

TOWN OF ADDISON

**CONSTRUCTION SPECIFICATIONS
AND CONTRACT DOCUMENTS**

**ADDISON FIRE STATION NO. 1
DRAINAGE IMPROVEMENTS**

Prepared By

**GBW Engineers, Inc.
1919 S. Shiloh Road, Suite 500
Garland, Texas 75042**

June, 2002

TRANSMITTAL OF ADDENDUM

INSTRUCTIONS:

Acknowledge receipt of Addenda in Proposal, on outer envelope of bid **AND WITH THE FORM BELOW FAXED TO (972) 450-7096** upon receipt.

Addendum Acknowledgment FAX to (972) 450-7096

I Acknowledge the receipt of Addendum No. 1

Town of: ADDISON, TEXAS

Project Name: 02-38 Fire Station 1 Drainage Improvements

By Facsimile Transmission on this date: July 30, 2002

Contractor's Signature

Company Name

E-Mail Address: _____

**"PLEASE SIGN & FAX THIS PAGE BACK TO TOWN OF ADDISON"
(as verification that you received this Fax)
972-450-7096**

Total Number of Fax Pages: 4

TOWN OF ADDISON
Bid 02-38
FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS
ADDENDUM NO. 1

This Addendum forms a part of the Contract Documents and Specifications. Acknowledge receipt of the Addendum in the space provided in Section PF, Proposal Summary Page PF-2, and on the outer envelope of Bid proposal. Failure to acknowledge receipt of this Addendum may subject Bidder to disqualification.

Bid Closing Date: **August 8, 2002 at 2:00 p.m.**

**** PLEASE NOTE THE PROPOSAL BID DUE DATE IS CHANGED FROM WEDNESDAY, JULY 31, 2002 TO THURSDAY, AUGUST 8, 2002.**

Bid Submittal Address: Ms. Minok Suh, Purchasing Coordinator
Town of Addison Finance Building
5350 Belt Line Road
Addison, Texas

No late bids will be accepted.

CONTRACT DOCUMENTS

1. Section AB: Advertisement for Bids and Section PF: Proposal Form

 1. Page AB-2 and Page PF-3:

 The proposal bid date is hereby changed from July 31, 2002 to Thursday, August 8, 2002 at 2:00 p.m.

2. Section MP: Measurement and Payment

Item 7. Remove/Replace Existing Concrete Channel or Flume

 Add the following language:

 “Install Neenah grate R-4990-DX (14-inch wide) or approved equal. Delete Neenah grate (Type A, 15x36, R-4575A).”

 “**This pay item shall include all excavation and trenching for the flume.**”

Item 8. Sidewalk and Driveway Replacement

 Add the following language:

 “**The unit price bid for sidewalk replacement shall include the cost of replacing the inlaid brick to match the existing brick type and pattern.**”

Item 10. Tree Protection and Trimming

Add the following language:

“Tree removal shall be permitted, with prior approval from the Town of Addison, for those trees that fall within the project work zone.”

3. Section PF: Proposal Form

Item No. 102

Reword item description to read as follows:

“Unclassified excavation **for swale**, including rock”

Item No. 107

Reword item description to read as follows:

“Furnish and install 4" thick reinforced concrete sidewalk, 4000 psi @ 28 days, **including inlaid brick to match existing type and pattern**”

Item No. 108

Reword item description to read as follows:

“Furnish and install reinforced concrete flume, 4000 psi @ 28 days, including **Neenah grate R-4990-DX (14" wide)** and patio curb”

4. Construction Plans; Sheets 1 of 2 and 2 of 2

Make the following revisions:

“Replace the 5-foot wide maximum construction work zone with a 10-foot wide construction work zone. Prior approval for additional work zone width must be obtained from the Town of Addison. The contractor shall not be required to replace the landscaping and trees that are removed within the construction zone. The work zone shall be graded to provide positive drainage to the flume and left in a loose earthen state. No seed or sod is required. ”

“There is an irrigation system in the work zone. Plans of this system, which the contractor must restore under Bid Item No. 115, are available for review by the contractors prior to the bid opening at the Town of Addison Service Center, 16801 Westgrove Drive, Addison, Texas.”

“Revise the width of the concrete flume grate from 15" to 14". The concrete ledges on which the grate sits shall be revised from 2" to 1.5".

“The length of the concrete flumes shall be adjusted as outlined below such that standard grate lengths of 18" and 24" may be used exclusively:

1. Flume A:

Revise P.I. Sta. 0+07.76 to read Sta. 0+08

Revise P.I. Sta. 0+14.62 to read Sta. 0+14

Revise Sta. 0+36.90 to read Sta. 0+36

2. Flume B:

- 3. Flume C:
 - Revise Sta. 0+38.06 to read Stat 0+38
 - Revise Sta. 0+52.68 to read Sta. 0+52
- 4. Flume D:
 - Revise P.I. Sta. 0+11.10 to read Sta. 0+12
 - Revise P.I. Sta. 0+15.20 to read Sta. 0+16
 - Revise P.I. Sta. 0+45.82 to read Sta. 0+46
 - Revise P.I. Sta. 0+49.82 to read Sta. 0+50
 - Revise Sta. 0+59.28 to read Sta. 0+60

Add the following notes:

“The contractor may elect to tunnel under the brick wall at Sta. 0+57 on Line B.”

“The inlets and junction boxes may be precast or cast-in-place.”

“A monolithic pour is not required for the concrete flume.”

Revise Typical Irrigation No. 1 to read as follows:

“The contractor may elect not to hire a licensed irrigator for the work covered in Item No. 115. However, in this event, the contractor must contact Ron Lee with the Town of Addison to inspect and approve the repaired irrigation system before it is covered over with soil.”

END OF ADDENDUM

The undersigned bidder hereby certifies that the Addendum No. 1 has been incorporated in the contract and if accepted becomes part of the contract.

BY: _____

Date: _____

TOWN OF ADDISON

**CONSTRUCTION SPECIFICATIONS
AND CONTRACT DOCUMENTS**

**ADDISON FIRE STATION NO. 1
DRAINAGE IMPROVEMENTS**

Prepared By

**GBW Engineers, Inc.
1919 S. Shiloh Road, Suite 500
Garland, Texas 75042**

June, 2002

TOWN OF ADDISON

**CONSTRUCTION SPECIFICATIONS
AND CONTRACT DOCUMENTS**

**ADDISON FIRE STATION NO. 1
DRAINAGE IMPROVEMENTS**

Prepared By

**GBW Engineers, Inc.
1919 S. Shiloh Road, Suite 500
Garland, Texas 75042**

June, 2002

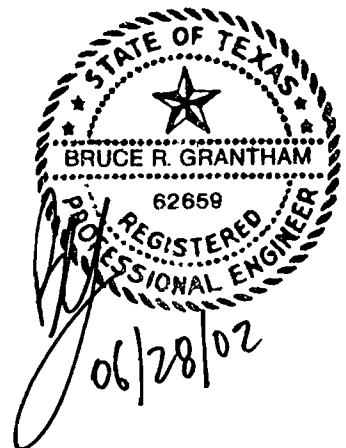


TABLE OF CONTENTS

Section AB	Advertisement for Bids
Section IB	Instruction to Bidders
Section MP	Measurement and Payment
Section PF	Proposal Form
Section CA	Contract Agreement
Section PrB	Performance Bond
Section PyB	Payment Bond
Section MB	Maintenance Bond
Section BP	Contractor's Affidavit of Bills Paid
Section GP	General Provisions
Section SP	Special Provisions
Section T	Technical Specifications
Appendix	Sample of Texas Sales Tax Exemption Certificate
	<ul style="list-style-type: none">• "Standard Specifications for Public Works Construction, Third Edition, North Central Texas Council of Governments" (Separate document not furnished).

SECTION AB

ADVERTISEMENT FOR BIDS

SECTION AB
ADVERTISEMENT FOR BIDS
BID NO. 02-38

1. Sealed bids addressed to the Town of Addison, Texas, for the Construction of Paving, Storm Drainage Improvements for ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS for the Town of Addison, Texas, hereinafter called "Town", in accordance with the plans, specifications and contract documents prepared by GBW Engineers, Inc. (GBW), will be received at the office of Ms. Minok Suh, Purchasing Coordinator, Finance Building, 5350 Belt Line Road, Addison, Texas until **2:00 p.m. on the 31th day of July, 2002**. 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 **BID NO. 02-38 ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS**.
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 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 ten (10) business days after notice of award of contract to him.
4. Plans, specifications and bidding documents may be secured beginning at 8:00 a.m. on the 5th day of July, 2002 from Ms. Minok Suh, Purchasing Coordinator; 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 \$40.00 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 Ms. Minok Suh, (972) 450-7091. For information on the work to be performed, call Jim Pierce, P.E., Assistant Director of Public Works, (972) 450-2871 or Bruce R. Grantham, P.E. GBW Engineers, Inc., (972) 840-1916.
9. This project consists of providing Storm Drainage improvements as shown on the plans and in accordance with these specifications.
10. A prebid conference shall be held at 10:00 a.m. on the 23rd day of July, 2002 at the Addison Service Center, 16801 Westgrove Drive, Addison, Texas.

SECTION IB

INSTRUCTION TO BIDDERS

SECTION IB
INSTRUCTIONS TO BIDDERS

- A. PROJECT:** ADDISON FIRE STATION NO. 1 DRAINAGE 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 Storm Drainage improvements as shown on the plans and in accordance with these 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 registered mail, fax, 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:** The completion time of the project will be set through the bidding technique used in the Proposal Form. A more detailed explanation of the bidding technique is given in the Special Provisions.
- 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. In the case of a discrepancy between a unit price and its extension, the unit price will govern. Failure to submit all requested information will make a bid irregular and subject to rejection. Bids shall be signed with name typed or printed below signature, and, if a partnership, give full name of all partners. Where bidder is a corporation, bids must be signed with the legal name of the corporation followed by the name of the state of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.

NOTE: A COMPUTER GENERATED PROPOSAL FORM MAY BE USED IN LIEU OF THE ENCLOSED FORMS. THE FORM SHALL BE 8 1/2" 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: SPREADSHEET OPTION IS FOR THE CONVENIENCE OF THE BIDDER, NO WORDING IN THE SPREADSHEET SHALL MODIFY OR AMEND THE WORDING IN THE BID PROPOSAL OR PLANS.

THE UNIT PRICE ON THE FORM SHALL BE THE PRICE OF THE ITEM, AND ERRORS THAT MAY BE PRESENT IN THE PRINTOUT WILL NOT BE RECOGNIZED AS AN OPPORTUNITY TO REVISE THE PROPOSAL. THE SUMMARY SHEET INCLUDED IN THIS BID DOCUMENT SHALL BE UTILIZED FOR SUMMARIZING THE BID.

THE 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. DESCRIPTION & UNIT PRICE IN WORDS
3. UNIT OF MEASURE
4. UNIT PRICE
2. ESTIMATED QUANTITY
3. AMOUNT BID

K. SUBMITTAL OF BIDS: Sealed proposals will be received at the time, date and place stated in the Advertisement for Bids. Proposals shall be made on unaltered Proposal Forms furnished by the 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:

ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS

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 "Change or Modification of Contract".

- P. EXECUTION OF THE CONTRACT:** The successful bidder will be required to enter into a contract with the Owner within ten (10) days of notice by the Owner that his bid has been accepted. Failure to enter into a contract within the established time limit shall be considered grounds for forfeiture of the bid bond.
- Q. CONSTRUCTION SCHEDULE:** It is the Owner's desire to have the project completed and operational in as short a time as possible. The number of calendar days for completion of the project will begin with the date specified in the Notice to Proceed. The Notice to Proceed will be issued in a manner to facilitate a smooth construction of the project. The Contractor shall begin construction within five (5) calendar days of the issuance of the Notice to Proceed.
- R. 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.
- S. 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.)
- T. BID SECURITY:** Bids shall be accompanied by a cashier's check or certified check upon a national or state bank in an amount not less than five percent (5%) of the total maximum bid price payable without recourse to the Town of Addison, or a bid bond in the same amount from a surety company licensed to do business in the State of Texas as a guarantee that the bidder will enter into a contract and execute a Performance Bond and Payment Bond within ten (10) calendar days after notice of award of contract to him. Such checks or bid bonds will be returned to all except the three lowest bidders within three (3) days after the opening of bids, and the remaining checks or bid bonds will be returned promptly after the Owner has made an award of contract, or, if no award has been made within thirty (30) calendar days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.
- U. 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.
- V. CONSTRUCTION STAKING:** Construction staking and re-staking will not be provided by the Owner. Benchmarks and Horizontal Control are shown on the plans. There is no separate bid item for staking, therefore, the contractor must include value for staking in the various bid items as subsidiary to the contract. Any staking or re-staking that is required shall be the responsibility of the Contractor and shall be at no cost to the Owner.
- W. 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

(3rd 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.

X. 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.

SECTION MP

MEASUREMENT AND PAYMENT

MEASUREMENT AND PAYMENT

1. **SCOPE:**

This section covers methods of measurement and payment for items of Work under this Contract.

2. **GENERAL:**

The total Contract Price shall cover all Work required by the Contract Documents. All costs in connection with the proper and successful completion of the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and lump sum prices bid. All Work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of Contractor and all costs in connection therewith shall be included in the prices bid.

3. **ESTIMATED QUANTITIES:**

All estimated quantities stipulated in the Bid Form or other Contract Documents are approximate and are to be used only (a) as a basis for estimating the probable cost of the Work and (b) for the purpose of comparing the bids submitted for the Work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished. Contractor agrees that it will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts.

4. **CLEARING AND GRUBBING:**

Clearing and grubbing of designated construction areas shall include all trees, brush, etc., in accordance with N.C.T.C.O.G. Item 3,2.; however, the Contractor shall obtain prior approval from City inspection staff prior to any tree removal. The Contractor may be required to adjust the alignment of residential services to avoid a conflict with trees. All clearing and grubbing shall be considered subsidiary to other bid items.

5. **EXCAVATION AND TRENCHING:**

Except where otherwise specified, the unit or lump sum price bid for each item of Work which involves excavation, trenching or backfill shall include all costs for such Work, including transportation and disposal of excavated material that will not be used as backfill. No direct payment shall be made for excavation, trenching, or backfill of existing material, including rock. All excavation and trenching shall be unclassified as to materials which may be encountered; in addition, trenches shall be unclassified as to depth.

5.01 **Junction Box and Inlet Excavation:**

All excavation work required for junction boxes or inlets, not otherwise paid for as trenching, shall be considered to be a subsidiary obligation of Contractor and the cost of such excavation shall be included in the prices bid for the manholes or structures.

5.02 **Clean-up and restoration, Reseeding and Resodding**

No separate payment shall be made in connection with clean-up and restoration, as specified or required. All costs in connection with clean-up and restoration shall be included in the cost of other pay items.

5.02A **Limits of Resodding:**

The Contractor shall be required to resod the areas disturbed during construction. Payment shall be made for resodding the areas shown on the plans. Any other areas disturbed during construction, shall be resodded at the Contractor's expense.

6. **STORM SEWERS**

The storm sewer will be measured for payment on a horizontal plane after installation, through all line bends to the new inlet face. The unit price bid for pipe of each designated kind and size shall cover all installation and shall include all trenching and backfill, pipe, fittings, jointing materials, pipe laying, pipe embedment, including furnishing embedment materials, acceptance testing and all other appurtenant work necessary to furnish and install the sewer.

7. **REMOVE/REPLACE EXISTING CONCRETE CHANNEL OR FLUME:**

Payment for removal and replacement of concrete pavement and curb shall be based on the unit price bid to cover cutting, removal, and disposal of old pavement and curb, new concrete pavement and curb, and all incidentals required to restore concrete pavement and curb to original or better than original conditions, and all extra compaction effort required for backfill beneath pavement.

The contractor shall take whatever measures are necessary to avoid damaging the surface of the existing building foundation when the flume curb is removed. A smooth finish must be provided on the portion of the foundation which will be exposed once the curb is removed.

Payment for the 6-inch reinforced concrete flume shall be measured as shown on the plans and shall include the Neenah grate (Type A, 15x36, R-4575-A or approved equal), the patio curb (for flume 'A') and all incidentals.

8. **SIDEWALK AND DRIVEWAY REPLACEMENT:**

Sidewalk and driveway replacement shall be paid for based on the unit price bid to cover removal and disposal of old sidewalk and driveway, construction of new sidewalk and driveway, and all other incidentals necessary to restore sidewalk and/or driveway to original or better than original conditions.

9. **VIDEO TAPE OF WORK SITE:**

The Contractor shall be required to video tape the entire project work site prior to beginning construction. A copy of the video tape shall be furnished to the City prior to the first pay request. (No separate pay item).

10. **TREE PROTECTION AND TRIMMING**

The Contractor may elect to trim trees and shrubs in accordance with the requirements of Technical Specification 02231, if it is deemed necessary to do so in order to facilitate the construction. Trimming shall be limited to those trees and shrubs that fall within the construction work zone designated on the plans, unless prior approval is obtained from Town of Addison staff.

SECTION PF

PROPOSAL FORM

SECTION PF
PROPOSAL FORM

_____, 20____

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: _____

PROPOSAL FORM

Place _____

Date _____

Proposal of _____,

a Corporation

organized and existing under the laws of the State of _____.

OR

Proposal of _____,

a partnership consisting of _____

and _____.

OR

Proposal of _____,

an individual trading as _____.

OR

Proposal of _____,

a Joint Venture consisting of _____

and _____.

TO: Town of Addison, Texas

Sealed bids addressed to the Town of Addison, Texas, for the Construction of Paving, Storm Water, Water, Signalization and Streetscape Improvements for ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS for the Town of Addison, Texas, hereinafter called "Town", in accordance with the plans, specifications and contract documents prepared by GBW Engineers, Inc., will be received at the office of Ms. Minok Suh, Purchasing Coordinator, Finance Building, 5350 Belt Line Road, Addison, Texas until **2:00 p.m. on the 31st day of July, 2002**. Bids received by the appointed time will be opened and read aloud. Any bids received after stated time will be returned unopened.

The undersigned Bidder, having visited the site of the work, having examined the Plans, Specifications, and other Contract Documents, including all Addenda, and being familiar with all of the conditions relating to the proposed project, hereby proposes to furnish all material, supplies, equipment, and appliances specified for the project and to furnish all labor, tools, equipment and incidentals to complete the work in accordance with the Specifications, and other Contract Documents at and for the unit prices proposed herein:

The undersigned Bidder agrees that this bid may not be withdrawn for a period of sixty (60) days after the opening of the bids.

In submitting this bid, it is understood by the undersigned Bidder that the right is reserved by the Town of Addison to reject any and all bids.

Name of Bidder

By: _____
(Signature)

(Print Name and Title)

Witness: _____
(Signature)

(Office Address of Bidder)

Bidder's Tax I.D. No. or Employer No. _____

SEAL (If Bidder is a Corporation)

NOTES: Sign in ink. Do not detach.

ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
101	Mobilization	L.S.		1	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per lump sum				
102	Unclassified excavation, including rock	C.Y.		10	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per cubic yard				
103	Full depth sawcut existing concrete	L.F.		250	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per linear foot				
104	Remove and dispose of existing concrete sidewalk	S.Y.		41	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per square yard				
105	Remove and dispose of existing concrete flume and metal cover	S.Y.		50	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per square yard				
106	Remove and dispose of existing brick landscape wall	L.F.		14	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per linear foot				

ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
107	Furnish and place 4" thick reinforced concrete sidewalk, 4000 psi @ 28 days	S.Y.		43	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per square yard				
108	Furnish and install reinforced concrete flume, 4000 psi @ 28 days, including Neenah Type A, 15x36, R-4575-A grates and patio curb	L.F.		194	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per linear foot				
109	Furnish and install 12" HDPE pipe (AASHTO M294 Type S)	L.F.		185	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per linear foot				
110	Furnish and install reinforced concrete grate inlet 4000 psi @ 28 days, including Neenah type R-4342 grate	EA.		1	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per each				
111	Furnish and install reinforced concrete junction box, 4000 psi @ 28 days	EA.		3	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per each				
112	Furnish and install brick landscape wall to match existing wall	L.F.		26	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per linear foot				

ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
113	Furnish and install block sod within designated work zone	S.Y.		95	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per square yard				
114	Adjust existing cleanouts	EA.		2	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per each				
115	Inspect, maintain, repair and test irrigation system	L.S.		1	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per lump sum				
116	Trench safety	L.F.		75	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per linear foot				
117	Lower existing water line	L.S.		1	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per lump sum				
118	Trim and maintain shrubs and trees within designated work zone	L.S.		1	
	Complete in Place, for the Sum of _____ Dollars and _____ Cents per lump sum				

ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS

ITEM NO.	DESCRIPTION & UNIT PRICE IN WORDS	UNIT	UNIT PRICE	EST. QTY.	AMOUNT BID
119	Plug existing 12" line	EA.		2	
	Complete in Place, for the Sum of <hr style="width: 80%; margin-left: 0;"/> _____ Dollars and _____ Cents per each				

SECTION CA

CONTRACT AGREEMENT

SECTION CA
CONTRACT AGREEMENT

STATE OF TEXAS

COUNTY OF DALLAS

THIS AGREEMENT is made and entered into this ____ day of _____, 20____, by and between the Town of Addison, of the County of Dallas and State of Texas, acting through its Mayor or City Manager, thereunto duly authorized so to do, Party of the First Part, hereinafter termed the OWNER, and _____, of the City of _____, County of _____, State of _____, Party of the Second Part, hereinafter termed CONTRACTOR.

