIGATION SPECIFICATIONS

SECTION 01532 - TREE PROTECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide protection of existing trees scheduled to remain and furnish all supplementary items necessary to complete the protection barricade installation and root pruning.

1.02 SITE CONDITIONS

- A. Most of the existing trees are located on the drawings. Protect these trees and all other trees outside of the building footprint and roadway/parking area unless they are scheduled to be removed.

1.03 TREE TAGGING

- A. Identify trees to be preserved with permanent flagging tape.

1.04 PROTECTION/ROOT PRUNING

- A. Protect trees by barricading each tree or group of trees outlined on the drawings.
- B. Do not cut or fill within the line of the barricade or within the drip line of the trees.
- C. Complete root pruning prior to beginning parking area and building construction.

1.05 GUARANTEE

- A. Guarantee existing trees against damage until final acceptance of the project. Repair any damage which, in the opinion of the landscape architect, can be satisfactorily corrected.

1.06 DEFINITIONS

- A. Disturbance/Damage: Physical or visual change to the trees which, in the opinion of the landscape architect, is detrimental to the trees being protected. Such disturbance may be caused by equipment, material, or personnel.
- B. Violation: Damage to trees caused by any construction or delivery vehicle, construction material storage, or disposal of solid or liquid debris shall be considered a violation.

PART 2 - PRODUCTS

2.01 BARRICADES

- A. Fence Material: 12½ ga. galv. stock fence, 4'-0" tall or Plastic Snow fence.
- B. Post: Steel T post, 6'-0" long.

2.02 EQUIPMENT

- A. Complete root pruning with a "Ditch Witch" type trenching machine.

PART 3 - EXECUTION

3.01 TREE PROTECTION

- A. Install prior to any mobilization on the site.
- B. Barricade: Install barricades around trees at their drip line unless construction is scheduled to encroach closer to the trunk. In this event, relocate the fence to within 4' of the trunk. Where construction comes closer than 4', protect the trunk by planking as detailed.

3.02 ROOT PRUNING

- A. If construction encroaches within the dripline, provide root pruning as described.
 - 1. Cut trenches 2'-6" deep, 1'-0" behind the proposed back of curb or building perimeter line.
 - 2. After trenching, carefully inspect exposed roots and saw cut any flared ends smooth.
 - 3. After trenches are cut and reviewed by landscape architect, backfill with soil to the original grade and water backfill thoroughly.
 - 4. Do not proceed with backfill until trenches are reviewed.

3.03 MAINTENANCE

- A. Maintain tree protection barricades in a newly installed condition through final acceptance or until construction has been completed in the area of the tree(s).
- B. Deep-water protected trees weekly during dry periods, and spray tree crowns periodically to reduce dust accumulation on the leaves.

3.04 PENALTY

- A. If any tree is damaged and, in the opinion of the landscape architect, cannot be satisfactorily repaired, then a fine of \$100 per caliper inch will be assessed against the contractor. Caliper measurements will be taken as follows: up to and including 4" caliper, 6" above ground level; over 4", 4'-0" above ground level.
- B. If the landscape architect agrees that the damage can be satisfactorily repaired, then complete this work by a qualified arborist to the satisfaction of the owner/landscape architect.

END OF SECTION

SECTION 02930 - LAWNS AND GRASS

PART 1 - GENERAL

1.1 RELATED CONDITIONS

- A. Provisions established within the General Conditions of the Contract are collectively applicable to this Section.

1.2 DESCRIPTION

- A. Complete grassing as described including common Bermudagrass solid sod and hydroseed.

1.3 QUALITY ASSURANCE

- A. Deliver fertilizer to site in original, sealed containers bearing manufacturer's guaranteed statement of analysis.

1.4 SPECIAL GRASSING

- A. Water: Will be available on site. Provide necessary hoses and other watering equipment required to complete work. Refer to drawings for irrigation limits.
- B. Maintenance: Until substantial completion and until an approved stand of grass is achieved, maintain lawn areas by watering, mowing, weeding, spraying, cleaning and replacing as necessary to keep the turf in a vigorous, healthy condition.
 - 1. Watering: As necessary to keep top 2 inches of soil moist.
 - 2. Mowing: Mow newly planted grass areas weekly after initial growth reaches 2-½ inches.
 - 3. Weeding: Remove weeds and foreign grass over grass areas at least once a week. Herbicides may be used only when approved by Architect and as noted in 1.3, E below.
- C. Acceptance: The work will be accepted when a completed undamaged stand of grass is achieved as approved by Owner and Architect.
- D. Weed Eradication:
 - 1. Spray areas to be seeded prior to seeding to eliminate broadleaf and grassy weeds.
 - 2. Complete this work prior to cultivating the area during favorable weather conditions.

1.5 REFERENCED STANDARDS

- A. ASTM - American Standard Testing Material - sand.
- B. The Grasses of Texas, TAMU Press - Plant Nomenclature.

1.6 CONDITIONS OF SURFACES

- A. Lawn areas will be graded with topsoil. Provide fine grading as noted herein.

1.7 SCHEDULES

- A. Sodding:
 - 1. Sodding operations can be performed year-round weather permitting. Do not install sod on frozen ground or if forecast calls for freezing conditions.
 - 2. Do not place sod without prior approval from Architect.

B. Grass Seeding:

- 1. Common Bermudagrass: Complete seeding between May 1 and September 15, weather permitting.

PART 2 - MATERIALS

2.1 GRASS

- A. Sod: Common Bermudagrass (*Cynodon dactylon*) Free of foreign weeds and grasses. Cut sod with a full ¾ inch heavy clay soil covering roots. Do not stack for more than 48 hours between time of cutting and planting. Any sod not planted with 24 hours after receipt on site shall be removed and not planted.