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

Addison Fire Station No. 1 Drainage Improvements

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 ten (10) calendar days after the date of written notice shall have been given to him, and to complete all work within the number of days submitted in the proposal form 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 THEREOF, 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 Addison Fire Station No. 1 Drainage Improvements Contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Signed: _____

Corporate Seal

SECTION PrB

PERFORMANCE BOND

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 The Town of Addison, Texas, 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 The Town of Addison, Texas, 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 _____ 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 _____, 20 ____.

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 _____, 20___.

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 Work Construction, North Central Texas Council of Governments (3rd Edition, 1998), under Part I, "General Provisions", Items 1.0 through 1.63 inclusive, as amended or supplemented and except as modified by the Special Provisions.
2. The Town of Addison will require the contractor to obtain "Umbrella" Liability Insurance, as described in 1.26.3 of the Standard Specifications for Public Work Construction, North Central Texas Council of Governments (3rd Edition, 1998), under Part I, "General 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**

GBW Engineers, 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 Ms. Minok Suh, Purchasing Coordinator, Finance Building, 5350 Belt Line Road, Addison, Texas, (972) 450-7091.

4. **COPIES OF PLANS FURNISHED**

Three (3) 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 Drawing. 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 inspectors 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. The cost of this will be the Contractor's expense and shall not be paid for by the Town of Addison.

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 Addison Fire Station No. 1 Drainage Improvements.

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 by the Bidder in the Proposal Form. The time shall commence on the date specified in the Notice to Proceed. The Notice to Proceed shall consist of a written order 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 three (3) 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, or by separate instrument, 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 daily, 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. USE OF EXPLOSIVES

Use of explosives will not be allowed.

30. 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.

31. 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.

32. REMOVALS, ADJUSTMENTS AND REPLACEMENTS

Existing pavements, driveways, curbs, gutters, sidewalks, etc., to be removed to facilitate the construction of the improvements shall be broken up and disposed of. Care shall be exercised to leave a neat, uniform edge or joint at the excavation limits or sections removed where only portions are to be removed. The Engineer will designate the limits to be removed. Where pavements, driveways, curbs, gutters, sidewalks, etc., shall be replaced, then said replacements shall be to the standard of the previously removed portion or better. Re-sawing of damaged edges will be at the Contractor's expense.

Existing structures such as manholes, inlets, cleanouts, valve boxes, etc. which are not the property of a private firm or company, or an individual required to move their own property,

shall be adjusted, altered or reset to the required elevation and alignment. New materials and workmanship necessary shall conform to the requirements of these Specifications covering the particular Work. Salvaged materials in good condition may be used in rebuilding such structures, provided the materials are thoroughly cleaned before their use. These items shall be subsidiary to other bid items unless quantified in the proposal as a separate bid item.

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

33. TOWN OF ADDISON APPROVAL

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

34. 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.

35. 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.

36. FINAL ACCEPTANCE OF WORK

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

37. WORK AREA

Contractor shall restrict his construction activity to the project limits.

38. 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.

39. 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.

40. SAMPLES AND TESTS OF MATERIALS

The Contractor shall designate and pay a recognized testing laboratory, approved by the Owner, to perform all concrete mix 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 (3rd Edition, 1998) 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. **All costs for testing and lab work shall be paid by the Contractor and will be subsidiary to other bid items.** Item 5.8.6.(c), paragraph two in the NCTCOG specifications will be modified so that five (5) test cylinders will be taken. This will allow for cylinders to be broken at 7, 28, and 56 days.

41. 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.

42. 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.

43. 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.

44. CONSTRUCTION STAKING

Construction staking will not be provided by the Owner or Engineer. This item will be performed by the Contractor and shall be subsidiary to other bid items. The Contractor will be responsible for maintaining stakes. If re-staking is required for any reason, it will be the Contractor's responsibility, including associated costs.

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

- a. Heading to include date, contract number, project name, surveying firm, contractor, and construction plan sheet number.
- b. Location, description of street/line and street/line name, number, letter, etc. designation.
- c. Benchmark Data: Location, description, and elevation.
- d. Slope or percent of grade of each curb line or utility line.
- e. Stations at 50 foot intervals and including all PC, PT, PI, PVC, PVI, PVT, PRC, grade changes, etc.
- f. Offset description including distance to center lines 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.

45. 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. Repair shall comply with applicable specifications elsewhere.

46. IRRIGATION AND SPRINKLER REPAIR

The contractor shall maintain all existing irrigation systems within the limits of the project during the duration of the contract. The contractor is responsible for the repair or replacement of any damage to irrigation lines, valves, controllers, sprinklers, wiring and appurtenances which are damaged during construction. This repair is subsidiary to the

various other items bid. The contractor will be responsible for any vegetation that dies as a result of damage to the irrigation system and replace it with equal vegetation at his own cost.

47. 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."

48. 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."

49. 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.

PREVAILING WAGE RATES

GENERAL DECISION TX010045 03/02/2001 TX45

Date: March 2, 2001

General Decision Number TX010045

Superseded General Decision No. TX000045

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

<u>Modification Number</u>	<u>Publication Date</u>
0	03/02/2001

COUNTY(ies):

COLLIN	GRAYSON	ROCKWALL
DALLAS	JOHNSON	TARRANT
DENTON	KAUFMAN	WICHITA
ELLIS	PARKER	

SUTX2043A 03/26/1998

<u>Rates</u>	<u>Fringes</u>
AIR TOOL OPERATOR	\$ 9.00
ASPHALT RAKER	9.55
ASPHALT SHOVELER	8.80
BATCHING PLANT WEIGHER	11.51
CARPENTER	10.30

CONCRETE FINISHER-PAVING	10.50
CONCRETE FINISHER-STRUCTURES	9.83
CONCRETE RUBBER	8.84
ELECTRICIAN	15.37
FLAGGER	7.55
FORM BUILDER-STRUCTURES	9.82
FORM LINER-PAVING & CURB	9.00
FORM SETTER-PAVING & CURB	9.24
FORM SETTER-STRUCTURES	9.09
LABORER-COMMON	7.32
LABORER-UTILITY	8.94
MECHANIC	12.68
OILER	10.17
SERVICER	9.41
PAINTER-STRUCTURES	11.00
PIPE LAYER	8.98
BLASTER	11.50
ASPHALT DISTRIBUTOR OPERATOR	10.29
ASPHALT PAVING MACHINE	10.30
BROOM OR SWEEPER OPERATOR	8.72
BULLDOZER	10.74
CONCRETE CURING MACHINE	9.25
CONCRETE FINISHING MACHINE	11.13
CONCRETE PAVING JOINT MACHINE	10.42
CONCRETE PAVING JOINT SEALER	9.00
CONCRETE PAVING SAW	10.39
CONCRETE PAVING SPREADER	10.50
SLIPFORM MACHINE OPERATOR	9.92
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL	11.04
FOUNDATION DRILL OPERATOR CRAWLER MOUNTED	10.00
FOUNDATION DRILL OPERATOR TRUCK MOUNTED	11.83
FRONT END LOADER	9.96
MILLING MACHINE OPERATOR	8.62
MIXER	10.30
MOTOR GRADER OPERATOR FINE GRADE	11.97
MOTOR GRADE OPERATOR	10.96
PAVEMENT MARKING MACHINE	7.32
ROLLER, STEEL WHEEL PLANT-MIX PAVEMENTS	9.06
ROLLER, STEEL WHEEL OTHER FLATWHEEL OR TAMPING	8.59

ROLLER, PNEUMATIC, SELF-PROPELLED	8.48
SCRAPER	9.63
TRACTOR-CRAWLER TYPE	10.58
TRACTOR-PNEUMATIC	9.15
TRAVELING MIXER	8.83
WAGON-DRILL, BORING MACHINE	12.00
REINFORCING STEEL SETTER PAVING	13.21
REINFORCING STEEL SETTER STRUCTURES	13.31
STEEL WORKER-STRUCTURAL	14.80
SPREADER BOX OPERATOR	10.00
WORK ZONE BARRICADE	7.32
TRUCK DRIVER-SINGLE AXLE LIGHT	8.97
TRUCK DRIVER-SINGLE AXLE HEAVY	9.02
TRUCK DRIVER-TANDEM AXLE SEMI TRAILER	8.77
TRUCK DRIVER-LOWBOY/FLOAT	10.44
TRUCK DRIVER-TRANSIT MIX	9.47
TRUCK DRIVER-WINCH	9.00
VIBRATOR OPERATOR-HAND TYPE	7.32
WELDER	11.57

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)(v)).

 In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

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

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

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

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

END OF GENERAL DECISION

SECTION T
TECHNICAL SPECIFICATIONS

I. GENERAL

All materials, construction methods, and standard drawings 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" (3rd Edition, 1998), as amended or supplemented. Where conflicts exist, the Town of Addison standards and specifications shall govern.

II. SUPPLEMENTAL SPECIFICATIONS

Amendments to the North Central Texas Council of Governments Standard Specifications for Public Works Construction. Where conflict exists, Town of Addison standards and specifications shall govern.

III. SECTION WR - TOWN OF ADDISON WATER REGULATIONS

IV. SECTION CSS - TOWN OF ADDISON CONSTRUCTION (STREETS & SIDEWALKS)

V. SECTION LS - LANDSCAPE SPECIFICATIONS

02231 - TREE PROTECTION AND TRIMMING

02920 - LAWNS AND GRASSES

02930 - EXTERIOR PLANTS

04810 - UNIT MASONRY ASSEMBLIES

VI. SECTION IRR - IRRIGATION SPECIFICATIONS

VII. SECTION TR - TOWN OF ADDISON TESTING REQUIREMENTS

II. SUPPLEMENTAL SPECIFICATIONS

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

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.

(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.

1.27 - MATERIALS AND WORKMANSHIP; WARRANTIES AND GUARANTEES:

ITEM 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 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 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
ASTM D 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° +/- 20° 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 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. 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)".

5.8.7 Add the following to the end of the section:

Street Headers and Longitudinal Butt Joints will not be separate pay items, but will be considered to be subsidiary to other bid items.

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. In non-paved areas the top of the valve box shall be installed at finish grade with a 24"x24"x6" thick level concrete pad surrounding the top.

6.7.3.(s).(2).(B).(ii) 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/1 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/1. Final flushing shall then be accomplished to remove chlorine concentrations greater than 2.0 mg/1. 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.

8.1 BARRIERS AND WARNING AND/OR DETOUR SIGNS

Add the new paragraphs immediately after section 8.1.

8.1.2 Minimum standards for safeguarding pedestrian and vehicular traffic are contained in the "Manual on Uniform Traffic Control Devices", Federal Highway Administration of the U. S. Department of Transportation and the "Texas Manual on Uniform Traffic -Control Devices", Texas Department of Transportation.

8.8 SAWING

8.8.3.(c) Add the following to the end of this section:

Saw joints after completion of finishing operations as soon as concrete has hardened to the extent necessary for operation of saws without causing chipping of joints or damage to adjacent concrete surfaces.

8.9 PAINTING

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.

8.18 PAVEMENT MARKINGS

Add the following section immediately after paragraph 8.17.

8.18.1 DESCRIPTION:

General. The Contractor shall be responsible for providing and installing all pavement markings necessary to complete the project. Typical details of permanent pavement markings are provided in the construction plans. The Contractor shall begin paint application no less than 45 days and no more than 75 days after the substantial completion of paving activities. Between the time of substantial completion and paint application, the Contractor shall provide temporary pavement markings. The Contractor shall submit the method and material to be used for the provision of temporary pavement markings to the Engineer, in submittal form; for approval. The Contractor shall provide maintenance of temporary pavement markings until such time they are replaced by permanent pavement markings.

- (a) The paint to be used is defined by TXDOT specifications for "waterborne" paint. Paint will be accepted if it is in accordance with the TXDOT Departmental Materials Specification, D-9-8200 as amended. Furnish labor, materials, equipment, transportation, and shop services required for the painting as specified herein or

indicated on the drawings. Where not specifically mentioned, work shall be painted or finished the same as specified for similar items.

- (b) **Quality Assurance:** All paints shall be used in strict accordance with the specifications of the manufacturer and with all other applicable codes and standards. A qualified representative of the paint manufacturer shall be available for consultation at the site, as necessary, to ensure that surface preparation and application of their product is being performed in accordance with their specifications.
- (c) **Product Delivery, Storage and Handling:** Paints shall be in sealed containers that legibly show the designated name, formula or specification number, batch number, color, quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warning and special precautions and name of manufacturer. Provisions will be made for a secure space for the storage of all paint materials and equipment for the exclusive use of the painter who will, in turn, maintain and leave it free from hazards due, for example, to improperly stored rags or thinners.

8.18.2 MATERIALS:

- (a) **General:** All materials shall be applied in strict accordance with manufacturer's directions as printed on the container, and any thinning required shall be done in the manner prescribed and exclusively with the type of reducer recommended by the manufacturer.
- (b) **Reflective Material:** Reflective material shall consist of glass beads added to the surface of the final coat of paint prior to setting, so that the beads shall have proper adhesion. The glass beads shall be in accordance with TXDOT Departmental Material Specification, D-9-8290 as amended. Special care shall be taken with rapid dry paint.

Glass beads shall be mechanically applied at a rate of six to eight pounds of beads per gallon (0.72 to 0.96 kg per litre) of paint. Glass beads shall be applied to pavement markings, curbs and crosswalks by use of a dispensing device developed for this purpose or other methods approved by the Owner.

8.18.3 CONSTRUCTION METHODS:

(a) General:

- (1) 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.
- (2) Pavement markings shall consist of lane striping, stop bars and turn lane markings. Pavement markings shall be as shown on the plans.

(b) Preparation of Surfaces: The Contractor shall be held responsible for the finished appearance and satisfactory completion of his work. And, therefore, he shall not commence any painting until surfaces to be painted are in proper condition in every respect. Drop cloths must be provided by the Contractor to prevent paint material from falling on or marring any adjacent surface not being painted. Any damage resulting from the neglect of this provision will be corrected at the expense of the Contractor. All surfaces shall be clean, free of dirt, grease and any foreign matter that would adversely affect the finished appearance or protective properties of the paint applied. If for any reason the surface cannot be properly prepared by customary cleaning, the condition shall be promptly reported to the Engineer, or the Contractor shall assume the responsibility for rectifying any unsatisfactory finish resulting.

(c) Application:

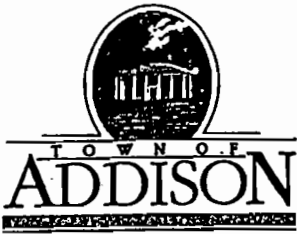
- (1) All materials shall be applied neatly so as to dry uniformly to the color and sheen specified, free from runs, sags, wrinkles, shiners, streaks, and brush marks.
- (2) No exterior painting shall be undertaken at temperatures under 45 degrees F. or immediately following a rain, frost, or dew. Paints other than those specified follow manufacturer's temperature recommendations.
- (3) Any work that does not meet the approval of the Engineer shall be immediately corrected.
- (4) All coats of paint shall be thoroughly dry before applying succeeding coats. All primer and intermediate coats of paint shall be sanded lightly and dusted before succeeding coats of paint are applied. Manufacturer's recommendations must be strictly adhered to.

Clean-up: Upon completion of the work, all misplaced paint, spots or spills shall be removed and work left in a condition acceptable to the Engineer. The painter shall remove from premises all empty containers and all other rubbish and debris resulting from his work and shall leave the entire premises in a neat and clean manner.

END OF SECTION

SECTION WR

TOWN OF ADDISON – WATER REGULATIONS



TOWN OF ADDISON
GENERAL REQUIREMENTS
FOR WATER SERVICE

Domestic Use:

1. All commercial unit applications for domestic use having flow capabilities greater than 160 g.p.m. shall employ a compound type meter conforming to Town of Addison Specifications. Hersey MCTII™ or Neptune Tru/flo™ are the accepted models at this time.
2. All services with flow capabilities less than or equal to 160 g.p.m. shall employ a nutating disc, multi-jet, or turbine meter, less than or equal to 2", conforming to Town of Addison Specifications. Disc meters shall be Hersey400 Series IIST™ or 500 Series IIST™, or Neptune T-10™. Multi-jet shall be Master Meter™. Turbine meters shall be Hersey MVR™ or Neptune HP™ meters.
3. Connection fees:

Lawn Irrigation:

1. All Irrigation services greater than or equal to 1.5" shall employ a turbine, or multi-jet type meter conforming to the above guidelines.
2. Less than 1.5" irrigation service may use turbine, multi-jet, or disc, but turbine or multi-jet meters are preferred.

Fire Service:

1. Less than or equal to 2" shall employ a turbine, or multi-jet meter as described above.
2. Greater than 2" shall employ either a Double Check Detector Assembly, or a Reduced Pressure Zone Detector Assembly. These assemblies shall be approved by the University of Southern California Foundation for Cross Connection Control and Hydraulic Research (USC-FCCCHR). Detector meters shall be Hersey with ER-1 register with Pit-Pak.