- B. Seed: Common Bermudagrass (*Cynodon dactylon*) Min. 90% purity and min. 85% germination with no noxious weeds.

2.2 MULCH FIBER

- A. Virgin wood cellulose fiber for hydromulch - Weyerhaeuser or Conweb with green color additive.

2.3 TACKIFIER

- A. Natural, non-asphaltic vegetable gum with gelling and hardening agents.

2.4 FERTILIZER

- A. Provide a complete fertilizer, part of elements of which are derived from organic sources and will include trace elements. Fillers to be sulphur and iron sulphate.
 1. First Application: 10-10-10 or similar analysis with minimum 8% sulphur and 4% iron plus micronutrients.
 2. Second Application: 20-5-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) plus minimum 8% sulphur and 4% iron plus micronutrients.

2.5 SHARP SAND

- A. Clean washed sand (fine aggregate) ASTM C-33.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Grading: Verify that lawn areas have been graded as required. Note that some areas may be left undisturbed as shown on the grading drawings. Do not proceed with final grading until prior earthwork is in accordance with Contract Documents.

3.2 FINAL GRADING

- A. Loosen areas to be grassed with rototiller, or similar equipment and fine rake to break up lumps to produce a smooth, even grade free from unsightly variations, ridges or depressions. Leave grade next to walks and curbs 1 in. low.
- B. Remove and dispose of stones 1 inch or larger, sticks, roots, other debris and grass stubble exposed during this operation.
- C. Do not vary final grades more than 0.1 foot from finish elevations.
- D. Receive approval of fine grading from Architect prior to grass planting.

3.3 FERTILIZING

- A. First Application:
 1. Distribute 10-10-10 fertilizer uniformly at rate of 15 pounds per 1,000 square feet and rake into seed bed prior to grassing.
- B. Second Application:
 1. Repeat fertilization with 20-5-10 commercial fertilizer after first cutting at rate of 15 pounds per 1,000 square feet.
- C. Water: Immediately water fertilizer after each application.

3.4 GRASS PLANTING

- A. Sod:
 1. After final grading, place sod so edges are touching in neat even rolls. Lightly topdress with sharp sand to fill voids and grade smooth. Roll to eliminate undulations and to achieve a smooth even grade.
- B. Seeding:
 1. At time of seeding, soil to be moist but not muddy and wind velocity shall not exceed 10 miles per hour. Add water if required to moisten soil.

2. Lightly scarify the ground as necessary immediately before hydromulching seed to provide a smooth, even grade and friable seed bed.
3. Hydromulch seed evenly at the following rates with wood cellulose fiber at rate of fifty (50) pounds per 1,000 square feet.
Hulled Common Bermudagrass: 2 lbs/1000 sq. ft.
4. Add tackifier to mix for slopes 4:1 or steeper at rate of one pound per bag of mulch.

3.5 PERFORMANCE

- A. Establish a dense coverage of permanent grasses, free from lumps and depressions.
- B. Regrass any area failing to show uniform cover. Such replacement shall continue until a dense cover is established. Scattered bare or dead spots will not be allowed.
- C. Mow and edge Bermuda areas a minimum of three times, each time after grass has reached a height of 2-½ inches. Mow to a height of 2 inches returning clippings to the turf.
- D. Keep area weeded removing broadleaf and grassy weeds as required.

3.6 GRADE MAINTENANCE AND EROSION DAMAGE

- A. Maintain original grades of lawn areas after commencement of planing and during maintenance period.
- B. Provide surface repair to ruts, ridges, tracks. Replant areas as required for final acceptance.

3.7 ACCEPTANCE

- A. The work will be accepted when a dense, undamaged stand of grass is achieved as approved by the owner.

3.8 CLEAN UP

- A. Keep premises neat and orderly including organization of storage areas. Remove trash and debris resulting from lawn preparation from site daily as work progresses. Leave paved areas in a broom clean condition by sweeping or hosing.

END OF SECTION

VII. NPDES – STORM WATER POLLUTION PREVENTION PLAN

STORM WATER POLLUTION PREVENTION PLAN

FOR

MORRIS AVENUE EXTENSION

ADDISON, TEXAS

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

Company:

STORM WATER POLLUTION PREVENTION PLAN

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Storm Water Pollution Prevention Plan

This plan has been prepared in accordance with the requirements of the Final NPDES General Permit for Storm Water Discharges from Construction Sites, as published in the Federal Register on September 9, 1992. Should contract documents conflict with the minimum requirements of the General Permit, State or local requirements, the more stringent requirements shall apply.

In accordance with the requirements of the NPDES General Permit for Storm Water Discharges from construction sites, all contractors and subcontractors shall at all times take necessary measures to prevent the flow of sediment and other materials from the work site into the storm sewer system or to any receiving water. Such measures may include, but are not limited to, the placement of straw bale erosion checks and inlet protection, silt fence, riprap stabilization, grassing, sodding, etc.

I. Site Description

A. Nature of the Construction Activity.

MORRIS AVENUE EXTENSION is a new multi-family mixed use development on 4.2 acres. The construction of this project involves fine grading, excavation, backfilling and installation of the water and paving.

B. Sequence of Major Activities which disturb soil. (Descriptive)

Major soil disturbing activities that will take place include:

- Paving
- Construction of underground utilities (public and franchise)
- Fine grading

The site drainage areas and grading are indicated on the drawings and maps found in the construction documents.

C. Estimates of Total Area & Area to be Disturbed.

The total area of MORRIS AVENUE EXTENSION is 0.50 acres. Approximately 0.50 acres are expected to be disturbed by construction activity.