07/24/01



Backflow Prevention Assemblies:

1. All water services (except large fire services, see above) shall have the appropriate BPA installed immediately after the meter. If there are space limitations or other considerations that would preclude installation in that location, the BPA may be installed inside a building or other location. There may be no taps or tees into the service between the meter and the BPA. The Town of Addison Public Works Department must approve this prior to installation.
2. All BPA's must be on the most current List of Approved Backflow Prevention Assemblies as published by the USC-FCCCHR.
3. The appropriate BPA will be determined by the Town of Addison Utility Division, using the most current edition of the Manual of Cross-Connection Control as published by USC-FCCCHR as a guideline. Final determination rests with the Town of Addison.
4. The plumber, contractor, and/or owner is responsible for having the BPA tested upon installation and initiation of service by a Tester certified according to TNRCC Rules for the specific type of installation, i.e. Fireline, General, etc. Thereafter, it will be the responsibility of the party paying the water bill, to have the BPA tested as prescribed by the Town of Addison Utility Division based on type of device and Degree of Hazard. Reduced Pressure Zone Assemblies shall be tested at least annually.
5. All BPA's shall be installed according to the most recent edition of the Town of Addison's Standard Operating Procedures Manual.
6. Stainless steel or brass plugs shall be placed in all test cocks after testing. The use of Teflon tape is required to facilitate removal of plugs for future testing of the device. Plumber's putty or pipe dope is unacceptable for this installation.
7. Above ground installation is the preferred method, but if the device is placed in a meter box, the box must be of sufficient size to provide the proper clearances for accessing, testing, and repair of the device. All above ground installations shall be protected from freezing with apparatus designed for such use. *In no case shall Reduced Pressure Zone Assemblies be permitted in a meter box or vault, or any other below grade installation.*

07/24/01

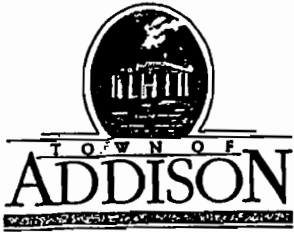


WATER SERVICE

Sizes 3/4" - 2"

Contractors and/or plumbers are responsible for compliance with the following specifications:

- A. Meters shall be set within the Utility easement and clear of vehicular traffic flow and/or parking spaces. Curb stops are to be set 6"-12" below finished grade.
- B. To prevent the inflow of mud or silt into the box, 4-6" of washed pea gravel shall be placed under the meter inside the box, allowing for 2-6" of open space below the meter. Meter box shall be minimum 18" deep. (See Figure SM-1)
- C. Meter boxes shall be large enough to allow access to, and operation of, all meter nuts/flanges/bolts, and the curb stop without obstruction.
- D. Boxes that are vulnerable to vehicular traffic shall have load-bearing frames and lids with reader door designed to withstand the anticipated load.
- E. Meters shall conform to Town specifications as to make and type (See General Requirements for Water Service).
- F. An approved Backflow Prevention Assembly shall be installed on all water services after the meter, with a brass or copper nipple between the meter and the Assembly of sufficient length to allow placement in separate boxes. Both meter and assembly shall be accessible for testing and repairs. It shall be the responsibility of the contractor to have the Assembly tested upon installation by a TNRCC certified tester, who shall provide the original of the test report to the Town of Addison Utility Division prior to final, continuous connection to the City's water supply.
- G. All companion flanges shall be elliptical brass, and all bolts & nuts shall be grade 316 stainless steel, 5/8-11 x 2 1/2" hex head.
- H. Meters shall be set level in all directions.
- I. 2" meters shall have a laying length of 17"; 1.5" meters shall have a laying length of 13". Meters may be "compact," but the difference shall be made up with a strainer upstream or a spool with test port downstream from the meter. 5/8" x 3/4" meters shall have 7 1/2" laying length, 3/4" meters shall have 9" laying length, and 1" meters shall have 10 3/4" laying length. (Approval of Utility Inspector)
- J. A meter deposit is required for all meters before initiation of service. The party responsible for the water bill will make application and deposit for service to the Town of Addison Utility Billing Department. (Call 450-7081)



3/4" - 2" WATER SERVICE
APPROVED MATERIALS and PROCEDURES

1. Double-strap bronze tapping saddle with CC. (AWWA taper) threads: Mueller #BR2B, Ford #202B, or McDonald #3825. Tap shall be set at 45° of vertical on the mainline.
2. Corporation stop with AWWA taper thread (CC) by conductive compression connection: Mueller H-15013 or B25008 (1.5", 2"), Mueller H-15008 or H-25008 (3/4", 1"), Ford FB1000 or F1000 (1.5", 2", -6-G, -7-G, respectively), (3/4", 1", -3-G, -4-G, respectively), McDonald 4701T or 4701BT
3. Pipe and meter size shall be determined by owner with approval of Building Inspection or Public Works/Engineering Departments: Piping shall be continuous type "K" copper from corporation to curb stop.
4. 90 degree angle curb stop with lock-wing: Mueller H-14277 or B24276 (1.5", 2"), Ford KV43-666W-G or FV43-777W-G (1.5", 2"), Mueller H-14277 or B24258 (3/4", 1"), Ford KV43-332W-G or KV43-444W-G (3/4", 1"), McDonald 4646BT or 4606BT. All companion flanges (1.5", 2") shall be brass.
5. Meter boxes shall be of sufficient size to accommodate the curb stop, meter, and all connections. They shall have a cover with reader lid. Boxes may be stacked to achieve sufficient depth (see "B&C" above).
6. In-line curb-stops, meter yokes/setters, and/or meter risers may be considered on a case-by-case basis dependent on situation and subject to approval of Utility Inspector and/or Utility Foreman. No hand valves will be allowed on the inlet side of the meter.
7. The type of Backflow Prevention Assembly required shall depend upon the degree of hazard or potential hazard which exists. See Utility Rules for further information.
8. The tapping saddle and corporation stop must be poly-wrapped (8 mil) and hand backfilled with sand to a depth of 12". Additional backfill may be done by machine, with material free of rocks and clods exceeding three (3) inches in diameter. **CAUTION!!** Inspection must be called for and completed prior to backfill, or tap must be re-exposed by the contractor so that inspection may be completed by the Town's representative.

See Figure SM-1 for detail.

01/31/96

revised 09/04/01

WATER SERVICE

Sizes > 2"

Contractors, plumbers, and/or developers are responsible for compliance with the following specifications:

- A. Provide and install mechanical joint tapping sleeve (such as Mueller H-615). Submittal and approval required if other.
- B. Provide and install tapping valve to meet Addison specification GV-95.1, for resilient wedge gate valve.
- C. Provide and install piping. Piping shall conform to ANSI/AWWA C-909-98 for Molecularly Oriented PVC Pressure pipe for water distribution. Pipe shall be 150-psi minimum class rating for domestic use, and 200-psi minimum class rating for fire line applications.
- D. Fittings shall be ductile iron mechanical joint style, with restraining glands (such as Mega-Lug). Fittings shall be wrapped with 8-mil poly prior to backfill.
- E. Pipe embedment shall conform to NCTCOG Class "B-3", "B+", or "C+" (from Standard Specifications for Public Works Construction, Third Edition, Drawing 3020, 3030, 3040). Variations allowed with engineer's seal and approval of City Engineer.
- F. Service meter or Fire Line DCDA shall be placed in a pre-cast concrete vault with floor and access hatch. Hatch shall be "Bilco"-type, aluminum, spring-assisted, lockable, and sufficiently sized to allow for removal of complete meter or assembly. Vault shall be placed within the public ROW and clear of vehicular traffic flow and/or parking areas.
- G. All meters within vaults shall be equipped with remote touch-pad reading devices compatible with the Town of Addison meter reading system. Hersey, Schlumberger (Neptune), and Master meters are acceptable.
- H. The meter and/or backflow assembly and piping shall be supported with manufactured supports designed for such application. (For clarification, reference Specification for *Standon Pipe Supports* as manufactured by Material Resources Co., Hillsboro, Oregon; 503-693-0727 – Models S89 or S92).



PUBLIC WORKS DEPARTMENT

Post Office Box 9010 Addison, Texas 75001-9010

(972) 450-2871

16801 Westgrove

Dear Water Service Customer/Certificate of Occupancy Applicant:

The Town of Addison Utilities Division of the Public Works Department is committed to providing its residential and business customers the safest, most reliable water supply possible. In order to maintain the integrity of our water supply and comply with increasing state and federal public drinking water regulations, Addison has implemented a Cross-Connection Control (CCC) Program. (See attached information sheet).

A major component of our CCC Program is the installation of the appropriate backflow prevention assembly at each service connection to the City's mains. The determination of which assembly is necessary is based on the type and degree of any potential hazards in the consumer's water system.

The owner/developer is responsible for this installation on all new service connections, all existing services when the plumbing system undergoes permitted modifications or additions, change of property ownership, and on existing services that have been disconnected for any reason upon completion of a system survey prior to re-connection to the City service.

A certified assembly tester as approved by the Town of Addison shall test all assemblies upon installation. Additionally, all Reduced Pressure Zone Assemblies shall be tested annually, and other assemblies shall be tested periodically as determined by the Town of Addison.

Please be aware that the installation of a backflow prevention device on an existing water service creates a closed system that is susceptible to thermal expansion, and the possibility of damage due to said thermal expansion exists. Consultation with a qualified licensed plumber is recommended.

Any questions regarding the above information can be directed to Keith Thompson at 972-661-1634.

The Town of Addison Utilities Division
Public Works Department
PO Box 9010
Addison Texas 75001-9010

Attachment

12/01/95 amended 11/13/97

WATER & SEWER SPECIFICATIONS

PVC (WATER) PRESSURE PIPE

The PVC pipe shall be SDR-18. Dimensions Class 150. The pipe shall meet or exceed requirements of AWWA C-909, PVC pipe with cast iron outside dimensions and with rubber ring joints. PVC water pipe shall be listed by Underwriters Laboratories and approved for use in cities and towns of Texas by the State Board of Insurance. The rigid PVC pipe shall bear the seal of approval (or "NSF" mark) of the National Sanitation Foundation Testing Laboratory for potable water pipe. Provisions must be made for contraction and expansion at each joint with a rubber ring and an integral thickened bell as part of each joint. Pipe and fittings must be assembled with a non-toxic lubricant. Pipe shall be made from NSF approved Class 12454-A or B PVC Pipe Compound conforming to ASTM resin specification D1784.

Joints and Fittings -Fittings shall be restrained mechanical joint. All cast iron fittings will be polywrapped (8 mil.).

Pipe Bedding

Bedding material for water and sewer pipe shall be class "B+".

Tracer

The No. 12 plastic coated copper wire shall be placed in the trench over all water lines. The wire will be tied to all valves and fire hydrants and attached directly to the top of pipe and extending to six (6) inches above finished grade along the outside of all valve stacks and fire hydrants.

Water Taps & Service

The Town of Addison's policy regarding water taps is as follows:

Contractor and/or plumbers are responsible for all taps, copper line to meter, angle curb stop, meter, setting a box large enough to have access to the entire meter, including flanges and curb stop. No hand valves will be allowed on inlet side of meter.

All materials will be provided by the contractor, including backflow prevention assembly after all meters. All materials must conform to the town specifications.

Backfill

The tapping saddle and corporation stop must be polywrapped (8 mil) and sand placed on the pipe

to a depth of six (6) inches to twelve (12) inches deep by hand shovels only. No backhoes. The rest of the backfill may be done by machine, with material free of rocks and clods exceeding three (3) inches in diameter.

Caution: If a tap is made and backfilled without an inspector present, it will have to be exposed by the contractor so it may be inspected by the town.

PVC (Sewer) Pipe

PVC pipe and fittings shall meet the extra strength requirements of ASTM specification D3034 or SDR 35, over 10' in depth SDR 26. Pipe shall have integral wall bell and spigot joints.

Joints - Joints for the PVC pipe and fittings shall be compression rubber gasket joints. The bell shall consist of an integral wall section with factory installed ring securely locked in bell groove to provide positive seal under all installation conditions.

Fittings - Fittings and accessories shall be manufactured and furnished by the pipe supplier and have bell and/or spigot configuration identical to that of the pipe.

Connections at Manholes - Asbestos cement sleeves or approved equal, with rubber ring joint will be used at manhole walls to provide positive water tight connections. Manholes are to be poured in place. Six (6) sack concrete mix. Forms must be in place after pour for four (4) hours. ~~Manhole steps are required.~~

Stiffness - Minimum pipe stiffness at 5% deflection shall be forty-six (46) for all sizes when calculated in accordance with ASTM D-2412.

Sewer Taps

The Contractor/Plumber will make all four (4) to six (6) inch taps. The plumber will be responsible for exposing the existing sewer line. All water must be pumped out of the hole at the time the tap is being made. Taps are to be on a 45 degree angle, and a double clean-out at the property line must be SDR 35, ~~or~~ PVC.

Backfill: The plumber shall extend his yard line to the tap on grade no higher than twelve (12) inches above the tap. Prior to any tap being backfilled, the town shall be called for an inspection of the backfill operation. The tap and exposed yard line will be backfilled with sand to a level of twelve (12) inches above the pipe. This portion of the backfill will be done by hand shovels only! No backhoes. After the hand operation, the remainder of the trench can be machine filled with select fill material. No rocks or clods over three (3) inches in diameter.

Caution: If you backfill the tap without an inspector on location, you will be required to dig it up for an inspection.

TOWN OF ADDISON

SPECIFICATION # GV-95.1

RESILIENT SEATED GATE VALVES

All gate valves installed in the Town of Addison shall be of the resilient wedge type conforming to AWWA C509 in its most current revision, Standard for Resilient Seated Gate Valves. In addition, all valves shall include the following design criteria:

1. Wedge shall be cast or ductile iron, fully encapsulated in synthetic rubber.
2. Wedge rubber shall be molded in place and permanently bonded to the iron without screws, rivets, or similar fasteners.
3. Wedge shall seat against seating surfaces arranged symmetrically about the centerline of the operating stem, so that seating is equally effective regardless of direction of pressure unbalance across the wedge.
4. Valves for underground installations shall be non-rising stem type, opening counter clockwise by means of a 2" square operating nut. Valves for installation in a vault shall be of the rising stem type opening counter clockwise by means of a hand wheel. The word OPEN and an ARROW indicating direction to open shall be cast in the metal of the nut or hand wheel.
5. Stem shall be sealed by at least two O-rings; all stem seals shall be replaceable with valve fully open and while subjected to full rated pressure.
6. All nuts and bolts shall be stainless steel.
7. Waterway shall be smooth and shall have no depressions or cavities in seat area where foreign material can lodge and prevent closure. Waterway shall be large enough to accept full size tapping cutter without damaging the interior of the valve.
8. Valve body and bonnet shall be epoxy coated, inside and out, with fusion-bonded epoxy. Coating shall conform to AWWA C550-90, Standard for Protective Interior Coatings for Valves and Hydrants.
9. Current list of approved Gate Valves: Mueller A2360, AFC 500, Clow F6100. Other valves may be submitted for consideration to the Town of Addison Engineering Department for verification of compliance to these specifications.

SECTION CSS

TOWN OF ADDISON – CONSTRUCTION (STREETS AND SIDEWALKS)

ARTICLE I. IN GENERAL

Sec. 70-1. Depositing mud or dirt upon streets prohibited; abatement; penalties.

(a) No person shall deposit or permit the deposit of mud, dirt or similar matter, upon any street or alley in the town.

(b) No person shall operate or drive a motor vehicle in a manner to cause mud, dirt and other similar matter to be tracked, dropped or otherwise deposited upon public streets or alleys in the town.

(c) Upon discovery of the mud upon the public street, the chief building official or his delegated representative shall orally notify the owner of the property and/or the operator of the motor vehicle, if known, to remove the mud. The owner of the property and/or operator of the motor vehicle shall have 24 hours after such notification to clean the street of the deposited mud, dirt or similar matter.

(d) In addition to the penalty provided for in section 1-7, failure to clean such street of such deposited matter within the prescribed time shall constitute a violation of the owner's building permit and subject such owner to the penalties provided for in the official building code as adopted by the town, including the possible revocation of the permit.

(Code 1982, § 16-1)

State law references—Litter control, V.T.C.A., Health and Safety Code ch. 365; vehicles tracking mud, V.T.C.A., Transportation Code § 725.021.

Sec. 70-2. Owners to construct sidewalk.

(a) Any owner or person in control of real estate fronting upon a public street which is improved with street paving and curbs and gutters shall not be issued a building permit for any construction when concrete sidewalks have not been installed unless such owner, either as a part of the construction covered by the building permit or other separate arrangements satisfactory to the city council, constructs public sidewalks to town standards. The failure to so construct the required sidewalk shall constitute a violation of the building code.

(b) The town's standards, as that term is used in this section, shall mean the following:

- (1) Concrete sidewalks shall be five feet wide and a minimum of four inches thick. The walk shall be of one-course construction to be of 3,000 psi concrete, five sack mix, and reinforced with three-eighths-inch steel reinforcing bars on 18-inch centers longitudinally and 24-inch centers transversely.
- (2) Generally, the sidewalk is to be located adjacent to the back of curb. The landscape department may approve sidewalks in other areas not directly adjacent to curb.
- (3) Sidewalks shall be poured in sections of the lengths indicated on the plans, in general, they shall be tooled in five-foot sections. One-half inch expansion joint shall be placed every eight joints and where new works about old works, or where new work is constructed adjacent to other concrete work, walls, foundations, curb and gutters, the expansion joint shall be made of premolded bituminous filter or redwood and shall extend the entire depth and width of the concrete section.
- (4) Tooled joints (contraction joints) will be on five-foot centers. Finish walks by lightly brooming surface transversely to direction of main traffic or, where adjacent sidewalks differ from this standard, new sidewalks shall conform to adjacent sidewalks (e.g., exposed aggregate). Round all edges to one-fourth inch radius. Cross slope walk one-fourth inch per foot, or as shown on the drawings to provide drainage.
- (5) Approved barrier-free ramps will be provided at street intersections as required by the town.

(c) Further, the city council may upon application of a property owner, affected by the provisions herein, waive the requirements for installation of sidewalks because of unusual circumstances or hardship.

(Code 1982, § 16-2)

Secs. 70-3—70-30. Reserved.

ARTICLE II. PAVING AND DRAINAGE

Sec. 70-31. Violations.

Any construction or maintenance of any street, road or alley in violation of any of the standard specifications adopted in this article shall be unlawful and a violation of this Code.

(Code 1982, § 16-24)

Sec. 70-32. Compliance prior to construction.

Plans and specifications shall be submitted to the town for approval by the town engineer under the standards adopted in this article prior to the granting of any building permit or the commencement of any construction of any street, road or alley in the town, and the town engineer shall have the duty to inspect such plans and specifications, with regard to these standards. If the town engineer approves such plans and specifications he shall make a notation and record of such approval. No building permit or other authorization for the commencement of such construction shall be granted by the town unless and until the plans and specifications shall have been approved in accordance with this section.

(Code 1982, § 16-25)

Sec. 70-33. Adopted standards.

There are hereby adopted standard specifications for paving and drainage construction and drainage criteria, as the rules and regulations governing the construction, paving and drainage aspects of all streets, roads and alleys in the town. The specifications adopted hereby are attached to the ordinance from which this section is derived as exhibit "A" and made a part hereof for all purposes. The original copy of the standard specifications shall be kept with such ordinance and with the other ordinances of the town at the town hall and shall be made available for public inspection during regular business hours of the town.

(Code 1982, § 16-26)

Sec. 70-34. Inspections.

The construction of streets, roads and alleys with regard to paving and drainage shall be subject to inspections by the building official and/or the town engineer and shall conform with all the requirements of the standard specifications adopted in this article. If the building official and/or the town engineer shall determine that such construction is not being carried on according to such standard specifications, he shall order the cessation of such work and shall point out to the contractor or builder the acts or omissions indicated from his inspection.

(Code 1982, § 16-27)

Secs. 70-35—70-56. Reserved.

ARTICLE III. USE BY PUBLIC UTILITIES

DIVISION 1. GENERALLY

Sec. 70-57. Findings and purpose.

The purposes of this Article are to:

- (1) Govern the use and occupancy of the public rights-of-way;
- (2) Assist in the management of facilities placed in, on or over the Public rights-of-way in order to minimize the congestion, inconvenience, visual impact and other adverse effects, and the costs to the citizens resulting from the placement of facilities within the public rights-of-way;
- (3) Assist the town in its efforts to protect the public health, safety and welfare;
- (4) Conserve the limited physical capacity of the public rights-of-way held in public trust by the town;
- (5) Preserve the physical integrity of the streets and highways;
- (6) Control the orderly flow of vehicles and pedestrians;
- (7) Monitor and coordinate the activities of the different entities using the public

rights-of-way to prevent interference between them in the use of the public rights-of-way;

- (8) Assist with scheduling common trenching and street cuts; and
 - (9) Protect the safety, security, appearance, and condition of the public rights-of-way.
- (Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-58. Process.

A person to whom this article applies shall:

- (1) Register with the town in accordance with section 70-58(c) of this article (provided, however, that the holder of a franchise from the town or of a license described in division 2 of this article shall not be required to register);
- (2) Secure from the town a franchise, license or other authorization as may be required by the town to use the public rights-of-way (provided, however, that such requirement shall not apply to a certificated telecommunications provider);
- (3) Obtain an excavation or other permit from the town prior to working on any facilities which requires (i) the breaking of pavement within the public rights-of-way, (ii) the interference with any landscaping or any improvements located in the public rights-of-way, or (iii) the partial or complete closure of any public rights-of-way; and
- (4) Prior to construction of or on any facilities, obtain approval from the town of construction plans and maps in connection with such work and give the town notice of the initiation of such work.

(Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-59. Scope; registration.

(a) This article applies to all persons that place facilities in, on or over public rights-of-way.

(b) Any person with a current, unexpired consent, franchise, agreement or other authorization from the town ("Grant") to use the public rights-of-way that is in effect on January 1, 2000 shall

continue to operate under and comply with that grant until the grant expires or until it is terminated by mutual agreement of the town and the person, or terminated as otherwise provided for by law. To the extent that a grant is inconsistent with the terms of this article, the terms of the grant shall control.