D. Estimate of Post-Construction Runoff Coefficient.

The overall estimated post-construction runoff coefficient for this construction site is based on Town of Addison Drainage Design Criteria. Runoff tabulations are given on the Drainage Area Map.

E. Existing Data Giving Soils Information and Quality of any Discharge from the Site.

A geotechnical report for the surrounding recent development indicates surface soils found in the area typically consist of dark brown clay underlain by light brown calcareous clays underlain by tan weathered limestone and gray limestone.

No data exists on storm water runoff quality from this project.

F. Site Map Information:

The following information can be found on the maps and plan sheets given in the construction documents:

- Site drainage patterns
- Approximate slopes after grading
- Areas of soil disturbance
- Outline of areas not to be disturbed (No areas indicated.)
- Location of major structural & non-structural controls

G. Name of and Location of Discharges to Receiving Water(s) and Area of Wetland Acreage at the Site.

All storm water runoff from MORRIS AVENUE EXTENSION is received by an unnamed tributary of White Rock Creek.

There are no designated wetlands within the Right-Of-Way of these projects.

II. Controls

In general, for this project the Contractor shall be responsible for the selection and implementation of erosion and sedimentation control and stabilization measures as necessary. Appropriate preventative and control measures shall be implemented prior to commencing any activity which disturbs the existing surface or could otherwise be considered a pollutant source. The Contractor shall take such measures as necessary to assure compliance with the requirements and intent of the NPDES General Permit for storm water discharges from this project. Such measures shall include, but are not limited to the installation and maintenance of the following:

- Perimeter controls such as silt fence, straw bales, or equivalent to prevent offsite sedimentation and/or to prevent run-on to the site.
- Silt fence, straw bale, or equivalent erosion checks for ditch and inlet protection to eliminate soils, sediments, or other debris from entering the drainage systems or receiving waters.
- Silt fence, straw bale, or equivalent sediment barrier around the perimeter of stockpiled soils.
- Other controls, as warranted by field conditions and sequencing.
- Final stabilization of the site shall be achieved by the Contractor prior to acceptance of the project by the Owner or the Town of Addison.

At a minimum, the Contractor shall install the measures shown on the Erosion Control Plan.

A. Erosion & Sediment Controls

1. Stabilization practices

To reduce the erosion potential of disturbed areas, temporary seeding, permanent seeding, mulching or sod stabilization procedures, or their equivalent, must be initiated on all disturbed areas within 14 calendar days of last activity in that area as required by the General Permit.

The owner's construction manager will keep a record of when major activities occur, temporarily or permanently cease, and when stabilization measures are initiated. A copy of this record will be kept with this plan on-site.

2. Structural practices

The disturbed surface areas for this project are comprised of relatively small drainage areas. Within these small areas, erosion and sedimentation can be effectively controlled using silt fences, straw bales, and sediment traps, as shown on the erosion control plan.

During construction and until the site is adequately stabilized, ditches, curb inlets, and basin and drop inlets shall have stone siltation structures, straw bale erosion checks, straw bale dikes, or equivalent installed to significantly reduce the amount of soil and silt entering the underground drainage system and/or receiving waters. All stockpiled soil will be surrounded by a straw bale dike, silt fence, or equivalent to properly control sediment runoff. At a minimum, silt fences will be used as sediment controls on the sideslope and downslope boundaries of the construction and staging areas.

Offsite drainage will be controlled through the use of a diversion swale adjacent to the project site. This swale will also collect runoff from the construction area, therefore sedimentation dams will be placed at intervals along the swale as indicated on the erosion control plan.

The Contractor is encouraged to limit the number of access points to the site as both a safety measure and a pollution prevention measure. The Contractor shall submit proposed locations of Stabilized Construction Entrances, if different from those shown on the plans, to the Engineer. The Contractor will at all times take such measures as required to minimize off-site tracking of sediments and debris. Where offsite tracking does occur, the Contractor shall promptly remove any such material or debris.

The proposed measures for erosion and sedimentation control during construction satisfy the intent of State and local requirements. The applicable erosion control drawings are given in the Appendix (Erosion Control Plan, Erosion Control Details).

B. Storm Water Management

Permanent erosion control and sedimentation control measures will be in place when construction is completed and prior to submittal of the Notice Of Termination. Specific locations of these stabilization measures are not given in the drawings but consist generally of the following items.

Permanent seeding, mulching or sod stabilization procedures, or their equivalent, shall be initiated on all disturbed areas within fourteen (14) calendar days of last activity in that area.

The proposed measures for erosion and sedimentation control after construction satisfy the intent of the State and local requirements.

C. Other Controls

The Contractor shall at all times take such measures as required to minimize off-site tracking of sediments and debris. Where offsite tracking does occur, the Contractor shall promptly remove any such material or debris.

The Contractor shall comply with all Federal, State, and local regulations regarding the collection, storage, and disposal of solid, sanitary, septic, or hazardous waste materials.

The Contractor shall designate a maintenance area for his equipment and shall comply with all applicable federal, state, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) regarding the storage, treatment, or disposal of any hazardous materials utilized on the construction site or construction staging areas. In the event of a spill of oil, fuel, or other hazardous material, the Contractor shall notify the appropriate agencies and shall immediately take action to control, contain, and clean up the spill. The Contractor is responsible for all costs, permits, fines, or penalties associated with any spill and shall submit to the Owner copies of any associated paperwork. Should the Contractor delay in spill cleanup, the Owner reserves the right to have the cleanup performed by a licensed disposal contractor at the Contractor's expense.

Indemnification:

The Contractor shall defend, indemnify and hold harmless the Owner and the Engineer and their respective officers, agents and employees, from and against all damages, claims, losses, demands, suits, judgments and costs, including reasonable attorney's fees and expenses, arising out of or resulting from non-compliance with this section or the Storm Water Pollution Prevention Plan (SWPPP).