(c) In order for the town to know which persons own facilities in the public rights-of-way, each person who owns facilities shall register with the director and provide the following information: (i) the person's name, (ii) a phone number at which the person may be reached 24 hours a day; (iii) the current name, address, and telephone number(s) of a contact employed by the person with binding and decision-making authority for the person and who shall be responsible for satisfying all information needs of the town (the "Contact"), and (iv) such other information as the director may reasonably require. Each such person shall update and keep current his/her registration with the town at all times.

(Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-60. Definitions.

In this article:

Certificated telecommunications provider means the same as in Local Government Code Section 283.002(2) [any entity that has been granted a certificate from the Texas Public Utility Commission under Chapter 54 of Tex. Utility Code authorizing that entity to provide local exchange telephone service].

Director means the director of public works of the town or the director's designee.

Facilities means any and all of the wires, cables, fibers, duct spaces, manholes, poles, conduits, underground and overhead passageways and other equipment, structures, plant and appurtenances and all associated physical equipment placed in, on or under the public rights-of-way.

Person means a natural person (an individual), corporation, company, association, partnership, firm, limited liability company, joint venture, joint stock company or association, and other such

entity who places, constructs, reconstructs, maintains, or repairs Facilities on, in, over, or under the public rights-of-way.

Public rights-of-way means the same as the term is defined in Texas Local Government Code, § 283.002(6), and being the area within the town on, below, or above a public roadway, highway, street, public sidewalk, alley, waterway, or utility easement in which the municipality has an interest. The term does not include the airwaves above a Public Right-of-Way with regard to wireless telecommunications.

Utility means a publicly, privately, or cooperatively owned utility that provides telephone, telegraph, communications, electric, gas, heating, water, railroad, storm sewer, sanitary sewer, or pipeline service.
(Ord. No. 000-005, § 1, 2-8-00);

Sec. 70-61. Construction and maintenance.

A person is subject to reasonable police power regulation of the town to manage its public rights-of-way in connection with the construction, expansion, reconstruction, maintenance or repair of facilities in the public rights-of-way, pursuant to the town's rights as a custodian of public property, based upon the town's historic rights under state and federal laws. Such regulations include, but are not limited to, the following:

- (1) Any facilities installed or constructed on, in, over or under the public rights-of-way shall:
 - a. Be constructed, reconstructed and maintained in accordance with plans approved by the town, and such approval shall not constitute a warranty that such plans conform with federal, state and/or local codes and regulations applicable thereto;
 - b. Comply with all applicable laws or ordinances of the town, including, but not limited to, construction and/or excavation permits;
 - c. Be done to the town's satisfaction at such times and in such manner as not to interfere with the use of the public rights-of-way;
- d. Be constructed, reconstructed, and maintained so that the public rights-of-way are kept in a neat and safe condition and in good order and operating condition, failing which, the town may do so at the expense of the person owning the facilities.
- (2) In the event a person proposes to perform open trenching within the public rights-of-way, the person may be required by the town, prior to such performing open trenching, to conduct soil compaction testing if the town determines, in its sole judgment, that the open trenching may have an adverse effect on any facilities of the town. All costs incurred by the test, or any corrections thereof, shall be borne by the person.
- (3) In connection with the construction, reconstruction, removal, maintenance, or repair of a person's facilities which requires the excavation of the public rights-of-way, the alteration of the surface of or the interference with any landscaping or any improvements located in the public rights-of-way, or the partial or complete closure of any public rights-of-way, at the town's request the person shall furnish the town accurate and complete information relating to the construction, reconstruction, removal, maintenance, or repair of facilities performed by the person in the public rights-of-way.
- (4) A person may be required to place certain facilities within the public rights-of-way underground according to the requirements of this chapter 70 and any other applicable town requirements absent a compelling demonstration by the person that, in any specific instance, this requirement is not reasonable, feasible or equally applicable to other similar users of the public rights-of-way.
- (5) A person shall perform operations, excavations and other construction in the public rights-of-way in accordance with all applicable town requirements, including the obligation to use trenchless technol-

ogy whenever commercially economical and practical and consistent with obligations on other similar users of the public right-of-way. The town shall waive the requirement of trenchless technology if it determines that the field conditions warrant the waiver, based upon information provided to the town by the person. All excavations and other construction in the public rights-of-way shall be conducted so as to minimize interference with the use of public and private property. A person shall follow all reasonable construction directions given by the town in order to minimize any such interference.

- (6) A person must obtain a construction or other applicable permit prior to any excavation, construction, installation, expansion, repair, removal, relocation or maintenance of the person's facilities; provided, however, that such a permit is not required for routine maintenance (A) that does not (x) require excavation of the public rights-of-way, (y) alter the surface or interfere with any landscaping or public improvements located in the public rights-of-way, or (z) block traffic lanes or sidewalks, or (B) that requires the blocking of traffic lanes or sidewalks for less than two hours if the person has first given to the director written notice of the date, time, location, general nature of the maintenance and such other information as may be required by the director relating to such routine maintenance. Unless waived by the director, an application for such a permit must be filed with the town at least five business days prior to any work in connection with the person's facilities. In connection with such permit, a person shall furnish, among other information as may be reasonably required by the town, construction plans and maps showing the location and proposed routing of new construction or reconstruction at least five business days before beginning such construction or reconstruction. A person may not begin construction until the location of new facilities and proposed routing of the new construction or recon-

struction and all required plans and drawings have been approved in writing by the town, which approval will not be unreasonably withheld, taking due consideration of the surrounding area and alternative locations for the facilities and routing. For a permit issued in connection with the excavation of any public rights-of-way, the person shall give to the town at least 48 hours notice (which could be at the time of the issuance of the permit) prior to undertaking any of the above listed activities on its facilities in, on, over or under the public rights-of-way; provided, however that this notice requirement may be waived by the director. The failure of the person to request and obtain a permit from the town prior to performing any of the above listed activities in, on, under or over any public right-of-way, except in an emergency as provided for in section 70-139 of this chapter, will subject the person to a stop-work order from the town and enforcement action pursuant to the town's Code of Ordinances, other ordinances, rules or regulations. Unless otherwise provided in a regulation relating to a specific permit (i.e., excavation permit - 10 days), if a person fails to act upon any permit within 90 calendar days of issuance, the permit shall become invalid, and the person will be required to obtain another permit or to obtain an extension as may be approved by the director.

- (7) When a person completes construction, expansion, reconstruction, removal, excavation or other work, the person shall promptly restore the public rights-of-way in accordance with applicable town requirements. A person shall replace and properly re-lay and repair the surface, base, irrigation system and landscape treatment of any public rights-of-way that may be excavated or damaged by reason of the erection, construction, maintenance, or repair of the person's facilities within 30 calendar days (unless extended by the town for good cause) after completion of the work in accordance with existing standards of the town in effect at the time of

the work; provided, however, that such timetable shall apply only to the extent the same is not addressed in another ordinance, rule or regulation of the town which requires a permit for any excavation, construction, installation, expansion, repair, removal, relocation or maintenance of facilities.

- (8) Upon failure of a person to perform or to initiate the performance of any such repair or replacement work within five days after written notice has been received by the person (such notice having been sent by the town to the contact by either hand-delivery, by facsimile transmission, or by certified mail, return receipt requested), the town may repair such portion of the public rights-of-way as may have been disturbed by the person, its contractors or agents. Such written notice may be provided by upon receipt of an invoice from the town, the person will reimburse the town for the costs so incurred within 30 calendar days from the date of the town invoice. Provided, however, that the provisions of this subsection (10) shall apply only to the extent the same is not addressed in another ordinance, rule or regulation of the town which requires a permit for any excavation, construction, installation, expansion, repair, removal, relocation or maintenance of facilities.
- (9) Should the town reasonably determine, within one year from the date of the completion of the repair work, that the surface, base, irrigation system or landscape treatment requires additional restoration work to return the affected property to a condition at least equal to the condition of the property immediately prior to the construction, a person shall perform such additional restoration work to the satisfaction of the town, subject to all town remedies as provided herein.
- (10) Notwithstanding the foregoing, if the town determines that the failure of a person to properly repair or restore the public rights-of-way constitutes a safety hazard to the public and after emergency notice to the

person has been provided (to the extent reasonable under the circumstances), the town may undertake emergency repairs and restoration efforts. A person shall promptly reimburse the town for all costs incurred by the town within 30 calendar days from the date of the town invoice; provided, however, that such timetable shall apply only to the extent the same is not addressed in another ordinance, rule or regulation of the town which requires a permit for any excavation, construction, installation, expansion, repair, removal, relocation or maintenance of facilities.

- (11) If the director declares an emergency with regard to the health and safety of the citizens and requests by written notice the removal or abatement of facilities, a person shall remove or abate the person's facilities by the deadline provided in the director's request. The person and the town shall cooperate to the extent possible to assure continuity of service. If the person, after notice, fails or refuses to act, the town may remove or abate the facility, at the sole cost and expense of the person, without paying compensation to the person and without the town incurring liability for damages.

(Code 1982, § 16-44; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-62. Additional obligations of licensee.

A person shall maintain a complete set of engineering plans of any facilities constructed or located in the public rights-of-way and shall furnish copies of the engineering plans to the director in a format used in the ordinary course of the person's business and as reasonably prescribed by the town, and as allowed by law. Upon the completion of the constructing or locating of facilities pursuant to such engineering plans and in the event that the facilities were not constructed or located in accordance with the plans, such plans shall be modified to reflect the actual construction or installation of facilities and such modified plans (excluding customer specific, proprietary or confidential information) shall be provided to the town within 30 days of such completion.

(Code 1982, § 16-45; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-63. Indemnity.

(a) Except as to certificated telecommunications providers, each person shall agree to promptly defend, indemnify and hold the town, its officials, officers, agents and employees harmless from and against all damages liability, costs, losses or expenses (i) for the repair, replacement, or restoration of the town's property, equipment, materials, structures and facilities which are damaged, destroyed or found to be defective as a result of the person's acts or omissions, (ii) from and against any and all claims, demands, suits, causes of action, and judgments for (A) damage to or loss of the property of any natural person (an individual), corporation, company, association, partnership, firm, limited liability company, joint venture, joint stock company or association, and other such entity (including, but not limited to the person, its agents, officers, employees and subcontractors, town's agents, officers and employees, and third parties); and/or (B) death, bodily injury, illness, disease, loss of services, or loss of income or wages to any person (individual) (including, but not limited to the agents, officers and employees of the person, person's subcontractors and town, and third parties), arising out of, incident to, concerning or resulting from any negligent or willful act or omission of the person, its agents, employees, and/or subcontractors, in the performance of any activities in connection with the facilities.

(b) This indemnity provision shall not apply to any liability resulting from the negligence of the town, its officers, employees, agents, contractors, or subcontractors.

(c) The provisions of this indemnity is solely for the benefit of the town and is not intended to create or grant any rights, contractual or otherwise, to any other person or entity.

(d) A certificated telecommunications provider shall indemnify the town in accordance with Section 283.057, Tex. Loc. Gov. Code. (Code 1982, § 16-46; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-64. Insurance.

During the period of time during which a person is performing any work as described herein

within the public rights-of-way and during which a person's facilities are located in the public rights-of-way, that person shall obtain and maintain commercial general liability insurance, including personal injury liability, premises operations liability, and contractual liability, covering, but not limited to, the liability assumed under the indemnification provisions set forth herein, with limits of liability for bodily injury, death and property damage or destruction of not less than \$1,000,000.00 and other insurance as may be reasonably prescribed by the town with an insurance company licensed to do business in the State of Texas acceptable to the town. A person shall furnish the town with proof of insurance at the time of the request for building, excavation, or other applicable permits or at such other time as the town may reasonably request. The town reserves the right to review the insurance requirements and to reasonably adjust insurance coverage and limits when the director determines that changes in statutory law, court decisions, or the claims history of the industry or the person require adjustment of the coverage. For purposes of this section, the town will accept certificates of self-insurance issued by the State of Texas or letters written by the person in those instances where the state does not issue such letters, which provide the same coverage as required herein. However, for the town to accept such letters the person must demonstrate by written information that it has adequate financial resources to be a self-insured entity as reasonably determined by the town, based on financial information requested by and furnished to the town.

A person shall furnish, at no cost to the town, copies of certificates of insurance evidencing the coverage required by this section to the town. The town may request the deletion, revision or modification of particular policy terms, conditions, limitations or exclusions, unless the policy provisions are established by a law or regulation binding the town, the person, or the underwriter. If the town requests a deletion, revision or modification, a person shall exercise reasonable efforts to pay for and to accomplish the change.

- (1) An insurance certificate shall contain the following required provisions:
 - a. Name the town of and its officers, employees, board members and elected representatives as additional insureds for all applicable coverage;

- b. Provide for 30 days notice to the town for cancellation, non-renewal, or material change; and
 - c. Provide that notice of claims shall be provided to the director by certified mail.
- (2) A person shall file and maintain proof of insurance with the director. An insurance certificate obtained in compliance with this section is subject to town approval. The town may require the certificate to be changed to reflect changing liability limits. A person shall immediately advise the town attorney of actual or potential litigation that may develop may affect an existing carrier's obligation to defend and indemnify.
- (3) An insurer has no right of recovery against the town. The required insurance policies shall protect the person and the town. The insurance shall be primary coverage for losses covered by the policies.
- (4) The policy clause "other insurance" shall not apply to the town if the town is an insured under the policy.
- (5) The person shall pay premiums and assessments. A company which issues an insurance policy has no recourse against the town for payment of a premium or assessment. Insurance policies obtained by a person must provide that the issuing company waives all right of recovery by way of subrogation against the town in connection with damage covered by the policy.

The above insurance requirements may be met by applicants with a current franchise or license and applicants governed by Chapter 283 of the Texas Local Government Code if the current franchise, license or statutory indemnity adequately provides for insurance or bonds or provides an indemnity in favor of the town.
(Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-65. Conditions of public rights-of-way occupancy.

(a) In the exercise of governmental functions, the town has first priority over all other uses of the public rights-of-way. The town reserves the

right to lay sewer, gas, water, and other pipe lines or cables and conduits, and to do underground and overhead work, and attachments, restructuring or changes in aerial facilities in, across, along, over or under a public street, alley or public rights-of-way occupied by a person, and to change the curb, sidewalks or the grade of streets.

(b) The town shall assign the location in or over the public rights-of-way among competing users of the public rights-of-way with due consideration to the public health and safety considerations of each user type, and to the extent the town can demonstrate that there is limited space available for additional users, may limit new users, as allowed under state or federal law.

(c) If the town authorizes abutting landowners to occupy space under the surface of any public street, alley, or public rights-of-way, the grant to an abutting landowner shall be subject to the rights of the previously authorized user of the public rights-of-way. If the town closes or abandons a public right-of-way that contains a portion of a person's facilities, the town shall close or abandon such public right-of-way subject to the rights of the person.

(d) If the town gives written notice, a person shall, at its own expense, temporarily or permanently, remove, relocate, change or alter the position of the person's facilities that are in the public rights-of-way within 120 days, except in circumstances that require additional time as reasonably determined by the town based upon information provided by the person. For projects expected to take longer than 120 days to remove, change or relocate, the town will confer with person before determining the alterations to be required and the timing thereof. The town shall give notice whenever the town has determined that removal, relocation, change or alteration is reasonably necessary for the construction, operation, repair, maintenance or installation of a town governmental public improvement in the public rights-of-way. This section shall not be construed to prevent a person's recovery of the cost of relocation or removal from private third parties who initiate the request for relocation or removal, nor shall it

be required if improvements are solely for beautification purposes without prior joint deliberation and agreement with the person.

If the person fails to relocate facilities in the time allowed by the town in this section: (i) the Person may be subject to liability to the town for such delay and as set forth in the town Code or ordinances, now or hereafter enacted, and (ii) the town has the right, to the extent allowed by law, to relocate or cause to be relocated the affected portion of the facilities and the person shall promptly reimburse the town for all costs of such relocation.

Notwithstanding anything in this subsection (d), the director and a person may agree in writing to different time frames than those provided above if circumstances reasonably warrant such a change.

(e) A person may trim trees in or over the public rights-of-way for the safe and reliable operation, use and maintenance of its facilities. All tree trimming shall be performed in accordance with standards promulgated by the National Arborist Association and International Society of Arboriculture, and should be done in such a manner to preserve as much vegetation and natural shape of trees as reasonably possible, and still accomplish a safe and effective tree trimming program. Reasonable efforts shall be made to contact affected property owners prior to necessary tree trimming operations. Should the person, its contractor or agent, fail to remove such trimmings within 24 hours (unless a longer period is required for extraordinary conditions and conditions beyond the control of the person), the town may remove the trimmings or have them removed, and upon receipt of a bill from the town, the person shall promptly reimburse the town for all costs incurred within 30 working days.

(f) Persons shall temporarily remove, raise or lower its aerial facilities to permit the moving of houses or other bulky structures, if the town gives written notice of no less than 48 hours. The expense of these temporary rearrangements shall be paid by the party or parties requesting and benefiting from the temporary rearrangements.

Person may require prepayment or prior posting of a bond from the party requesting temporary move.

(Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-66. Governing law.

This article shall be construed in accordance with the town Code(s) and regulations in effect on January 1, 2000 to the extent that such Code(s) or regulations are not in conflict with or in violation of the Constitution and laws of the United States or the State of Texas, subject to the town's on going authority to adopt reasonable regulations to manage its public rights-of-way, pursuant to the provisions of this article or as otherwise provided by law.

(Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-67. Unauthorized use of public rights-of-way.

The town may institute all appropriate legal action to prohibit any person from knowingly using the public rights-of-way unless the person has complied with the terms of this article.

(Ord. No. 000-005, § 1, 2-8-00)

Secs. 70-68—70-80. Reserved.

DIVISION 2. LICENSE

Sec. 70-81. Required for use of public right-of-way.

Any person operating a utility (other than a certificated telecommunications provider) and seeking to place facilities on, in, under or over any portion of any public rights-of-way, or any other area under the control of the town now or hereafter existing, shall first have obtained from the town a license or other authorization from the town as may be required by the town to use such right-of-way. The issuance of a license shall not constitute a franchise and shall not replace any obligation to obtain a franchise, if applicable.

(Code 1982, § 16-39; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-82. Application.

Persons desiring a license as provided in section 70-81 shall apply in writing to the director. The application must be accompanied by plans or drawings showing the area to be used, certified survey notes showing elevations of the area and a statement of the purpose for which the public rights-of-way are to be used.

(Code 1982, § 16-40; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-83. Grant by city council.

If, in the sole judgement of the city council, the requested use is not inconsistent with and does not unreasonably impair the public use of the public rights-of-way, the council may by ordinance grant the license.

(Code 1982, § 16-41; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-84. Terms and conditions; duration; right of termination reserved by town.

(a) The ordinance provided for in section 70-83 shall contain the terms and conditions of the license and shall state the time for which the license exists. Whether or not stated in the ordinance, the city council retains the right to terminate a license whenever in its judgement the purpose or use of the license is inconsistent with the public use of the public rights-of-way or whenever the purpose or use of the license is likely to become a nuisance.

(b) If a private license does not state the time for expiration, it will expire ten years from the date of the passage of the ordinance granting the license.

(c) If a license to place and maintain the facilities of a utility operated by a governmental entity on public rights-of-way does not state the time for expiration, it will expire upon expiration of the governmental entity's contract with the town providing for mutual granting of rights-of-way.

(Code 1982, § 16-42; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-85. Annual fee for use of public right-of-way.

The annual fee for a license to use the public rights-of-way is \$2.00 per linear foot of public

right-of-way traversed and \$1,000.00 per public street crossing. All fees are payable in advance for each upcoming year until the license is terminated. The person to whom the license is granted, or licensee, shall bear the entire cost of constructing, reconstructing, maintaining and operating any facilities constructed on the public rights-of-way, and will not allow any mechanic's or materialman's liens to be enforced against the public right-of-way by reason of any such work.

(Code 1982, § 16-43; Ord. No. 000-005, § 1, 2-8-00)

Secs. 70-86—70-110. Reserved.

ARTICLE IV. EXCAVATIONS**DIVISION 1. GENERALLY****Sec. 70-111. Definitions.**

The following words, terms and phrases when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant means any person making written application to the public works director for an excavation permit under this article.

Excavation work means the excavation and other work permitted under an excavation permit and required to be performed under this article.

Permittee means any person who has been granted and has in full force and effect an excavation permit issued under this article.

Street means any street, highway, sidewalk, alley, avenue, or other public way or public grounds in the town.

Working day means any Monday, Tuesday, Wednesday, Thursday or Friday which is not a holiday observed by the town.

(Code 1982, § 16-56; Ord. No. 000-005, § 1, 2-8-00)

Cross reference—Definitions generally, § 1-2.

Sec. 70-112. Liability of town.

This article shall not be construed as imposing upon the town or any official or employee any liability or responsibility for damages to any per-

son injured by the performance of any excavation work for which an excavation permit is issued under this article; nor shall the town or any official or employee thereof be deemed to have assumed any such liability or responsibility by reason of inspections authorized hereunder, the issuance of any permit or the approval of any excavation work.

(Code 1982, § 16-90.5; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-113. Routing of traffic.

(a) The permittee under this article shall take appropriate measures to assure that during the performance of the excavation work, traffic conditions as nearly normal as practicable shall be maintained at all times so as to cause as little inconvenience as possible to the occupants of the abutting property and to the general public, provided that the public works director may permit the closing of streets to all traffic for a period of time prescribed by him if, in his opinion, it is necessary. No interference with traffic flow on town streets shall be permitted during the hours of 6:30 a.m. to 9:30 a.m. and 3:30 p.m. to 6:30 p.m., Mondays through Fridays; provided, however, that on Belt Line Road and Midway Road, no interference with traffic flow will be permitted during the hours of:

- (1) 6:00 a.m. to 10:00 p.m. Mondays through Thursdays.
- (2) 6:00 a.m. Fridays through 3:00 a.m. Saturdays.
- (3) 9:00 a.m. Saturdays through 3:00 a.m. Sundays.
- (4) 9:00 a.m. Sundays through 10:00 p.m. Sundays.

Contractors working for the town on contracts awarded by the town prior to May 23, 1995, are exempt from the Belt Line Road and Midway Road time restrictions.

Emergency closures during these hours may be permitted with the approval of the public works director. The permittee shall route and control traffic including its own vehicles as directed by the police department.

(b) The following steps shall be taken before any street or part thereof may be closed or restricted to traffic:

- (1) The permittee must receive the approval of the public works director and the police department therefor;
- (2) The permittee must notify the chief of the fire department of any street so closed;
- (3) Upon completion of construction work, the permittee shall notify the public works director, fire department and the police department before traffic is moved back to its normal flow so that any necessary adjustments may be made; and
- (4) Where flagmen are deemed necessary by the public works director, they shall be furnished by the permittee at its own expense. Through traffic shall be maintained without the aid of detours, if possible. In instances in which this would not be feasible, the public works director will designate detours. The town shall maintain roadway surfaces of existing highways designated as detours without expense to the permittee, but in case there are no existing highways, the permittee shall construct all detours at its expense and in conformity with the specifications of the public works director. The permittee will be responsible for any unnecessary damage as may be determined in the public works director's sole discretion caused to any highways by the operation of its equipment.

(Code 1982, § 16-63; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-114. Clearance for fire equipment.

The excavation work shall be performed and conducted so as not to interfere with access to fire stations and fire hydrants. Materials or obstructions shall not be placed within 15 feet of fire hydrants. Passageways leading to fire escapes or firefighting equipment shall be kept free of excavated material or other obstructions.

(Code 1982, § 16-64; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-115. Protection of traffic.

The permittee under this article shall erect and maintain suitable timber barriers to confine earth from trenches or other excavations in order to encroach upon streets as little as possible. The permittee shall construct and maintain adequate and safe crossings over excavations and across streets under improvement to accommodate vehicular and pedestrian traffic at all street intersections. Vehicular crossings shall be constructed and maintained of plank, timbers and blocking of adequate size to accommodate vehicular traffic safely. Decking shall be not less than four inches thick and shall be securely fastened together with heavy wire and staples. Pedestrian crossings shall consist of planking three inches thick, 12 inches wide and of adequate length, together with necessary blocking. The walk shall be not less than three feet in width and shall be provided with a railing as required by the public works director. (Code 1982, § 16-65; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-116. Barricades.

A permittee under this article shall be responsible for the placement of barricades, warning signals and signal lights sufficient to warn the public of hazard and which are in compliance with the town ordinances concerning barricading of public streets. (Code 1982, § 16-66; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-117. Removal and protection of utilities.

The permittee under this article shall not interfere with any existing utility without the written consent of the utility company or person owning the utility. If it becomes necessary to remove an existing utility, this shall be done by its owner. No utility owned by the town shall be moved to accommodate the permittee unless the cost of such work be borne by the permittee. The cost of moving privately owned utilities shall be similarly borne by the permittee unless it makes other arrangements with the person owning the utility. The permittee shall support and protect by timbers or otherwise all pipes, conduits, poles, wires or other apparatus which may be in any way affected by the excavation work, and do

everything necessary to support, sustain and protect them under, over, along or across such work. In case any of such pipes, conduits, poles, wires or apparatus should be damaged, they shall be repaired by the agency or person owning them, and the expense of such repairs shall be charged to the permittee, and his bond shall be liable therefor. The permittee shall be responsible for any damage done to any public or private property by reason of the breaking of any water pipes, sewer, gas pipe, electric conduit or other utility. The permittee shall inform itself as to the existence and location of all underground utilities and protect such utilities against damage.

(Code 1982, § 16-67; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-118. Protection of adjoining property.

The permittee under this article shall at all times and at his own expense preserve and protect from injury any adjoining property by providing proper foundations and taking other measures suitable for the purpose. Where in the protection of such property it is necessary to enter upon private property for the purpose of taking appropriate protective measures, the permittee shall obtain a license from the owner of such private property for such purpose, and if he cannot obtain a license from such owner, the public works director may authorize him to enter the private premises solely for the purpose of making the property safe. The permittee shall, at his own expense, shore up and protect all buildings, walls, fences or other property likely to be damaged during the progress of the excavation work and shall be responsible for all damage to public or private property or highways resulting from its failure properly to protect and carry out such work. Whenever it may be necessary for the permittee to trench through any lawn area, the sod shall be carefully cut and rolled and replaced with live sod after ditches have been backfilled as required in this division. All construction and maintenance work shall be done in a manner calculated to leave the lawn area clean of earth and debris and in a condition as nearly as possible to that which existed before such work began. The permittee shall not remove, even temporarily, any trees or shrubs which exist in streets without first

having notified and obtained the consent of the appropriate town department or town official having control of such property.
(Code 1982, § 16-68; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-119. Sidewalk excavations.

Any excavation made in any sidewalk or under a sidewalk shall be provided with a substantial and adequate footbridge over such excavation on the line of the sidewalk, which bridge shall be at least three feet wide and securely railed on each side so that foot passengers can pass over safely at all times.
(Code 1982, § 16-69; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-120. Protective measures.

The permittee under this article shall erect such fence, railing or barriers about the site of the excavation work as shall prevent danger to persons using the town streets or sidewalks, and such protective barriers shall be maintained until the work shall be completed or the danger removed. At twilight, there shall be placed upon such place of excavation and upon any excavated materials or structures or other obstructions to streets suitable and sufficient lights which shall be kept burning throughout the night during the maintenance of such obstructions. It shall be unlawful for anyone to remove or tear down the fence or railing or other protective barriers or any lights provided there for the protection of the public.
(Code 1982, § 16-70; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-121. Industry standards to be followed in street and sidewalk excavations; indemnity.

(a) The plans by a permittee under this article for all trenches whose depth will equal or will exceed five feet shall include detailed plans and specifications showing a trench safety system which meets occupational safety and health administration standards.

(b) The permittee and a registered professional engineer shall certify that the trench safety system set forth on the submitted plan meets and complies with all occupational safety and health administration standards.

(c) The permittee and the engineer shall indemnify and hold the town harmless from any damages or injuries resulting from a failure of the plan or its implementation to meet occupational safety and health administration standards.
(Code 1982, § 16-70.1; Ord. No. 000-005, § 1, 2-8-00)

State law reference—Trench safety, V.T.C.A., Health and Safety Code § 756.021 et seq.

Sec. 70-122. Attractive nuisance.

It shall be unlawful for the permittee under this article to suffer or permit to remain unguarded at the place of excavation or opening any machinery, equipment or other device having the characteristics of an attractive nuisance likely to attract children and be hazardous to their safety or health.
(Code 1982, § 16-71; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-123. Care of excavated material.

All material excavated from or other materials stored next to trenches and piled adjacent to the trench or in any street shall be piled and maintained in such manner as not to endanger those working in the trench, pedestrians or users of the streets, and so that as little inconvenience as possible is caused to those using streets and adjoining property. Where the confines of the area being excavated are too narrow to permit the piling of excavated material beside the trench, such as might be the case in a narrow alley, the public works director shall have the authority to require that the permittee haul the excavated material to a storage site and then rehaul it to the trench site at the time of backfilling. It shall be the permittee's responsibility to secure the necessary permission and make all necessary arrangements for all required storage and disposal sites.
(Code 1982, § 16-72; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-124. Damage to existing improvements.

All damage done to existing improvements during the progress of the excavation work shall be repaired by the permittee under this article. Materials for such repair shall conform with the requirements of any applicable code or ordinance. If upon being ordered, the permittee fails to

furnish the necessary labor and materials for such repairs, the public works director shall have the authority to cause such necessary labor and materials to be furnished by the town and the cost shall be charged against the permittee, and the permittee shall also be liable on his or its bond therefor.

(Code 1982, § 16-73; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-125. Property lines and easements.

Property lines and limits of easements shall be indicated on the plan of excavation submitted with the application for the excavation permit and it shall be the permittee's responsibility to confine excavation work within these limits.

(Code 1982, § 16-74; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-126. Cleanup.

As the excavation work progresses, all streets and private properties shall be thoroughly cleaned of all rubbish, excess earth, rock and other debris resulting from such work. All cleanup operations at the location of such excavation shall be accomplished at the expense of the permittee under this article and shall be completed to the satisfaction of the public works director. From time to time as may be ordered by the public works director and in any event immediately after completion of such work, the permittee shall at his or its own expense clean up and remove all refuse and unused materials of any kind resulting from such work and upon failure to do so within 24 hours after having been notified to do so in writing by the public works director, such work may be done by the public works director and the cost thereof charged to the permittee, and the permittee shall also be liable for the cost thereof under the surety bond provided in this article.

(Code 1982, § 16-75; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-127. Protection of watercourses.

The permittee under this article shall provide for the flow of all watercourses, sewers or drains intercepted during the excavation work and shall replace such watercourses, sewers or drains in as good condition as it found them or shall make such provisions for them as the public works director may direct. The permittee shall not ob-

struct the gutter of any street but shall use all proper measures to provide for the free passage of surface water. The permittee shall make provision to take care of all surplus water, muck, silt, slickings or other run-off pumped from excavations or resulting from sluicing or other operations and shall be responsible for any damage resulting from its failure to so provide.

(Code 1982, § 16-76; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-128. Breaking through pavement.

Whenever it is necessary to break through existing pavement for excavation purposes and where trenches are to be four feet or over in depth, the pavement and the base shall be removed to at least 12 inches beyond the outer limits of the subgrade that is to be disturbed in order to prevent settlement, and a 12-inch shoulder of undisturbed material shall be provided on each side of the excavated trench. The face of the remaining pavement shall be approximately vertical. A power-driven concrete saw shall be used so as to permit complete breakage of concrete pavement or base without ragged edges for the full depth of the pavement. Asphalt paving shall be scored or otherwise cut in a straight line. No pile driver may be used in breaking up the pavement.

(Code 1982, § 16-77; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-129. Jacking, boring or tunneling.

(a) *Description.* This section shall govern for the provision of the required opening for the installation of conduits by the methods of jacking, boring, or tunneling as shown on the plans and in conformity with the specifications in this section.

(b) *Construction requirements.* Where encasement or carrier pipe is required to be installed under railroad embankments or under highways, streets, or other facilities by jacking, boring or tunneling methods, construction shall be made in a manner that will not interfere with the operation of the railroad, highway or other facility, and will not weaken or damage any embankment or structure. The drilling or pilot holes for the alignment of pipe prior to its installation by jacking, boring or tunneling will be a requirement. The contractor shall take the proper precautions to

avoid excavating earth or rock or shattering rock beyond the limits of excavation needed to install the conduit.

(c) *Construction by jacking.*

- (1) If the grade of the pipe at the jacking end is below the ground surface, suitable pits or trenches shall be excavated for the purpose of conducting the jacking operations and for placing end joints of the pipe. This excavation shall not be carried to a greater depth than is required for placing of the guide and jacking timbers and no nearer the roadbed than two feet.
- (2) At the other end of the pipe, an approach trench shall be excavated accurately to grade. All open trenches and pits shall be braced and shored in such a manner as will adequately prevent caving or sliding of the walls into the open trench or pit.
- (3) Heavy duty jacks suitable for forcing the pipe through the embankment shall be provided. In operating jacks, even pressure shall be applied to all jacks used. A suitable jacking head not less than six inches larger than the outside diameter of the pipe, usually of timber, and suitable bracing between jacks and jacking head shall be provided so that pressure will be applied to the pipe uniformly around the ring of the pipe. The jacking head shall be of such weight and dimensions that it will not bend or deflect when full pressure is applied at the jack. The jacking head shall be provided with an opening for the removal of excavated material as the jacking proceeds. A suitable jacking frame or backstop shall be provided. The pipe to be jacked shall be set on guides which are straight and securely braced together in such a manner to support the section of the pipe and to direct it in the proper line and grade. All timber and other materials used in the construction of the jacking assembly will be of such quality and dimensions that they will withstand all stresses to which they are subjected in such a manner as to ensure even pressures on the pipe during jacking operations. The whole jacking assembly shall be placed so as to line up with the direction and grade of the pipe.
- (4) As the jacking proceeds, the embankment material shall be excavated slightly in such a manner to avoid making the excavation larger than the outside diameter of the pipe, with the excavated material being removed through the pipe. The excavation for the underside of the pipe, for at least one-third of the circumference of the pipe, shall conform to the contour and grade of the pipe. The excavation for the top half of the pipe shall conform closely to the outside diameter of the pipe and a clearance greater than two inches pipe and the earth will be filled with grout proportioned 1:7 minimum mix grout with five percent to 40 percent air entrainment. Grout holes may be provided in the pipe or grouting may be made through drill holes from the ground surface if practical. The grouting shall follow immediately upon completion of the jacking operation.
- (5) All carrier pipe installed by jacking shall be supported by quarter point cradle of 2,000 psi concrete across the jacking pit and to the first joint in the ditch section on each end.
- (6) The distance that the excavation shall be extended beyond the end of the pipe depends on the character of the material, but it shall not exceed two feet in any case. The pipe, preferably, shall be jacked from the low or downstream end.
- (7) When the jacking of pipe is once begun, the operation shall be carried on without interruption, insofar as practicable to prevent the pipe from becoming firmly set in the embankment.
- (8) Any pipe damaged in jacking operations shall be repaired or removed and replaced by the contractor at his entire expense.
- (9) The pits or trenches excavated to facilitate jacking operation shall be filled immediately after the jacking of the pipe has

been completed unless an encasement only has been installed; in which case, the trenches and pits shall be left open until the carrier pipe has been laid through and manholes have been built if required.

- (10) The pits or trenches will then be backfilled in accordance with the location and conditions as are covered elsewhere in these specifications.
- (11) If a carrier pipe is laid through an encasement pipe, the bedding of crushed rock, concrete, grout or granular material, if any, will be considered a part of the jacking operation.

(d) *Construction by boring.* The hole shall be bored mechanically with a suitable boring assembly/ designed to produce a smooth, straight shaft and so operated that the completed shaft will be at the established line and grade. The size of the bored hole shall be of such diameter to provide ample clearance for bells or other joints. All carrier pipe installed by boring shall be supported by quarter point cradle of 2,000 psi concrete across the boring pit and to the first joint in the ditch section on each end. All voids will be grouted with a 1:7 minimum mix with five percent to 40 percent air entrainment, and will be considered a part of the unit price of the boring operation.

(e) *Construction by tunneling.*

- (1) The tunnel shall be excavated in such a manner and to such dimensions which will permit placing of the proper supports necessary to protect the excavation.
- (2) All equipment operated in the tunnel shall be powered by either air or electricity. No equipment will be permitted in the tunnel that uses a petroleum product for fuel. Electric lights shall be used for illumination of the tunnel construction, for illumination of completed portions of the tunnel used for passage, and wherever lighting is needed for inspection of the work. Sufficient number of lamps shall be used to properly illuminate the work, and all wiring for electric power and lights shall be installed and maintained in a safe and secure manner in accordance with the

current electrical code of the town. The contractor shall maintain the tunnel air in a condition suitable for the health of the workmen and sufficiently clear for surveying operations. A sufficient supply of fresh air shall be provided to make for the quick and complete removal of gases and dust resulting from blasting or other tunnel operations. Except when unnecessary due to natural ventilation, artificial ventilation shall be maintained in the tunnel by ventilating plants of ample capacity operated when needed to meet the preceding requirements.

- (3) If required by the plans or if required for safety, suitable steel or timber sheeting, shoring and bracing shall be used to support the sides and roof of the excavation. Supports may be left in place provided that they clear the encasement or carrier pipe.
- (4) Nothing contained in this section shall prevent the contractor from placing such temporary or permanent supports as he shall deem necessary, nor shall it be construed as relieving the contractor from his full responsibility for the safety of the work, and for all damages to persons and property.
- (5) If the tunnel is to be lined with concrete as a monolithic structure, then the overbreak, if any, or voids will be poured with concrete of the required strength as detailed on plan. If the strength is not indicated, the 28-day strength will be a minimum of 3,000 psi.
- (6) Unless otherwise indicated or specified, the entire void between the outside of the pipe and the tunnel walls or the inside face of the tunnel lining shall be backfilled with concrete having a minimum compressive strength of 2,000 pounds per square inch at 28 days or 1:7 minimum mix grout with five percent to 40 percent air entrainment.
- (7) No concrete or grout shall be placed around the pipe unless the permanent sheeting, bottom, sides and roof of the tunnel are in

a condition satisfactory to the public works director. The minimum thickness of concrete or grout backfill shall be maintained throughout. Concrete required for backfill in excess of the minimum dimensions shown on plan will be at the entire expense of the contractor.

(Code 1982, § 16-78; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-130. Backfilling.

Unless waived by the public works director, backfilling in any street opened or excavated pursuant to an excavation permit issued under this article shall be compacted to a minimum dry density of 95 percent of standard proctor density, within three percent of optimum moisture. Compacting shall be done by mechanical tampers or vibrators by rolling in layers, as required by the soil in question and sound engineering practices generally recognized in the construction industry. The public works director shall have the right to require testing to determine the compaction, and such testing shall be at the expense of permittee. (Code 1982, § 16-79; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-131. Dry backfilling.

Backfilling up to the first 12 inches above the top of the utility pipes or similar installations shall be done in four-inch to six-inch layers. Each layer is to be tamped by manual or mechanical means. Layers that are hand tamped shall not exceed four inches in thickness. Layers that are power tamped shall not exceed six inches in thickness. The same requirements shall apply to the remainder of the backfilling if tamping is the method used for backfilling. Backfilling of all pipes of over 24 inches in diameter shall be carried up to the spring line of the pipe in three-inch layers, with each layer moistened and thoroughly tamped with suitable mechanical equipment. The backfill around all pipes 24 inches or less in diameter shall be tamped as specified in this section to a depth of 12 inches above the top of the pipe before any additional backfilling is placed thereon.

(Code 1982, § 16-80; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-132. Backfill material.

Whenever any excavation for the laying of pipe is made through rock, the pipe shall be laid six inches above the rock bottom of the trench and the space under, around and six inches above the pipe shall be backfilled with clean river sand, noncorrosive soil or one-quarter inch minus gravel or in accordance with manufacturer's specification if approved in writing by the public works director. Broken pavement, large stones, and debris shall not be used in the backfill.

(Code 1982, § 16-81; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-133. Backfilling of the surface.

Backfilling shall be completed by placing the backfill material well up over the top of the trench. For dry backfilling, the material shall be compacted with a roller of an approved type or with the rear of a truck carrying at least five tons until the surface is unyielding. The surface shall then be graded as required.

(Code 1982, § 16-82; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-134. Restoration of surface.