Other Permits

No other discharge permits exist for this site.

III. Maintenance

The Contractor shall protect erosion and sediment control devices from damage and shall repair and replace dikes, erosion checks, sediment traps, silt fences, and overflow outlets when damaged by construction, natural, and other physical causes. All soil erosion and sediment control devices shall function as originally intended.

All stock piled soil shall be surrounded by a straw bale dike, silt fence, or equivalent to properly control sediment runoff. Temporary seeding, permanent seeding, mulching or sod stabilization procedures, or their equivalent, must be initiated on all disturbed areas within fourteen (14) calendar days of last activity in that area.

Stabilized Construction Entrances shall be top-dressed with additional stone as necessary to maintain their effectiveness. The Contractor will at all times take such measures as required to minimize off-site tracking of sediments and debris. Where offsite tracking does occur, the Contractor shall promptly remove any such material or debris.

Accumulated sediment shall be removed and disposed of as required to keep the control measure functional. Excess accumulation of sediment at erosion control devices will not be permitted.

Inspection services provided by the owner or owner's representatives do not relieve the Contractor's responsibility for inspection and maintenance of the erosion control measures or his duty to comply with this plan and the conditions of the NPDES General Permit.

IV. Inspections

The site will be inspected by a qualified representative of the CONTRACTOR at least once every seven calendar days and within 24 hours of the end of a rainfall event of 0.5 inches or greater. Where sites have been finally stabilized, inspection will be conducted at least once every month until a Notice of Termination (NOT) is filed for this project.

The inspections shall be for evidence of or the potential for pollutants entering the drainage system. In particular, inspection should be made of disturbed areas, storage areas, discharge locations, erosion and sediment control measures, and points of entrance and exit to the site. The inspector shall indicate in his report if rainfall has occurred since the last inspection. When possible, the date and volume of rainfall should also be recorded.

A written inspection report will be kept and filed with this plan. Any modifications or revisions to the plan based on results of the inspections shall be made for timely implementation of any changes within seven days of the inspection. Reports shall identify any incidents of non-compliance with the SWPPP and the General Permit and actions taken to ensure compliance.

V. Non-Storm Water Discharges

There are no anticipated non-storm water discharges, other than waterline flushings, from this site.

VI. Notice Of Intent (NOI)

For this project, the contractor shall file a Notice Of Intent (NOI) with the EPA. A copy of the NOI submitted for this project will be posted at the construction site in a prominent place for public viewing. Copies are also included in the Appendix of this document.

Under no circumstances will any construction activities identified as potential pollutant sources commence on this contract until 48 hours after submittal of the NOI.

VII. Certification of Contractors

Each contractor identified above shall provide the Owner with a list of their subcontractors. This list shall also identify the responsibilities of the subcontractor with regard to the implementation of and compliance with this plan and the NPDES Storm Water Discharge Permit. This list shall be kept in the Appendix.

Each contractor and subcontractor performing work which will have an impact on the pollution potential of this project shall be identified herein. Subcontractor information will be provided by the general contractor.

It is the responsibility of the General Contractor to obtain certification forms from his subcontractors prior to any work being performed by said subcontractor on this project. A brief description of the work to be performed will be included with the certification. Certification by the subcontractors does not relieve the Contractor's responsibility for inspection and maintenance of the erosion control measures or his duty to comply with this plan and the conditions of the General Permit. The signed certification forms will be submitted to the owner and will be included as part of this plan (File in the Appendix).

An example certification form is given in the Appendix. Copies of this form may be used.

VIII. Notice of Termination

A Notice Of Termination (NOT) may be filed for each co-permittee after the portion of work for which said co-permittee is responsible is finally stabilized and accepted by the Owner and the Town of Addison (where applicable). The Contractor shall not file an NOT without the prior approval and acceptance of the work by the owner and the Town of Addison. A copy of any NOT's filed in association with this project shall be submitted to the owner and filed with this plan.

IX. Maintenance of Records

This plan and the records required herein will be kept by the owner for a minimum period of three (3) years following the date of final stabilization in accordance with the requirements of the General Permit.

X. Posting of permit documents

A copy of any Notice Of Intent (NOI) forms submitted for this project will be posted, along with a project description, in accordance with the NPDES General Permit requirements and regulations. Posting can be on the job-site bulletin board or work trailer. Copies of these forms are also contained in this document.

XI. Plan Revisions/Modifications

This plan shall be amended whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the plan or if the plan proves to be ineffective in eliminating or significantly minimizing pollutants or in otherwise achieving the general objectives of controlling pollutants in storm water discharges from the site.

A record shall be kept of any revisions/modifications identifying the reason for the change, the date made, the date implemented, and the section revised. This record will be filed in the Appendix of this document.

GLOSSARY:

NOTE: This glossary is to assist in defining the terms and practices used in this plan. Should contract documents conflict with the minimum requirements of the EPA General Permit, the more stringent of the two shall apply.

Erosion and Sediment Controls:

Structural controls include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Non-structural controls include waste disposal, control of off-site vehicle tracking, and compliance with State and/or local solid, sanitary or septic waste disposal regulations.

For common drainage areas > 10 disturbed acres, a sediment basin with a volume of 3,600 cubic feet per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. Where a basin is not attainable, smaller basins and/or sediment traps should be used.

At a minimum, silt fences or equivalent sediment controls are required for all sideslope and downslope boundaries of the construction area.

These minimum controls shall also apply to drainage locations serving < 10 acres unless a sediment basin with a storage volume of 3,600 cubic feet per acre drained is provided.

Stabilization Measures:

Stabilization practices may include temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.