(a) The permittee shall restore the surface of all streets, broken into or damaged as a result of the excavation work, to its original condition in accordance with the specifications of the public works director. The permittee may be required to place a temporary surface over openings made in paved traffic lanes. Except when the pavement is to be replaced before the opening of the cut to traffic, the fill above the bottom of the paving slab shall be made with suitable material well tamped into place and this fill shall be topped with a minimum thickness of bituminous mixture which is suitable to maintain the opening in good condition until permanent restoration can be made. The crown of the temporary restoration shall not exceed one inch above the adjoining pavement. The permittee shall exercise special care in making such temporary restorations and must maintain such restorations in safe traveling condition until such time as permanent restorations are made. The asphalt which is used shall be in accordance with the specifications of the public works director.

(b) Permanent restoration of the street shall be made by the permittee in strict accordance with the specifications prescribed by the public works director to restore the street to its original and proper condition, or as near as may be.

(c) Acceptance or approval of any excavation work by the public works director shall not prevent the town from asserting a claim against the permittee and his surety under the surety bond required hereunder for incomplete or defective work if discovered within 12 months from the completion of the excavation work. The public works director's presence during the performance of any excavation work shall not relieve the permittee of its responsibilities under this article. (Code 1982, § 16-83; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-135. Town's right to restore surface.

(a) If the permittee shall have failed to restore the surface of the street to its original and proper condition upon the expiration of the time fixed by such permit or shall otherwise have failed to complete the excavation work covered by such permit, the public works director, if he deems it advisable, shall have the right to do all work as necessary to restore the street and to complete the excavation work. The permittee shall be liable for the actual cost thereof plus 25 percent of such cost for general overhead and administrative expenses. The town shall have a cause of action for all fees, expenses and amounts paid out and due it for such work and shall apply in payment of the amount due it any funds of the permittee deposited as provided in this article, and the town shall also enforce its rights under the permittee's surety bond provided pursuant to this article.

(b) It shall be the duty of the permittee to guarantee and maintain the site of the excavation work in the same condition it was prior to the excavation for one year after restoring it to its original condition. (Code 1982, § 16-84; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-136. Trenches in pipe laying.

Except by special permission from the public works director, no trench shall be excavated more than 250 feet in advance of pipe laying or left unfilled more than 500 feet where pipe has been

laid. The length of the trench that may be opened at any one time shall not be greater than the length of pipe and the necessary accessories which are available at the site ready to be put in place. Trenches shall be braced and sheathed according to generally accepted safety standards for construction work as prescribed by the public works director. No timber bracing, lagging, sheathing or other lumber shall be left in any trench. (Code 1982, § 16-85; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-137. Prompt completion of work.

The permittee shall prosecute with diligence and expedition all excavation work covered by the excavation permit and shall promptly complete such work and restore the street to its original condition, or as near as may be, as soon as practicable and in any event not later than the date specified in the excavation permit therefor. (Code 1982, § 16-86; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-138. Urgent work.

If in his judgment, traffic conditions, the safety or convenience of the traveling public or the public interest require that the excavation work be performed as emergency work, the public works director with the consent of the city manager, if the excavation is within 300 feet of a residence, shall have full power to order, at the time the permit is granted, that a crew of men and adequate facilities be employed by the permittee 24 hours a day to the end that such excavation work may be completed as soon as possible. (Code 1982, § 16-87; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-139. Emergency action.

In the event of any emergency in which a sewer or water main, conduit or utility in or under any street breaks, bursts or otherwise is in such condition as to immediately endanger the property, life, health or safety of any individual, the person owning or controlling such sewer, main, conduit or utility, without first applying for and obtaining an excavation permit hereunder, shall immediately take proper emergency measures to cure or remedy the dangerous conditions for the protection of property, life, health and safety of individuals. However, such person owning or con-

trolling such facility shall apply for an excavation permit not later than the end of the second day following the day of such emergency during which the public works director's office is open for business, and shall not proceed with permanent repairs without first obtaining an excavation permit under this article.

(Code 1982, § 16-88; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-140. Noise, dust and debris.

Each permittee shall conduct and carry out the excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. The permittee shall take appropriate measures to reduce to the fullest extent practicable in the performance of the excavation work, noise, dust and unsightly debris and during the hours of 10:00 p.m. and 7:00 a.m. shall not use, except with the express written permission of the city manager, or in case of an emergency as herein otherwise provided, any tool, appliance or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property.

(Code 1982, § 16-89; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-141. Preservation of monuments.

The permittee shall not disturb any surface monuments or hubs found on the line of excavation work until approved to do so by the public works director.

(Code 1982, § 16-90; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-142. Inspections.

The public works director shall make such inspections as are reasonably necessary in the enforcement of this article. The public works director shall have the authority to promulgate and cause to be enforced such rules and regulations as may be reasonably necessary to enforce and carry out the intent of this article.

(Code 1982, § 16-90.1; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-143. Drawings to be maintained.

Users of subsurface street space shall maintain accurate drawings and plans showing the location and character of all underground structures.

(Code 1982, § 16-90.2; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-144. Applicability of article to town work and utility companies.

The provisions of this article shall be applicable to any excavation work under the direction of a competent town authority by employees of the town. Any contractor of the town performing work for or in behalf of the town necessitating openings or excavations in streets shall comply with this article unless the public works director shall, in writing, waive compliance of the requirements of this article upon the terms and conditions he deems necessary. All provisions of this article shall be applicable to public utility companies and their contractors, except the provision which requires the payment of a permit fee and the provision which requires a surety bond provided such utility company has agreed to indemnify the town against damage and losses covered by the bond.

(Code 1982, § 16-90.3; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-145. Insurance.

A permittee, prior to the commencement of excavation work under this article, shall furnish to the public works director satisfactory evidence in writing that the permittee has in force and will maintain in force during the performance of the excavation work and the period of the excavation permit public liability insurance of not less than \$100,000.00 for any one person and \$300,000.00 for any one accident and property damage insurance of not less than \$100,000.00, duly issued by an insurance company authorized to do business in this state. However, if the public works director determines that the cost of the excavation to be performed by permittee exceeds \$100,000.00, then the public works director, at his discretion, may require the permittee to maintain in force during the performance of the excavation work and the period of excavation permit public insurance not

less than \$1,000,000.00 for any one person and \$3,000,000.00 for any one accident and property damage insurance not less than \$500,000.00, duly executed by an insurance company authorized to do business in this state. For purposes of this section, the town will accept certificates of self-insurance issued by the State of Texas or letters written by the person in those instances where the state does not issue such letters, which provide the same coverage as required herein. However, for the town to accept such letters the person must demonstrate by written information that it has adequate financial resources to be a self-insured entity as reasonably determined by the town, based on financial information requested by and furnished to the town.

The above insurance requirements may be met by applicants with a current franchise or license and applicants governed by Chapter 283 of the Texas Local Government Code if the current franchise, license or statutory indemnity adequately provides for insurance or bonds or provides an indemnity in favor of the city.
(Code 1982, § 16-90.4; Ord. No. 000-005, § 1, 2-8-00)

Secs. 70-146—70-160. Reserved.

DIVISION 2. PERMIT

Sec. 70-161. Required.

It shall be unlawful for any person to dig up, break, excavate, jack, bore, tunnel, undermine or in any manner break up any street or to make or cause to be made any excavation in or under the surface of any street for any purpose or to place, deposit or leave upon any street any earth or other excavated material or construction material obstructing or tending to interfere with the free use of the street, unless such person shall first have obtained an excavation permit therefor from the public works director.
(Code 1982, § 16-57; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-162. Application.

No excavation permit shall be issued unless a written application for the issuance of an excavation permit is submitted to the public works

director. The written application shall state the name and address of the applicant, the nature, location and purpose of the excavation, the date of commencement and date of completion of the excavation, and other data as may reasonably be required by the public works director. The application shall be accompanied by plans showing the extent of the proposed excavation work, the dimensions and elevations of both the existing ground prior to such excavation and of the proposed excavated surfaces, the location of the excavation work, and such other information as may be prescribed by the public works director. Furthermore, the application shall disclose the date on which the excavation work will be finished and the street restored to its original condition. An excavation permit issued pursuant to this section shall be automatically revoked if excavation work is not commenced within ten days from the issuance of such permit.

(Code 1982, § 16-58; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-163. Fees.

Except as provided by section 70-144, a permit fee shall be charged by the public works director for the issuance of an excavation permit which shall be in addition to all other fees for permits or charges relative to any proposed construction work. The excavation permit fee shall be in an amount of \$10.00.

(Code 1982, § 16-59; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-164. Suspension and/or revocation.

(a) Permits may be suspended by the public works director on the following grounds:

- (1) Failure of permittee to start excavation work on the commencement date provided for in the application or to diligently do such work after beginning.
- (2) Violation of any terms or provisions of the street excavation ordinance of the town, as amended.
- (3) Giving false information upon the application.
- (4) Changing of subcontractors responsible for the excavation work.

- (5) Failure of permittee to finish the work on or before the finish date set forth in the application.

Whenever a permit holder has failed to comply with any notice issued under the provision of this section, the permit holder shall be notified in writing that the permit is, upon the service of the notice, immediately suspended, and that an opportunity of hearing will be provided if a written request for a hearing is filed with the public works director by the permit holder. Notwithstanding the other provisions of this section, whenever the public works director finds the conditions of the excavation work, which in his judgment, constitutes a substantial hazard to the public, he may, without warning, notice or hearing, issue written or oral notice to the permit holder, citing such conditions, corrected actions to be taken; and if deemed necessary, such order shall state that the permit is immediately suspended, and all excavation work is to be immediately suspended except for returning the street to a usable condition. Any person to whom such an order is issued shall comply immediately therewith, but upon written petition to the public works director, shall be afforded a hearing as soon as possible.

(b) Any person whose permit has been suspended may, within five (5) days of the suspension, make application for reconsideration for the purpose of reinstatement of the permit. Within five (5) days following receipt of a written request, including a statement signed by applicant that in his opinion the conditions causing suspension of the permit has been corrected, the public works director shall reconsider the alleged violation. If the applicant is complying with the requirements of this article, the permit shall be reinstated.

(c) For serious or repeated violations of any of the requirements of this article, including, but not limited to, the failure to timely complete the excavation work, or for interference with the public works director's performance of his duty, the permit may be permanently revoked after an opportunity for a hearing has been provided for by the public works director. Prior to such action, the public works director shall notify the permit holder, in writing, stating the reasons for which the permit shall be permanently revoked at the end of

five (5) days following service of such notice, unless a request for hearing is filed with the public works director, by the permit holder within such five-day period. As provided in this section, the permit may be suspended for cause pending its revocation or a hearing relative thereto. If no request for hearing is filed within the five-day period, the revocation of the permit becomes final.

(d) The notice provided for in this section is properly served when it is delivered to the holder of the permit or the person in charge, or when it is sent by registered or certified mail, return receipt requested, to the address shown upon the application required to be submitted under this division.

(e) The hearing provided for in this section shall be conducted by a committee at a time and place designated by the public works director. The committee shall be comprised of the public works director, building official, and street superintendent. Based upon the record of such hearing, the committee shall make a finding and shall sustain, modify or rescind any official notice or order considered in the hearing. A written report of the hearing decision shall be furnished to the permit holder by the committee.

(f) The applicant shall not be entitled to refunding of a permit fee where a permit is revoked or suspended.

(g) If a permit is revoked pursuant to the provisions of this section, the public works director shall have the option to pursue any one or more of the following remedies without any notice or demand to the permit holder whatsoever:

- (1) Direct the building official to revoke the building permit related to the excavation work, if any.
- (2) Cause to be performed work necessary to correct and repair the street to its condition prior to the beginning of the excavation work and to charge the cost of such repair to the permittee or owner of the property for whom the excavation work was to be benefit.

- (3) Shall not accept an application for additional or new excavation work from an applicant whose permit has been revoked within a three-year period.

(Code 1982, § 16-60; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-165. Excavation placard.

The public works director shall provide each permittee at the time a permit is issued under this article a suitable placard plainly written or printed in English letters at least one inch high with the following notice: "Town of Addison Permit No. _____ Expires _____" and in the first blank space there shall be inserted the number of such permit and after word "expires" shall be stated the date when such permit expires. It shall be the duty of any permittee under this article to keep the placard posted in a conspicuous place at the site of the excavation work. It shall be unlawful for any person to exhibit such placard at or about any excavation not covered by such permit, or to misrepresent the number of the permit or the date of expiration of the permit.

(Code 1982, § 16-61; Ord. No. 000-005, § 1, 2-8-00)

Sec. 70-166. Surety bond.

Before an excavation permit as provided in this division is issued and unless waived by the public works director, the applicant shall deposit with the public works director a surety bond in the amount of twenty-five thousand dollars (\$25,000.00) payable to the town. The public works director shall have the right to reduce the amount of the bond, if he determines in his sole discretion that the prescribed amount would be unreasonable in the light of the scope and cost of the work. The required surety bond must be:

- (1) With good and sufficient surety.
- (2) By a surety company authorized to transact business in the state.
- (3) Satisfactory to the city attorney in form and substance.
- (4) Conditioned upon the permittee's compliance with this division and to secure and hold the town and its officers harmless against any and all claims, judgments, or

other costs arising from the excavation and other work covered by the excavation permit or for which the town, the city council or any town officer may be made liable by reason of any accident or injury to persons or property through the fault of the permittee either in not properly guarding the excavation or for any other injury resulting from the negligence of the permittee, and further conditioned to fill up, restore and place in good and safe condition as near as may be to its original condition, and to the satisfaction of the public works director, all openings and excavations made in streets, and to maintain any street where excavation is made in as good condition for the period of twelve (12) months after such work shall have been done and accepted by town, usual wear and tear excepted, as it was in before such work shall have been done. Any settlement or upheaval of the surface within such 12-month period shall be deemed conclusive evidence of defective backfilling by the permittee. Nothing contained in this subsection shall be construed to require the permittee to maintain any repairs to pavement made by the town if such repairs should prove defective. Any owner of real estate repairing or engaging another to repair his own sidewalk shall not be required to give such bond. In the event of any suit or claim against the town by reason of the negligence or default of the permittee, upon the town's giving written notice to the permittee of such suit or claim, any final judgment against the town requiring it to pay for such damage shall be conclusive upon the permittee and his surety. An annual bond may be given under this provision which shall remain in force for one year conditioned as above, in the amount specified above and in other respects as specified above but applicable as to all excavation work in streets by the principal in such bond during the term of one year from such date.

(Code 1982, § 16-62; Ord. No. 000-005, § 1, 2-8-00)

Secs. 70-167—70-190. Reserved.

ARTICLE V. BARRICADES

DIVISION 1. GENERALLY

Sec. 70-191. Definitions.

The following words, terms and phrases when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Alleys means minor traveled ways which are used primarily for vehicular service access to the back or the side of properties otherwise abutting on a street.

Contractor means any person or group of persons entering into an agreement to perform work within the town.

Detour means an alternate route in which vehicular traffic is directed around a street which is closed.

Director means the director of public works of the town or his designee.

Emergency means an unforeseen combination of circumstances or the resulting state that calls for immediate action.

Manual means part 4, entitled "Traffic-Control for Street and Highway Construction and Maintenance Operation," as contained in the Texas Manual on Uniform Traffic-Control Devices for Streets and Highways as published by state department of highway and public transportation, 1980 edition.

Permit means a written letter of approval from the director or his appointed representative.

Streets means a traveled way for vehicular traffic, whether designated as a street, highway,

thoroughfare, parkway, throughway, road, avenue, boulevard, lane, place or however otherwise designated.

- (1) *Major thoroughfares or arterial streets* means principal traffic arteries more or less continuous across the town which are intended to connect remote parts of the town and which are used primarily for fast or heavy volume traffic and shall include, but not be limited to, each street designated as a major street on the major street plan.
- (2) *Collector streets* means those streets which carry traffic from minor streets to the major system of arterial streets and highways, including the principal entrance streets of a residential development and streets for circulation within such a development.
- (3) *Minor streets* means those streets which are used primarily for access to abutting residential properties which are intended to serve traffic within a limited residential district.

Public right-of-way means any public street, highway, roadway, alley or sidewalk.
(Code 1982, § 16-91)

Cross reference—Definitions generally, § 1-2.

Sec. 70-192. Emergency situations.

The requirements of this article are to be used for all planned construction projects. In the event of an emergency type situation, notification of work to be done can be made by telephone directly to the director or his appointed representative, thereby bypassing the requirements mentioned above. Under these conditions, the contractor or agency will still be required to follow the basic barricading standards as outlined in the manual.
(Code 1982, § 16-94)

Sec. 70-193. Use of barricades in compliance with certain established regulations.

(a) Any person who undertakes to perform any work upon, in, under, above or about any public streets, highway, roadway, alley or sidewalk, col-

lectively called public right-of-way, which requires that the street be partially or completely closed for construction and/or maintenance operation which work shall require excavation within or occupancy of the whole or a part of the width of any public right-of-way by equipment, materials, debris, or workmen shall use barricades, signals, flags, flares and all other traffic control or warning devices and procedures about the work area during the duration of the work within the public right-of-way of the type and in the manner required by part 4 of the Texas Manual on Uniform Traffic-Control Devices for Streets and Highways, 1980 edition, entitled "Traffic-Control for Street and Highway Construction and Maintenance Operation." Such person shall also be required to obtain a permit from the director, if required by division 2 of this article. The permit must be acquired before construction is begun. The purpose of the permit is to ensure that ample consideration has been given to the effect of such construction work on the flow of traffic.

(b) It shall be the responsibility of the permit holder to provide, erect, place and maintain all warning signs, traffic control devices and barricades required by part 4 of the Texas Manual on Uniform Traffic-Control Devices for Streets and Highways, published by the State Department of Highway and Public Transportation, 1980 edition. All such signs, devices and barricades should be in good condition, clean and legible and shall be of the type required by the Texas Manual on Uniform Traffic-Control Devices.
(Code 1982, § 16-92)

Secs. 70-194—70-210. Reserved.

DIVISION 2. PERMIT

Sec. 70-211. Required.

(a) *Contractors.*

- (1) Any contractor undertaking any work whether of his own, or under contract for any other person, and such work is within a town street and requires that a set of plans be drawn up due to the extensive and/or complex nature of the work, will be subject to the provisions set forth in this

subsection, and must file for a permit before beginning construction. Proof must also be shown that such contractor has obtained approval by other affected agencies of the town to actually perform the work.

- (2) A plan must be prepared by the contracting agency showing where work is to be performed. The plan will include a standard barricading layout showing placement of barricades, cones and informational signs used on the project. In most cases, layouts will be similar to those shown in the latter part of the attached manual. Deviation from the manual will be allowed only with the approval of the director or his appointed representative.
- (3) The plan as mentioned in subsection (a)(2) of this section must be submitted a minimum of five business days prior to actual beginning of the construction work. This time period will allow the designated department the opportunity to survey the construction site in an attempt to uncover any traffic problems which might develop as a result of the barricading.
- (4) Each contractor or construction agency will provide with his barricading plan a listing of all persons directly responsible for the safety on each project to include an address or telephone listing at which such person can be reached at any hour of the day if a hazardous condition develops.

(b) *Contractors performing work for the town.* In the event the contractor undertakes work based on plans prepared by the town, all detours and barricading requirements will be inserted as a part of the construction plan. No permit will be required; however, the contractor shall be subject to the requirements contained in this article.

(c) *Public utility company requirements.*

- (1) Public utility companies performing construction work within a street which requires that a set of plans be drawn up due to the extensive and/or complex nature of work, will be subject to the same requirements established in subsection (a) of this

section. Such work would include major street construction (street cuts, street widening, etc.), water and sewerage line laying or relocation or off-street construction which requires that a portion of the adjacent roadway be barricaded.

- (2) Construction work performed by utility companies, minor enough such that a set of plans need not be drawn up, will not be subject to the same requirements established in subsection (a) of this section. Such work includes minor street construction (resurfacing, patching, striping), minor utility work (usage of manholes such that a lane must be barricaded), etc. These forces will be required, however, to comply with all other provisions set forth in this manual as to the construction site barricade layout and signing. In addition, the director or his authorized representative shall be contacted before such construction work is begun and be informed of the location and nature of construction. This work shall not be performed during the peak hour congestion periods of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., unless approved by the director.

(Code 1982, § 16-93(b))

Sec. 70-212. Application.

When a permit under this article is required, the permit application shall be filed with the director at least five days prior to the day the applicant seeks to first close or block any part of the roadway and shall contain the following information:

- (1) The name, telephone number, local address and principal place of business of the applicant.
- (2) The name and day and night telephone number of the engineer, foreman or other person who will be in charge of the construction or repairs for which the application is requested.
- (3) The times of the day and total number of calendar days the applicant seeks to block the roadway.

- (4) A statement signed by the applicant, or a person authorized to bind the applicant, that the applicant will indemnify and forever hold the town harmless against each and every claim, demand or cause of action that may be made or come against it by reason of or in any way arising out of the closing or blocking of the roadway by the applicant under a permit from the town, if such permit is granted.
- (5) A standard barricading layout showing placement of barricades, cones and information signs used on the project.
- (6) An explanation as to the nature or type of work that is to be performed along with its location.
- (7) Any other information deemed necessary by the director.

(Code 1982, § 16-93(a)(1))

Sec. 70-213. Approval or disapproval.

The director shall either approve or disapprove the application for a permit under this article in five business days after it is submitted. The director may approve an application either as applied for or subject to special requirements, as provided in section 70-214, which special requirements shall be endorsed on the permit when issued and become a part thereof. If an application is not approved, the director shall so notify the applicant, in writing, stating the reasons for disapproval. An applicant may, if he so desires, undertake the revision of the unapproved application and resubmit it to the director who shall approve, subject to special requirements, or disapprove the amended application within two business days. The director may disapprove applications for permits under this article only for the following reasons:

- (1) The proposed barricading, channelizing, signing, warning or other traffic control procedures or the equipment therefor do not comply with the requirements of the manual.
- (2) The nature of the work to be performed or its location is such that the work may, without imposing any undue hardship on

the applicant, be performed without the necessity of blocking or closing the roadway.

- (3) The work or the manner in which it is to be performed will violate a town ordinance or a state statute.
- (4) Failure to furnish all of the information required by this article or, except for good cause shown, to file the application within the time prescribed by this article.
- (5) Misrepresenting or falsifying any information in the application.

(Code 1982, § 16-93(a)(2))

Sec. 70-214. Special requirements.

(a) The director may, at the time he approves an application for a permit under this article or anytime after a permit is issued, require:

- (1) The use or specific location of additional barricades, signals, signs or other traffic control or safety devices or the pursuance of special traffic control or safety procedures.
- (2) That the work be performed only at certain hours during the day or night, or during specified days of the week.
- (3) That only a specified area or not more than a specified number of lanes shall be blocked at the same time or at specified times of the day.
- (4) That materials and equipment used in the work site and dirt removed from any excavation be located other than in the vehicle traffic lanes of such roadway.
- (5) That all equipment be moved from the traffic lanes and any excavation in the traffic lanes be covered or filled with materials of sufficient strength and construction to permit vehicular traffic to pass over such excavation during all or part of the peak traffic periods or at night.

(b) When such requirements are deemed necessary by the director in the interest of public safety and to avoid traffic congestion, any such special requirements shall be endorsed on the permit and shall be a part thereof.

(Code 1982, § 16-93(a)(3))

Sec. 70-215. Revocation.

(a) Any designated director or his authorized representatives may revoke a permit issued under this article if any of the permit holder's barricading, signing, channelizing, warning or other traffic control procedures or the equipment at the work site do not comply with the requirements of the manual, or with any special requirements imposed by the director. The permit holder, or the person named as responsible for or in charge of the work in the permit, shall first be notified of the failure or defect and be given a reasonable time, such length of time to be determined by the director and not to exceed 24 hours, to correct such failure or defect before such permit is revoked. In the event a permit issued under this article is revoked, it shall be unlawful to continue to block the roadway, except to restore the site to its proper condition as required in this article.

(b) In the event a permit is revoked, the permit holder shall immediately commence operations to restore the work area within the roadway to its proper condition, such work to be completed within 24 hours. In addition, except as required to restore the work area to its proper condition, the permit holder shall remove all equipment, men, materials and debris from the roadway. In the event such restoration is not done, the town shall be authorized, at its election, to take charge of the work and restore the premises to its proper condition and shall be entitled to recover from the permit holder by civil action the actual expenses incurred by the town in restoring the premises, including, but not limited to, cost of labor, materials, overhead, rental of any equipment used by the town in restoring the site and attorneys' fees, and for such purposes, the town shall have a right of action against any bonds in effect running from the holder of the permit to the town, conditioned upon compliance with the ordinances of the town in the performance of such work.
(Code 1982, § 16-93(a)(3), (a)(4))

Secs. 70-216—70-240. Reserved.

**ARTICLE VI. UNLOADING
CONSTRUCTION EQUIPMENT ON
PUBLIC PROPERTY**

Sec. 70-241. Definitions.

The following words, terms and phrases when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Appropriate town official means the street superintendent, the public works director, the chief of police, the chief building official, the zoning administrator, or other appropriate official or his duly designated and acting representative.

Construction equipment means any type of apparatus, material, debris or supplies used in construction, including, but not limited to, the following: motorized and unmotorized vehicles, cranes, pulleys, carts, containers, wagons, tractors, trailers, components of construction and material, debris or supplies and the like.

Public property means any street or highway which shall include the entire width between the boundary lines of the right-of-way publicly maintained and shall also mean any other publicly owned property, facility or landscaped areas.

Unlawful loading and unloading means the placing of any construction equipment upon public property without first obtaining written consent of the public works director or his designee.
(Code 1982, § 9-231)

Cross reference—Definitions generally, § 1-2.

Sec. 70-242. Intent and purpose.

This article is enacted as in enforcement procedure for protection of the public peace, safety and welfare, and the safeguarding of property, and shall be used generally for the prevention and removal of traffic hazards, prevention and abatement of public nuisances arising from violations, and for the protection of the public rights in the use of town streets, thoroughfares and public property.
(Code 1982, § 9-232)

SECTION LS

LANDSCAPE SPECIFICATIONS

ADDISON FIRE STATION NO. 1 DRAINAGE IMPROVEMENTS

SECTION 02231 - TREE PROTECTION AND TRIMMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the protection and trimming of trees that interfere with, or are affected by, execution of the Work, whether temporary or new construction.
- B. Related Sections include the following:
 - 1. Division 1 Section "Summary of Work" for limits placed on Contractor's use of the site.
 - 2. Division 1 Section "Construction Facilities and Temporary Controls" for temporary tree protection.
 - 3. Division 2 Section "Site Clearing" for removal limits of trees, shrubs, and other plantings affected by new construction.
 - 4. Division 2 Section "Earthwork" for building and utility trench excavation, backfilling, compacting and grading requirements, and soil materials.
 - 5. Division 2 Section "Landscaping" for tree and shrub planting and transplanting, tree support systems, and soil materials.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- C. Certification: From a qualified arborist that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- D. Maintenance Recommendations: From a qualified arborist for care and protection of trees affected by construction during and after completing the Work.

1.4 QUALITY ASSURANCE

- A. **Tree Service Qualifications:** An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site on a full-time basis during execution of the Work.
- B. **Arborist Qualifications:** An arborist certified by the International Society of Arboriculture or licensed in the jurisdiction where Project is located.
- C. **Tree Pruning Standards:** Comply with ANSI A300, "Trees, Shrubs, and Other Woody Plant Maintenance--Standard Practices," unless more stringent requirements are indicated.
- D. **Preinstallation Conference:** Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."
 - 1. Before starting tree protection and trimming, meet with representatives of authorities having jurisdiction, Owner, Architect, consultants, and other concerned entities. Review tree protection and trimming procedures and responsibilities. Notify participants at least three working days before convening conference. Record discussions and agreements and furnish a copy to each participant.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. **Topsoil:** Fertile, friable, surface soil, containing natural loam and complying with ASTM D 5268. Provide topsoil that is free of stones larger than 1 inch in any dimension and free of other extraneous or toxic matter harmful to plant growth. Obtain topsoil only from well-drained sites where soil occurs in depth of 4 inches or more; do not obtain from bogs or marshes.
- B. **Chain Link Fence:** Metallic-coated steel chain link fence fabric, 0.120-inch-diameter wire size; 48 inches high, minimum; line posts, 1.9 inches in diameter; terminal and corner posts, 2-3/8 inches in diameter; top rail, 1-5/8 inches in diameter; bottom tension wire, 0.177 inch in diameter; with tie wires, hog ring ties, and other accessories for a complete fence system.

PART 3 - EXECUTION

3.1 PREPARATION

- A. **Temporary Fencing:** Install temporary fencing located as indicated or outside the drip line of trees to protect remaining vegetation from construction damage.
 - 1. Install chain link fence according to ASTM F 567 and manufacturer's written instructions.
- B. **Protect tree root systems from damage due to noxious materials caused by runoff or spillage while mixing, placing, or storing construction materials. Protect root systems from flooding, eroding, or excessive wetting caused by dewatering operations.**

- C. Do not store construction materials, debris, or excavated material within the drip line of remaining trees. Do not permit vehicles or foot traffic within the drip line; prevent soil compaction over root systems.
- D. Do not allow fires under or adjacent to remaining trees or other plants.

3.2 EXCAVATION

- A. Install shoring or other protective support systems to minimize sloping or benching of excavations.
- B. Do not excavate within drip line of trees, unless otherwise indicated.
- C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks and comb soil to expose roots.
 - 1. Relocate roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and relocate them without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 3 inches back from new construction.
 - 2. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
- D. Where utility trenches are required within drip line of trees, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
 - 1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.3 REGRADING

- A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond drip line of trees. Maintain existing grades within drip line of trees.
- B. Minor Fill: Where existing grade is 6 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

3.4 TREE PRUNING

- A. Prune remaining trees affected by temporary and new construction.
- B. Prune remaining trees to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by qualified arborist.

- C. Pruning Standards: Prune trees according to ANSI A300 as follows:
 - 1. Type of Pruning: Crown thinning.
 - 2. Type of Pruning: Crown reduction.
 - 3. Type of Pruning: Crown restoration.
- D. Cut branches with sharp pruning instruments; do not break or chop.
- E. Chip branches removed from trees. Spread chips where indicated or as directed by Architect.

3.5 DISPOSAL OF WASTE MATERIALS

- A. Disposal: Remove excess excavated material, displaced trees, and excess chips from Owner's property.

END OF SECTION 02231

ADDISON FIRE STATION NO.1 DRAINAGE IMPROVEMENTS

SECTION 02920 - LAWNS AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Sodding.
 - 2. Lawn renovation.
- B. Related Sections include the following:
 - 1. Division 2 Section "Site Clearing" for topsoil stripping and stockpiling.
 - 2. Division 2 Section "Earthwork" for excavation, filling and backfilling, and rough grading.
 - 3. Division 2 Section "Subdrainage" for subsurface drainage.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

1. Certification of each seed mixture for turfgrass sod, identifying source, including name and telephone number of supplier.
- C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
- D. Qualification Data: For landscape Installer.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Planting Schedule: Indicating anticipated planting dates for each type of planting.
- G. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of lawns during a calendar year. Submit before expiration of required maintenance periods.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn establishment.
 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 1. Report suitability of topsoil for lawn growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding."

1.7 SCHEDULING

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Spring Planting: April 1 to June 1
2. Fall Planting: Sept 1 to Oct 1

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.8 LAWN MAINTENANCE

A. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:

1. Sodded Lawns: 60 days from date of Substantial Completion.

B. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn.

1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.

C. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water lawn at a minimum rate of 1 inch per week.

D. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

1. Mow grass 1 to 1-1/2 inches high.

E. Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry.

1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. to lawn area.

PART 2 - PRODUCTS

2.1 TURFGRASS SOD

A. Turfgrass Sod: Certified Number 1 Quality/Premium, including limitations on thatch, weeds, diseases, nematodes, and insects], complying with TPI's "Specifications for Turfgrass Sod Materials" in its "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.

1. Sun: Proportioned by weight as follows:
 - a. Bermuda Grass
 - b. St. Augustine Grass

2.2 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth.
 1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.
 2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.3 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 1. Class: Class T, with a minimum 99 percent passing through No. 8 sieve and a minimum 75 percent passing through No. 60 sieve.
 2. Provide lime in form of dolomitic limestone.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials.

2.4 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.5 PLANTING ACCESSORIES

- A. Selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.

2.6 FERTILIZER

- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

2.7 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

- B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- C. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic; free of plant-growth or germination inhibitors; with maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
- D. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.
- E. Asphalt Emulsion: ASTM D 977, Grade SS-1; nontoxic and free of plant-growth or germination inhibitors.

2.8 EROSION-CONTROL MATERIALS

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.
- B. Erosion-Control Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, a minimum of 0.92 lb/sq. yd. , with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches long.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding overspray.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply fertilizer directly to subgrade before loosening.
 - 2. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
 - 3. Spread planting soil mix to a depth of 4 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil mix.
 - b. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
 - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 - 2. Loosen surface soil to a depth of at least of 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 6 inches of soil. Till soil to a homogeneous mixture of fine texture.
 - a. Apply fertilizer directly to surface soil before loosening.
 - 3. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, trash, and other extraneous matter.
 - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.
- E. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

3.4 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across angle of slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of below sod.

3.5 LAWN RENOVATION

- A. Renovate existing lawn.
- B. Renovate existing lawn damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish lawn where settlement or washouts occur or where minor regrading is required.
- C. Remove sod and vegetation from diseased or unsatisfactory lawn areas; do not bury in soil.
- D. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.
- E. Mow, dethatch, core aerate, and rake existing lawn.
- F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.
- I. Apply soil amendments and initial fertilizers required for establishing new lawns and mix thoroughly into top 4 inches of existing soil. Provide new planting soil to fill low spots and meet finish grades.
- J. Apply sod as required for new lawns.

- K. Water newly planted areas and keep moist until new lawn is established.

3.6 SATISFACTORY LAWNS

- A. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- B. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.7 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.
- C. Remove erosion-control measures after grass establishment period.

END OF SECTION 02920

ADDISON FIRE STATION NO.1 DRAINAGE IMPROVEMENTS

SECTION 02930 - EXTERIOR PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

1. Trees.
2. Shrubs.
3. Ground cover.

- B. Related Sections include the following:

1. Division 2 Section "Tree Protection" for protection of existing trees and planting, topsoil stripping and stockpiling, and site clearing.
2. Division 2 Section "Earthwork" for excavation, filling, and rough grading and for subsurface aggregate drainage and drainage backfill materials.
3. Division 2 Section "Subdrainage" for below-grade drainage of landscaped areas, paved areas, and wall perimeters.

1.3 DEFINITIONS

- A. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

1.4 SUBMITTALS

- A. **Product Data:** For each type of product indicated.
- B. **Samples for Verification:** For each of the following:
 - 1. 5 lb of mineral mulch for each color and texture of stone required, in labeled plastic bags.
 - 2. Edging materials and accessories, of manufacturer's standard size, to verify color selected.
- C. **Product Certificates:** For each type of manufactured product, signed by product manufacturer, and complying with the following:
 - 1. Manufacturer's certified analysis for standard products.
 - 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- D. **Qualification Data:** For landscape Installer.
- E. **Material Test Reports:** For existing surface soil and imported topsoil.
- F. **Planting Schedule:** Indicating anticipated planting dates for exterior plants.
- G. **Maintenance Instructions:** Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year. Submit before expiration of required maintenance periods.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** A qualified landscape installer whose work has resulted in successful establishment of exterior plants.
 - 1. **Installer's Field Supervision:** Require Installer to maintain an experienced full-time supervisor on Project site when exterior planting is in progress.
- B. **Soil-Testing Laboratory Qualifications:** An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. **Topsoil Analysis:** Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 - 1. Report suitability of topsoil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.

- D. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."
 - 1. Selection of exterior plants purchased under allowances will be made by Architect, who will tag plants at their place of growth before they are prepared for transplanting.
- E. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
- F. Observation: Architect may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
 - 1. Notify Architect of sources of planting materials seven days in advance of delivery to site.
- G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver exterior plants freshly dug.
 - 1. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
- B. Do not prune trees and shrubs before delivery, except as approved by Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.
- C. Handle planting stock by root ball.
- D. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
 - 1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - 2. Do not remove container-grown stock from containers before time of planting.

3. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.7 COORDINATION

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 1. Spring Planting: Jan 15th to April 15th
 2. Fall Planting: Sep 15th to Nov 15th
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.
- C. Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Architect.
 1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

1.8 WARRANTY

- A. Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, or incidents that are beyond Contractor's control.
 1. Warranty Period for Trees and Shrubs: One year from date of Substantial Completion.
 2. Warranty Period for Ground Cover and Plants: 12 months from date of Substantial Completion.
 3. Remove dead exterior plants immediately. Replace immediately unless required to plant in the succeeding planting season.
 4. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
 5. A limit of one replacement of each exterior plant will be required, except for losses or replacements due to failure to comply with requirements.

1.9 MAINTENANCE

- A. Trees and Shrubs: Maintain for the following maintenance period by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings.
 1. Maintenance Period: 12 months from date of Substantial Completion.

- B. Ground Cover and Plants: Maintain for the following maintenance period by watering, weeding, fertilizing, and other operations as required to establish healthy, viable plantings:
 - 1. Maintenance Period: 12 months from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Architect, with a proportionate increase in size of container.
- C. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.
- D. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- E. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

2.2 SHADE AND FLOWERING TREES

- A. Shade Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.
 - 1. Provide container-grown trees.
 - 2. Branching Height: One-third to one-half of tree height.
- B. Small Upright Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1; stem form as follows:
 - 1. Stem Form: Single stem; Multistem, shrub, with multiple stems.
 - 2. Provide container grown trees.
- C. Multistem Trees: Branched or pruned naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1; stem form as follows:
 - 1. Stem Form: Shrub.

2. Provide balled and burlapped trees.

2.3 DECIDUOUS SHRUBS

- A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.

1. Provide container-grown shrubs.

2.4 GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1 and the following requirements:

2.5 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.

1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

- a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.6 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:

1. Class: Class T, with a minimum 99 percent passing through No. 8 sieve and a minimum 75 percent passing through No. 60 sieve.
2. Class: Class O, with a minimum 95 percent passing through No. 8 sieve and a minimum 55 percent passing through No. 60 sieve.
3. Provide lime in form of dolomitic limestone.

- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.

- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.

- D. Aluminum Sulfate: Commercial grade, unadulterated.

- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials.

2.7.1 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.7 FERTILIZER

- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

2.8 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - 1. Type: Shredded hardwood.
- B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

1. Organic Matter Content: 50 to 60 percent of dry weight.
2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

2.9 STAKES AND GUYS

- A. Upright and Guy Stakes: Metal "T" Stakes, sound, new formed steel "T" shape, length indicated, pointed at one end.
- B. Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.
- C. Guy Cable: 5-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.
- D. Hose Chafing Guard: Reinforced rubber or plastic hose at least 1/2 inch in diameter, black, cut to lengths required to protect tree trunks from damage.
- E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

2.10 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Steel Edging: 1/4" x 4" formed steel edging with 12" stakes for ground setting, painted dark green. Deliver new, unused material in standard factory lengths and set per the locations indicated on the drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.

- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations and areas for multiple exterior plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before planting. Make minor adjustments as required.
- D. Lay out exterior plants at locations directed by Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.
- E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
 - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

3.3 PLANTING BED ESTABLISHMENT

- A. Loosen subgrade of planting beds to a minimum depth of 8 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply fertilizer directly to subgrade before loosening.
 - 2. Thoroughly blend planting soil mix off-site before spreading.
 - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
 - 3. Spread planting soil mix to a depth of 12 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.
- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

3.4 TREE AND SHRUB EXCAVATION

- A. Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.

1. Excavate approximately one and one half times as wide as ball diameter for balled and burlapped and container-grown stock.
- B. Subsoil removed from excavations may be used as backfill.
- C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 1. Hardpan Layer: Drill 6-inch- diameter holes into free-draining strata or to a depth of 10 feet , whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE AND SHRUB PLANTING

- A. Set container grown stock plumb and in center of pit or trench with top of root ball 1 inch above adjacent finish grades.
 1. Remove plant from container. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
- B. Organic Mulching: Apply 3-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Do not place mulch within 3 inches of trunks or stems.

3.6 TREE AND SHRUB PRUNING

- A. Prune, thin, and shape trees and shrubs as directed by Architect.
- B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise indicated by Architect, do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character. Shrub sizes indicated are sizes after pruning.