Stabilization measures will be initiated as soon as practicable where construction activities have temporarily or permanently ceased. The measures will be initiated no more than 14 days after activity has temporarily or permanently ceased except where construction activity will resume on that portion of the site within 21 days or initiation of stabilization measures is precluded by snow or seasonal arid conditions. Arid conditions may occur in areas where the average rainfall is less than 20 inches.

Storm Water Management:

Practices include wet ponds, retention structures, flow attenuation using vegetated swales and natural depressions, infiltration and sequential systems using one or more of these practices.

APPENDIX

This appendix contains:

- Inspection forms and reports
- Notice of Intent Forms (copies)
- Certification of Contractors (forms)
- Notice of Termination Forms (copies)
- Record of major soil disturbing activities
- Record of Revisions/Modifications

Storm Water Pollution Prevention Plan

CONTRACTOR CERTIFICATION

Construction Site: MORRIS AVENUE EXTENSION

Addison, Texas 75001

Latitude: 32°57'00" Longitude: 96°50'00"

(As identified in the Storm Water Pollution Prevention Plan and NOI.)

The Storm Water Pollution Prevention Plan (SWPPP) for the referenced project identifies each pollution prevention measure and the contractor(s) responsible for the implementation and maintenance of the measure.

All contractors and subcontractors shall be identified in the SWPPP and must sign a copy of the certification statement given below before conducting any professional service at the site identified in the SWPPP.

Contractor information:
(Name, address, telephone no.) _____

Description of responsibilities: _____

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

Contractor's Signature

Date

Name of Prime Contractor: _____
(if applicable)

This certification is to be filed in the Storm Water Pollution Prevention Plan. Do not submit to EPA.

EROSION CONTROL & POLLUTION PREVENTION INSPECTION REPORT

Project: MORRIS AVENUE EXTENSION

Huitt-Zollars Project No.: 01-1822-50

Date: _____ Time: _____ am / pm

Has rainfall occurred since the last inspection? Yes No ; If yes, Volume = _____ inches

This inspection indicates compliance or noncompliance with the Storm Water Pollution Prevention Plan for this project and identifies evidence of or the potential for pollutants entering the drainage system or waters of the United States. Inspection is to be made of disturbed areas, storage areas, discharge locations, erosion & sediment control measures, and points of entrance and exit to the site.

Is this project in compliance with the SWPPP? Yes No

If No, has a copy of this report been given to the Contractor requesting corrective actions? Yes No

Summary of Inspection: (Include observations of any evidence of non-compliance or of pollutant sources not identified in the plan. Attach additional sheets if necessary.)

Summary of Corrective Actions Requested: (Attach additional sheets if necessary.)

Will the results of this inspection require modification of the SWPPP? Yes No

Inspector's Signature

Date

VIII. BRICK PAVER INSTALLATIONS IN VEHICULAR AREA

BRICK PAVER INSTALLATION IN VEHICULAR AREAS

PART 1 - GENERAL

1.01 Conformity

Conform to the requirements of the general conditions of the contract.

1.02 Work Included

1. Supply and place bituminous setting bed.
2. Supply and install brick pavers in quality, shape, thickness and color as specified.
3. Supply and place all accessory items as required by the contract.

1.03 Product Handling

Brick pavers shall be delivered and unloaded at jobsite on pallets and bound in such a manner that no damage occurs to the product during handling, hauling and unloading.

1.04 Project Conditions

Environmental requirements: Ambient and surface temperatures:
Minimum 35 degrees F for minimum 48 hours prior to and during construction.

1. Area to receive bituminous base must be dry.

PART 2 - MATERIALS

2.01 Asphalt adhesive will consist of 2 percent neoprene (grade WM), oxidized asphalt 80 penetration.

2.02 Joint and filler to be pigmented Portland Cement (ASTM C-50). Sand to conform to ASTM C-33.

2.03 Mixes:

- a. Bituminous Setting Bed: The fine aggregate to be used in the bituminous setting bed shall be clean, hard sand with durable particles and free from adherent coatings, lumps of clay, alkali salts and organic matter.

It shall be uniformly graded from "coarse" to "fine" and all passing the number 4 sieve and meet the gradation requirements when tested in accordance with the standard method of test for sieve or screen analysis for fine and course aggregates ASTM Designation C-36. The dried fine aggregate shall be combined with hot asphalt and cement, and the mix shall be heated to approximately 300 degrees F at an asphalt plant.

The proportion of materials shall be seven (7) percent cement and ninety three (93) percent fine aggregate. Each ton shall be apportioned by weight in the approximate ratio, 45 pounds (lbs.) asphalt to 855 pounds (lbs.) sand.

- b. Neoprene: Modified Asphalt Adhesive: Consist of two (2) percent neoprene (grade WM) oxidized asphalt with a 55 degree softening point. (80 penetration) and ten (10) percent long fibers.

Solids (Base)	75 + %
Lbs/Gal	8 - 8.5 lbs.
Solvents	Varsol (over 100 F flash)
Base	(2% neoprene, 0% fibers, 88% asphalt).
Melting Point	ASTM D-36 - 22 f Min.
Penetration	77 F 100 gram load 5 second (.1mm) 23-27
Ductility	ASTM D-3-44 @ 25 5 cms/per minute - .125 cm minimum

PART 3 - EXECUTION

3.01 Examine surfaces to receive Bituminous setting bed to assure that:

- a. Surfaces are free from structural defects.
- b. Elevation is such that when setting bed and brick paver are placed, the top surface of the pavers will be the required finished grade.
- c. Paver surface shall be completed to established elevations without ridges, voids, or other obstructions that would interfere with installation of brick pavers or asphalt.

3.02 Edge Restraint:

- a. Vehicular Paver: Pavers in vehicular areas will be restrained in all directions by the depression in street pavement provided by the paving contractor per details on plans, requiring no special work when pavers are installed.
- b. Check all restraint systems for proper location and elevation per plans and specifications.

3.03 Preparation:

- a. Prime concrete slab with rapid curing cut back asphalt (m-81), at a rate of .1 gal/square yard.

3.04 Application:

- a. To install the setting bed over the base, place 3/4 inch deep control bars directly over the base. If grades must be adjusted, set wood chocks under depth control bars to proper grade.

Set two bars parallel to other, approximately eleven (11) feet apart to serve as guides for the striking board (2 foot long, 2 inch by 6 inch board). The depth control bars must be set carefully, to bring the pavers, when laid, to proper grade.

Place some bituminous bed between the parallel depth control bars. Pull this bed with the striking board over these bars several times. After each passage, low porous spots must be showered with fresh bituminous material to produce smooth, firm and even setting bed. As soon as this initial panel is completed, advance the first bar to the next position in readiness for striking the next panel. Carefully fill any depressions that remain after removing the depth control bars and wood chocks. The setting bed shall be rolled while hot with a power roller to nominal depth of 3/4 inch for vehicular areas.

The elevation will be adjusted so that when the brick pavers are placed, the top surface of the pavers will be required finished grade.

- b. A coating of two (2) percent neoprene - modified asphalt adhesive shall be applied by mopping or squeezing or toweling over the top surface of the bituminous setting bed so as to provide a bond under the pavers. If it is troweled, the trowel shall be serrated with serrations not to exceed one-sixteenth (1/16) of an inch.
- c. Installation of brick pavers shall begin when the modified asphalt adhesive is dry to the touch, carefully place pavers by hand in straight courses with hand tight joints and uniform top surface. Good alignment must be kept, and the pattern shall be that shown on the drawings.
- d. If additional leveling of the pavers is required, and before sweeping in joint filler, roll with a power roller after sufficient hear has built up in the surface of the brick from several days of hot weather.
- e. Joint Treatment: Hand tight joints (shall read from 0 inch to maximum 1/4 inch).

Sweep a dry mixture of one part colored portland cement to match color of brick pavers and three parts sand until joints are completely filled. Fog lightly with water. Cement stains that remain shall be cleaned with a 10 percent solution of muratic acid or mortar cleaner.

3.05 Protection

- a. Newly laid pavers must be protected at all times by panels of plywood on which the installer stands. These panels of plywood can be advanced as work progresses. However, the plywood protection must be kept in areas which will be subjected to continued movements of materials and equipment. These precautions must be taken in order to avoid depressions and protect paver alignment.

END OF SECTION



Standard Specification for Heavy Vehicular Paving Brick¹

This standard is issued under the fixed designation C 1272; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers brick intended for use as a paving material in areas with a high volume of heavy vehicular traffic. The units are designed for use in such places as streets, commercial driveways, and aircraft taxiways. These units are not intended for applications covered by Specifications C 410 or C 902.

1.2 Units are manufactured from clay, shale, or similar naturally occurring earthy substances and subjected to a heat treatment at elevated temperatures (firing). The heat treatment must develop sufficient fired bond between the particulate constituents to provide the strength and durability requirements of this specification (see firing, fired bond, and incipient fusion in Terminology C 43).

1.3 Brick may be shaped during manufacture by extruding, molding, or pressing. Brick may have spacing lugs, chamfered edges, or both.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 ASTM Standards:

- C 43 Terminology of Structural Clay Products²
- C 67 Test Methods for Sampling and Testing Brick and Structural Clay Tile²
- C 88 Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate³
- C 410 Specification for Industrial Floor Brick²
- C 418 Test Method for Abrasion Resistance of Concrete by Sandblasting³
- C 902 Specification for Pedestrian and Light Traffic Paving Brick²
- E 303 Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester⁴

3. Terminology

3.1 *Definitions*—Terms used in this specification are defined in Terminology C 43.

4. Classification

4.1 *Types*—Heavy vehicular paving brick are classified by type according to their intended installation:

4.1.1 *Type R*—Brick intended to be set in a mortar setting bed supported by an adequate concrete base; or an asphalt setting bed supported by an adequate asphalt or concrete base.

4.1.2 *Type F*—Brick intended to be set in a sand setting bed, with sand joints, and supported by an adequate base.

4.2 *Applications*—Heavy vehicular paving brick are classified by application according to their dimensional tolerances, distortion, and extent of chips.

4.2.1 *Application PS*—Pavers intended for general use.

4.2.2 *Application PX*—Pavers intended for use where dimensional tolerances, warpage, and chippage are limited.

4.2.3 *Application PA*—Pavers intended to produce characteristic architectural effects resulting from nonuniformity in size, color, and texture.

5. Physical Requirements

5.1 *Durability*—The brick shall conform to the physical requirements for the type specified as prescribed in Table 1.

5.1.1 *Freezing and Thawing Alternate*—The cold water absorption requirements specified in 5.1 shall not be required provided a sample of five brick, meeting all other requirements, passes the 50 cycle freezing-and-thawing test in Test Methods C 67 with not greater than 0.5 % loss in dry weight of any individual unit.

NOTE 1—The provisions of 5.1.1 are specified only as an alternative when the sample does not conform to the requirements for cold water absorption prescribed in Table 1.

5.1.2 *Sulfate Soundness Test Alternate*—The cold water absorption requirements specified in 5.1 shall not be required if a representative sample of five brick survives 15 cycles of the sulfate soundness test in accordance with Sections 4, 5, and 8 of Test Method C 88 with no visible damage.

NOTE 2—The sulfate soundness test is an optional substitute test for the freezing-and-thawing test (5.1.1).

5.2 *Performance*—If information on the performance over time of similar units in a similar application with similar exposure and traffic is furnished by the manufacturer or the manufacturer's agent and is found acceptable to the specifier of the pavement material or the specifier's agent, the physical requirements in 5.1 or the size requirements in 7.2 shall not be required.

5.3 *Abrasion Resistance*—Each individual brick tested shall meet the requirements of either the Abrasion Index column or the Volume Abrasion Loss column of Table 2.

5.3.1 *Abrasion Index*—The abrasion index is calculated from the cold absorption in percent and the compressive strength in pounds per square inch as follows:

¹ This specification is under the jurisdiction of ASTM Committee C-15 on Manufactured Masonry Units and is the direct responsibility of Subcommittee C15.02 on Clay Brick and Structural Clay Tile.

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² Annual Book of ASTM Standards, Vol 04.05.

³ Annual Book of ASTM Standards, Vol 04.02.

⁴ Annual Book of ASTM Standards, Vol 04.03.

TABLE 1 Physical Requirements

Type	Minimum Compressive Strength, Gross Area, psi (MPa)		Minimum Modulus of Rupture, psi (MPa)		Maximum Cold Water Absorption, %	
	Avg. of 5 Brick	Individual	Avg. of 5 Brick	Individual	Avg. of 5 Brick	Individual
R	8 000 (55.2)	7 000 (48.3)	1 200 (8.3)	1 000 (6.9)	6	7
F	10 000 (69.0)	8 800 (60.7)	1 500 (10.3)	1 275 (8.8)	6	7

TABLE 2 Abrasion Requirements^a

Type	Abrasion Index, max	Volume Abrasion Loss, max, cm ³ /cm ²
R and F	0.11	1.7

^a See Sections 5.3.1 and 5.3.2 for additional information.

$$\text{abrasion index} = \frac{100 \times \text{absorption}}{\text{compressive strength}}$$

5.3.1.1 The compressive strength shall be determined on half-brick, which are the full height (no less than 2 1/4 in. (57 mm)) and width of the unit, and with a length equal to one half the full length of the unit ($\pm 1/4$ in. (± 6 mm)) for each dimension). For abrasion index testing purposes, the brick shall be without core holes, frogs or other perforations. Other shaped specimens may be used provided that a correlation is established with the results of the specified shape and the results are converted to be equivalent to those that would be obtained with the specified shape.

5.3.1.2 In those cases where the height requirements for determining compressive strength cannot be met, the abrasion resistance should be determined according to the volume abrasion loss method.

5.3.2 *Volume Abrasion Loss*—The volume abrasion loss should be determined in accordance with Test Method C 418, with the following changes in procedure:

5.3.2.1 The sand shall be a natural silica sand from Ottawa, IL, graded to pass a No. 50 (300- μ m) sieve and retained on a No. 100 (150- μ m) sieve.

5.3.2.2 The test shall be run on dry brick.

5.3.2.3 The duration of the test shall be 2 min.

5.3.2.4 The rate of sand flow shall be 400 g/min.

5.3.2.5 The volume loss shall be determined by filling the abraded depression with modeling clay, striking off level with the original surface of the brick, and removing and weighing the modeling clay. The volume loss shall be calculated from the bulk density of the modeling clay. The bulk density should be determined on each lot of modeling clay. An alternative method of determining the weight of clay used in filling the sandblast cavity is to determine the weight of the modeling clay sample before and after filling the cavity.

5.4 *Skid Resistance*—When specified, the units shall be tested for skid resistance in accordance with Test Method E 303.

5.5 *Coring*—The brick shall be without core holes or other perforations.

5.6 *Chips or Cracks*—The brick shall be free of chips or cracks larger than those listed in this specification that would significantly impair the performance of the system.

6. Efflorescence

6.1 When specified, the units shall be tested for efflorescence in accordance with Test Methods C 67. The units shall be sampled at the place of manufacture.

7. Dimensions and Permissible Variations.

7.1 The size of the brick shall be as specified by the purchaser.

7.2 The minimum thickness of the unit shall depend upon the classification:

7.2.1 *Type R*—2 1/4 in. (57.2 mm).

7.2.2 *Type F*—2 3/8 in. (66.7 mm).

7.3 When chamfers are specified by the purchaser, the dimensions required in 7.2 are exclusive of chamfers. When lugs are specified by the purchaser, the size of the brick and its associated dimensional tolerances shall include the lugs. The lugs shall project no greater than 1/4 in. (3.2 mm), unless otherwise specified.

7.4 In the sample of units, no unit shall depart from the specified size by more than the individual tolerance for the application specified as prescribed in Table 3. Type F paving brick shall conform to Application PX only.

7.5 Tolerances for distortion or warpage of surfaces or edges intended to be exposed in use from a plane surface and from a straight line, respectively, shall not exceed the maximum for the application specified as prescribed in Table 4. Type F paving brick shall conform to Application PX only.

8. Visual Inspection

8.1 Other than chips, the brick shall be free of cracks or other imperfections detracting from the appearance of a designated sample when viewed from a distance of 20 ft (6 m).

8.2 The parts of the brick that will be exposed in place

TABLE 3 Tolerances on Dimensions

Dimension, in. (mm)	Permissible Variation, max. \pm in. (\pm mm)		
	Application PS	Application PX	Application PA
3 (76) and under	1/8 (3.2)	1/16 (1.6)	no limit
Over 3 to 5 (76 to 127)	3/16 (4.7)	1/8 (2.4)	no limit
Over 5 to 8 (127 to 203)	1/4 (6.4)	1/8 (3.2)	no limit

TABLE 4 Tolerances on Distortion

Specified Dimension, in. (mm)	Permissible Distortion, max. in. (mm)		
	Application PS	Application PX	Application PA
8 (203) and under	3/32 (2.4)	1/16 (1.6)	no limit
Over 8 (203) to 12 (305)	1/8 (3.2)	3/32 (2.4)	no limit
Over 12 (305) to 16 (406)	1/4 (4.0)	1/8 (3.2)	no limit

TABLE 5 Maximum Permissible Extent of Chippage from Edges and Corners

Application	Chippage, in. (mm) in from	
	Edge	Corner
PS and PX	3/16 (7.9)	1/8 (12.7)
PA	no limit	no limit

all be free of chips that exceed the limits given in Table 5. The cumulative length of chips on the exposed face of a single unit shall not exceed 10 % of the perimeter of the exposed face of the brick.

8.3 Unless otherwise agreed upon in writing by the purchaser and the seller, a delivery shall contain not more

than 5 % brick that do not meet the combined requirements of Tables 3, 4, and 5, including broken brick.

9. Keywords

9.1 brick; fired masonry units; pavement surfaces

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IX. MISCELLANEOUS DETAILS

TOWN OF ADDISON
TESTING REQUIREMENTS

Trench Safety

Engineered trench safety plans required

Sanitary Sewer

Air test, 4 psi - no loss

Pipe size	Time
six inches	four minutes
eight inches	six minutes
ten inches	eight minutes

Mandrell - 5 $\frac{3}{8}$ maximum deflection

TV Tape - VHS format

Water

Hydrostatic - 200 psi for four hours

Maximum allowable loss = $\frac{\text{Diameter pipe} \times 25 \times \text{length}}{8} \div 5280$

Coliform test

Storm Sewer

Visual only

Trench Compaction

Test every three hundred feet of trench/lift (8" loose) to 95% compaction, 0 to 3 $\frac{3}{8}$ moisture (OPTIMUM)

Street Compaction

Three tests every two thousand square yards of base area

Two tests every subgrade materials change minimum

Concrete

Batch design required and approved by Town

Three cylinders per one hundred cubic yards (3,000 psi in twenty-eight days)

Pours of less than one hundred cubic yards may require cylinders - at direction of Inspector

Slump testing and air entrainment at direction of Inspector

Cores to verify depth - three per two thousand square yards

Sealant

Design approved by The Town of Addison

As Built

Must be dated

Must be sealed

Must state "as built" or "record set"

Must be dimensioned

August 16, 1991

Sample sign.



Substrate shall be flat blade (non-extruded) .080 aluminum. Lettering is five (5) inch F.H.W.A. series "B" upper and lower case. Suffix and numbering is two and one-half (2 1/2) inch F.H.W.A. series "B" upper and lower case. Background shall be 3-M High Intensity Blue. All lettering and numbers shall be 3-M High Intensity White. Length of sign shall be proportionate to length of street name.

Signs shall be mounted on Unistrut-Telespar. Pole shall be one and three-quarter (1 3/4) inches square by twelve (12) feet in length. Pole base shall be constructed of Unistrut-Telespar. Pole base is two (2) inches square by thirty six (36) inches long and reinforced by a sleeve two and one-quarter (2 1/4) inches square by eighteen (18) inches long. All Unistrut-Telespar pole and base assemblies are composed of 12 ga. galvanized steel. Regulatory and warning signs shall be mounted with the bottom of the signs at a minimum height of seven (7) feet and shall be mounted using Unistrut-Telespar drive rivets.

Street name signs shall be mounted using Unistrut-Telespar sign mounting cap (Unistrut Part Number 850FL175C) and, where applicable, mounting cross street names shall be mounted with a cross piece (Unistrut Part Number 850FL90X).

No borders of any kind are used.

APPENDIX A

TEXAS SALES AND USE TAX EXEMPTION CERTIFICATE

Name of purchaser, firm or agency	
Address (Street & number, P.O. Box or Route number)	Phone (Area code and number)
City, State, ZIP code	

I, the purchaser named above, claim an exemption from payment of sales and use taxes for the purchase of taxable items described below or on the attached order or invoice form:

Seller: _____

Street address: _____ City, State, ZIP code: _____

Description of items to be purchased or on the attached order or invoice:

Purchaser claims this exemption for the following reason:

TAX EXEMPT USE BY POLITICAL SUBDIVISION OF THE STATE OF TEXAS

I understand that I will be liable for payment of sales or use taxes which may become due for failure to comply with the provisions of the Tax Code, Limited Sales, Excise, and Use Tax Act, Municipal Sales and Use Tax Act, Sales and Use Taxes for Special Purpose Taxing Authorities, County Sales and Use Tax Act, County Health Services Sales and Use Tax and the Texas Health and Safety Code: Special Provisions Relating to Hospital Districts, Emergency Services Districts, and Emergency Services Districts in counties with a population of 125,000 or less.

I understand that it is a misdemeanor to give an exemption certificate to the seller for taxable items which I know, at the time of purchase, will be used in a manner other than that expressed in this certificate and that upon conviction may be fined not more than \$500 per offense.

SAMPLE

Purchaser sign here	Title	Date
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Note: This certificate cannot be issued for the purchase, lease or rental of a motor vehicle.

THIS CERTIFICATE DOES NOT REQUIRE A NUMBER TO BE VALID

Sales and Use Tax "Exemption Numbers" or "Tax Exempt" Numbers do not exist.

This certificate should be furnished to the supplier. Do not send the completed certificate to the Comptroller of Public Accounts.

HUITT-ZOLLARS

Huitt-Zollars, Inc.
3131 McKinney Ave., Suite 600, Dallas, TX 75204-2489

David E. Meyers, P.E.
Associate

Ph 214/871-3311 Fax 214/871-0757 davidm@huitt-zollars.com