3.7 GUYING AND STAKING

- A. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inches caliper only as required to prevent wind tip-out. Use a minimum of 2 stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating root balls or root masses. Support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree. Use the number of stakes as follows:

1. Use 2 stakes for trees up to 12 feet high and 2-1/2 inches or less in caliper; 3 stakes for trees less than 14 feet high and up to 4 inches in caliper. Space stakes equally around trees.

3.8 SHRUB PLANTING

- A. Set out and space ground cover and plants as indicated.
- B. Dig holes large enough to allow spreading of roots, and backfill with planting soil.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.9 PLANTING BED MULCHING

- A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 6 inches.
 1. Material and Seam Treatment: Composite fabric with seams pinned.
- B. Mulch backfilled surfaces of planting beds and other areas indicated.
 1. Organic Mulch: Apply 3-inch average thickness of organic mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

4.0 CLEANUP AND PROTECTION

- A. During exterior planting, keep adjacent pavings and construction clean and work area in an orderly condition.
- B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

4.1 DISPOSAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 02930

ADDISON FIRE STATION NO.1 DRAINAGE IMPROVEMENTS

SECTION 04810 - UNIT MASONRY ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
1. Building (common) brick.
 2. Mortar and grout.
 3. Ties and anchors.
 4. Embedded flashing.
 5. Miscellaneous masonry accessories.
- B. Related Sections include the following:
1. Division 2 Section "Unit Pavers" for exterior unit masonry paving.
 2. Division 7 Section "Bituminous Dampproofing" for dampproofing applied to cavity face of backup wythes of cavity walls.
- C. Products furnished, but not installed, under this Section include the following:
1. Dovetail slots for masonry anchors, installed under Division 3 Section "Cast-in-Place Concrete."
- D. Products installed, but not furnished, under this Section include the following:
1. Cast-stone trim, furnished under Division 4 Section "Cast Stone."

1.3 PERFORMANCE REQUIREMENTS

- A. Provide unit masonry that develops the following net-area compressive strengths (f_m) at 28 days. Determine compressive strength of masonry from net-area compressive strengths of masonry units and mortar types according to Table 21-D of the Uniform Building Code.
- B. Provide unit masonry that develops the following net-area compressive strengths (f_m) at 28 days. Determine compressive strength of masonry by testing masonry prisms according to ASTM C 1314. Retain appropriate subparagraphs below with either paragraph above. Retain or revise values in subparagraphs if one value is applicable throughout Project. Retain "as indicated" if values are shown on Drawings.

1. For Brick Unit Masonry: $f_m = 2000$ psi

1.4 SUBMITTALS

- A. Product Data: For each different masonry unit, accessory, and other manufactured product specified.
- B. Shop Drawings: Show fabrication and installation details for the following:
 1. Face Brick: Show coursing and location of special shapes.
 2. Stone Trim Units: Show sizes, profiles, and locations of each stone trim unit required.
 3. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection: For the following:
 1. Unit masonry Samples in small-scale form showing the full range of colors and textures available for each different exposed masonry unit required.
 2. Colored mortar Samples showing the full range of colors available.
- D. Samples for Verification: For the following:
 1. Full-size units for each different exposed masonry unit required, showing the full range of exposed colors, textures, and dimensions to be expected in the completed construction.
 2. Mortar Samples for each color required, showing the full range of colors expected in the finished construction. Make samples using the same sand and mortar ingredients to be used on Project.
 3. Weep holes/vents in color to match mortar color.
 4. Accessories embedded in the masonry.
- E. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.
 1. Submittal is for information only. Neither receipt of list nor approval of mockup constitutes approval of deviations from the Contract Documents, unless such deviations are specifically brought to the attention of the Architect and approved in writing.
- F. Qualification Data: For firms and persons specified in "Quality Assurance" Article.
- G. Material Test Reports: From a qualified testing agency indicating and interpreting test results of the following for compliance with requirements indicated:
 1. Each type of masonry unit required.
 - a. Include size-variation data for brick, verifying that actual range of sizes falls within specified tolerances.

1. Protect Type I concrete masonry units from moisture absorption so that, at the time of installation, the moisture content is not more than the maximum allowed at the time of delivery.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.7 PROJECT CONDITIONS

- A. **Protection of Masonry:** During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
 2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place
- B. **Stain Prevention:** Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 1. Protect base of walls from rain-splashed mud and from mortar splatter by coverings spread on ground and over wall surface.
 2. Protect sills, ledges, and projections from mortar droppings.
- C. **Cold-Weather Requirements:** Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in Section 2104.3 of the Uniform Building Code.
 1. **Cold-Weather Cleaning:** Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- D. **Hot-Weather Requirements:** Protect unit masonry work when temperature and humidity conditions produce excessive evaporation of water from mortar and grout. Provide artificial shade and wind breaks and use cooled materials as required.

1. When ambient temperature exceeds 100 deg F, or 90 deg F with a wind velocity greater than 8 mph, do not spread mortar beds more than 48 inches ahead of masonry. Set masonry units within one minute of spreading mortar.

PART 2 - PRODUCTS

2.1 BRICK

- A. General: Provide shapes indicated and as follows for each form of brick required:
 1. Provide units without cores or frogs and with exposed surfaces finished for ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces.
- B. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
- C. Face Brick: ASTM C 216 MW, and as follows:
 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 5500 psi
 2. Initial Rate of Absorption: Less than 20 g/30 sq. in per minute when tested per ASTM C 67.
 3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
 4. Surface Coloring: Brick with surface coloring, other than flashed or sand-finished brick, shall withstand 50 cycles of freezing and thawing per ASTM C 67 with no observable difference in the applied finish when viewed from 10 feet.
- D. Size: Manufactured to the following actual dimensions:
 1. Pine Hall Red Flashed: 4" x 8' x 2-3/4"
 2. Retaining Wall: Match Existing wall at Quorum / Arapaho Rd

2.2 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
- B. Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
 1. White-Mortar Aggregates: Natural white sand or ground white stone.
 2. Colored-Mortar Aggregates: Natural-colored sand or ground marble, granite, or other sound stone; of color necessary to produce required mortar color.
- C. Aggregate for Grout: ASTM C 404.

- D. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494, Type C, and recommended by the manufacturer for use in masonry mortar of composition indicated.
- E. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with concrete masonry units, containing integral water repellent by same manufacturer.
- F. Water: Potable.
- G. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
- H. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Mortar Cement:
 - a. Magnolia Superbond Mortar Cement; Blue Circle Cement.
 - b. Lafarge Mortar Cement; Lafarge Corporation.
 - 2. Cold-Weather Admixture:
 - a. Accelguard 80; Euclid Chemical Co.
 - b. Morseled; W. R. Grace & Co., Construction Products Division.
 - c. Trimix-NCA; Sonneborn, Div. of ChemRex, Inc.
 - 3. Water-Repellent Admixture:
 - a. Mortar Tite; Addiment Inc.
 - b. Dry-Block Mortar Admixture; W. R. Grace & Co., Construction Products Division.
 - c. Rheopel; Master Builders.

2.3 TIES AND ANCHORS, GENERAL

- A. General: Provide ties and anchors, specified in subsequent articles, made from materials that comply with this Article, unless otherwise indicated.
- B. Mill Galvanized Carbon-Steel Wire: ASTM A 82; with ASTM A 641 Class 1 coating.
- C. Hot-Dip Galvanized Carbon-Steel Wire: ASTM A 82; with ASTM A 153, Class B-2 coating.

2.4 ANCHORS FOR CONNECTING TO CONCRETE

- A. General: Provide two-piece assemblies that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
 - 1. Anchor Section: Dovetail anchor section formed from 0.064-inch- thick, galvanized sheet may be used at interior walls where humidity does not exceed 75 percent.
 - 2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.1875-inch- diameter, hot-dip galvanized steel wire.

2.5 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Fabricate from the following metal complying with requirements specified in Division 7 Section "Sheet Metal Flashing and Trim" and below:
1. Stainless Steel: 0.0156 inch thick.
 2. Fabricate metal drip edges from sheet metal indicated above. Extend at least 3 inches into wall and 1/2 inch out from wall, with a hemmed outer edge bent down 30 degrees.
 3. Fabricate metal flashing terminations from sheet metal indicated above. Extend at least 3 inches into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch and then down into joint 3/8 inch to form a stop for retaining sealant backer rod.

2.6 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.
- B. Preformed Control-Joint Gaskets: Material as indicated below, designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
1. Styrene-Butadiene-Rubber Compound: ASTM D 2000, Designation M2AA-805.
 2. PVC: ASTM D 2287, Type PVC-65406.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).
- D. Wicking Material: Cotton or polyester rope, 1/4 to 3/8 inch in diameter, in length required to produce 2-inch exposure on exterior and 18 inches in cavity between wythes.
- E. Plastic Weep Hole/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, designed to fill head joint with outside face held back 1/8 inch from exterior face of masonry, in color selected from manufacturer's standard.
- F. Vinyl Weep Hole/Vent: One-piece, offset, T-shaped units made from flexible, injection-molded PVC, designed to fit into a head joint and consisting of a louvered vertical leg, flexible wings to seal against ends of masonry units, and a top flap to keep mortar out of the head joint; in color approved by Architect to match that of mortar.
- G. Cavity Drainage Material: 1-inch-thick, free-draining mesh; made from polyethylene strands and shaped to avoid being clogged by mortar droppings.
- H. Available Products: Subject to compliance with requirements, cavity drainage materials that may be incorporated into the Work include, but are not limited to, the following:
- I. Products: Subject to compliance with requirements, provide one of the following:
1. Plastic Weep Hole/Vent:
 - a. Cell Vent; Dur-O-Wal, Inc. or equal

2. Cavity Drainage Material:
 - a. Mortar Break; Advanced Building Products, Inc.
 - b. CavClear Masonry Mat; CavClear.
 - c. Mortar Net; Mortar Net USA, Ltd.
 - d. Mortar Stop; Polytite Manufacturing Corp.

2.7 MASONRY CLEANERS

- A. Job-Mixed Detergent Solution: Solution of 1/2-cup dry measure tetrasodium polyphosphate and 1/2-cup dry measure laundry detergent dissolved in 1 gal. of water.
- B. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
 1. Available Products: Subject to compliance with requirements, products that may be used to clean unit masonry surfaces include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cleaners for Red and Dark-Colored Brick Not Subject to Metallic Staining:
 - 1) 200 Lime Solv; Diedrich Technologies, Inc.
 - 2) Sure Klean No. 101 Lime Solvent; ProSoCo., Inc.

2.8 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 1. Do not use calcium chloride in mortar or grout.
 2. Add cold-weather admixture (if used) at the same rate for all mortar, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in the form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
 2. Verify that foundations are within tolerances specified.
 3. Verify that reinforcing dowels are properly placed.
 4. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Before installation, examine rough-in and built-in construction to verify actual locations of piping connections.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to the full thickness shown. Build single-wythe walls to the actual widths of masonry units, using units of widths indicated.
- B. Cut masonry units with motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide a continuous pattern and to fit adjoining construction. Where possible, use full-size units without cutting. Allow units cut with water-cooled saws to dry before placing, unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
1. Mix units from several pallets or cubes as they are placed.
- D. Wetting of Brick: Wet brick before laying if the initial rate of absorption exceeds 30 gr/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at the time of laying.

3.3 CONSTRUCTION TOLERANCES

- A. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and the following:
- B. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, nor 1/2 inch maximum.
- C. For conspicuous horizontal lines, such as exposed lintels, sills, parapets, and reveals, do not vary from level by more than 1/4 inch in 20 feet, nor 1/2 inch maximum.
- D. For exposed bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets.

Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

- B. **Bond Pattern for Exposed Masonry:** Lay exposed masonry in the following bond pattern; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
 - 1. As indicated on Drawings.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2 inches. Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- D. **Stopping and Resuming Work:** In each course, rack back one-half-unit length for one-half running bond or one-third-unit length for one-third running bond; do not tooth. Clean exposed surfaces of set masonry, wet clay masonry units lightly if required, and remove loose masonry units and mortar before laying fresh masonry.
- E. **Built-in Work:** As construction progresses, build in items specified under this and other Sections of the Specifications. Fill in solidly with masonry around built-in items.

3.5 MORTAR BEDDING AND JOINTING

- A. Lay solid brick-size masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- B. Set stone trim units in full bed of mortar with vertical joints slushed full. Fill dowel, anchor, and similar holes solid. Wet stone-joint surface thoroughly before setting; for soiled stone surfaces, clean bedding and exposed surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
- C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness, unless otherwise indicated.

3.6 FLASHING, WEEP HOLES, AND VENTS

- A. **General:** Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- B. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Unless otherwise indicated, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
- C. **Install flashing as follows:**
 - 1. At masonry-veneer walls, extend flashing from exterior face of veneer, through veneer, up face of sheathing at least 8 inches, and behind air-infiltration barrier or building paper.
 - 2. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric

- sealant complying with requirements in Division 7 Section "Joint Sealants" for application indicated.
3. Extend sheet metal flashing 1/2 inch beyond face of masonry at exterior and turn flashing down to form a drip.
 4. Install metal drip edges beneath flashing at exterior face of wall. Stop flashing 1/2 inch back from outside face of wall and adhere flashing to top of metal drip edge.
 5. Install metal flashing termination beneath flashing at exterior face of wall. Stop flashing 1/2 inch back from outside face of wall and adhere flashing to top of metal flashing termination.
 6. Cut flashing off flush with face of wall after masonry wall construction is completed.
- D. Install weep holes in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing and as follows:
1. Use plastic weep hole/vents to form weep holes.
 2. Use wicking material to form weep holes above flashing in brick sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
 3. Place cavity drainage material immediately above flashing in cavities. In cavities insulated with loose-fill insulation, cover cavity side of open weep holes with plastic insect screening before placing insulation in cavity.
- E. Trim wicking material used in weep holes flush with outside face of wall after mortar has set.

3.7 CLEANING AND REPAIR

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing the surfaces thoroughly with clear water.
 5. Clean brick by the bucket-and-brush hand-cleaning method described in BIA Technical Notes No. 20, using job-mixed detergent solution.

6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
7. Clean concrete masonry by cleaning method indicated in NCMA TEK.8-2 applicable to type of stain on exposed surfaces.
8. Clean limestone units to comply with recommendations in the Indiana Limestone Institute of America's "Indiana Limestone Handbook."

3.8 MASONRY WASTE DISPOSAL

- A. Recycling: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Excess Masonry Waste: Remove excess, clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

·END OF SECTION 04810

SECTION IRR
IRRIGATION SPECIFICATIONS

TOWN OF ADDISON
IRRIGATION SPECIFICATIONS

Revised 4/3/00

These revised Town of Addison Irrigation Specifications dated 4/3/00 supersede any and all others. However, any discrepancies between those of the approved construction plans and those of the Town must be brought to the attention of the Town's designated representative for a final determination.

1. Design head to head with no single head coverage. Use appropriate size nozzles for a given landscape area so as not to spray onto or over paved surfaces or structures. Do not exceed manufacturer's recommendations.
2. All main line pipe 2 " and smaller is to be Schedule 40 belled PVC; larger sizes are to be Class 200. Put not more than two (2) pipes in any one trench. Class 200 belled PVC lateral piping is to be used.
3. Fittings: No crosses are permitted. Separate tees and/or elbows by at least 12". Reduction tees are preferred over use of single reducer bushings. Multiple reducer bushings will not be accepted. Only Spears and/or Lasco are permitted. Allow 18" outside of sleeve before first fitting. No 45 degree elbows on 1" and larger pipe are allowed without prior approval.
4. Wiring: 14 ga. UF. Red - Control wires. White - Ground. Anytime wiring changes direction, such as at an elbow or tee, allow a loop at least one hand width (10 inches) alongside the fitting at that location. Only continuous wire runs are permissible unless otherwise approved. Wire should follow mainline where possible and lay along a single side not crossing over lateral lines.
5. Use King connectors for all station wire splices. Allow at least 36" of pigtailed wire at each splice. All valve splices are to be housed in standard (large) Ametek rectangular plastic valve boxes. All field splices are to be in 10" round Ametek plastic valve boxes.
6. Only Weathermatic 11000 Series plastic valves are permitted. They are to be located within standard (large) Ametek rectangular plastic valve boxes with 4"-6" of pea gravel placed underneath the valve in such a manner as to prevent soil infiltration into the box. The pea gravel should only contact the bottom of the valve body.
7. Only West Ag Model V075 single lug ¾" QCV's are permitted. They are to be connected to a threaded fitting. Teflon paste and appropriate length gray Schedule 80 nipples and Schedule 40 fittings are to be used. Secure to 18"x½" steel rebar with stainless steel screw clamp. House QCV in a 10" round plastic Ametek valve box.
8. All heads are to be attached to threaded fittings via 6" Lasco polyethylene nipples cut to the appropriate length. All nozzle sizes will be designated on the plans.

Pop-ups: Only Toro 570Z Series are permitted, unless otherwise approved. Install ¾" above finished grade. Turf - 4" (includes tree bubblers within turf areas, use Toro SB-PC nozzles). Very low ground cover (<6" mature height) - 6" HP. Ground cover and low growing shrubs - 12" HP; use Hardie Blue Line funny pipe and Toro barb fittings utilizing side inlet.

Bubblers: Bed areas only. Use Hardie adjustable flood bubblers.

Rotaries: Only Hunter PGP Series are permitted, unless otherwise noted. Install $\frac{3}{4}$ " above finished grade.

Risers: Use Type-M copper with soldered male ends for Toro 570-S shrub adapters and female ends to attach to short polyethylene nipples screwed into threaded fittings. Owner reserves the right to determine placement of risers versus pop-ups.

9. Only Hersey MVR meters and three (3) brass flanges are acceptable. Meter lay lengths must be in accordance with Town of Addison's Public Works Department specifications. Stainless steel bolts and nuts must be used in the installation along with neoprene gaskets. House in appropriate size, (to be determined by Owner), concrete box with lid. To bring box to ground level use bricks or pavers, and backfill inside below meter base with at least 6" of pea gravel. Connection to main must be approved and inspected by the Town's Utilities Department and all tap materials are to be purchased at the expense of the contractor and must comply with the Town's specifications. A permit is also required.
10. Only Watts 007 M Series inline check valve assemblies are to be used. Connect to meter flange using Teflon paste and gray Schedule 80 nipple of sufficient length to center the DCA within its housing. House in appropriate size, (to be determined by Owner), rectangular Ametek plastic valve box. See above meter installation instructions and follow same with the exception of using plastic valve box extensions for increased height. Connect irrigation mainline to DCA using Teflon paste and PVC male adapter.
11. Female threaded plastic Spears ball valves with positive T-handle cut off must be installed every 200' of mainline for isolation purposes. House in standard (large) rectangular Ametek plastic valve box and follow meter box installation instructions for DCA assembly.
12. Only an approved size RainMaster Evolution DX-2 stainless steel controller with heavy duty transient protection along with a stainless steel free-standing pedestal is permitted. Controller must include all necessary hardware to ensure reliable communication and operation with the Town's central control located at 16801 Westgrove. Installation must include the following RainMaster hardware, purchased only from a RainMaster supplier: DX-03 sensor board, DX-PH phone communication option, flow meter (size to be approved by owner), and shielded EV-cab-Sen flowmeter cable. An approved size Weathermatic 11000 series master valve must also be installed with wiring being of a solid color distinctively different than that of the station wiring. Both flow meter and master valve must be housed in Ametek large rectangular plastic valve boxes. Flow meter cable must be sized appropriately and be of a continuous run; no splices will be allowed except at the point of connection to the flow meter. Connections will be soldered and water proofed using a 3-M DBY connector. Cab-Sen cable will be installed within continuous $\frac{3}{4}$ " or larger gray PVC conduit with 6" or larger J-boxes placed every 200' or where 360° of fittings are installed; only sweeps are permitted. It is the contractor's responsibility to entail the cost of and work in conjunction with Southwestern Bell Telephone to establish a dedicated phone service and install an interface within the pedestal at each controller location via direct burial cable. Controllers are to be affixed to a Town-approved permanent concrete pad via four (4) 7/16" or larger stainless steel bolts, nuts and washers. All wiring is to enter the pedestal via approved size gray PVC sweep elbows extending at least 1" through the pad. Control wiring, 120-volt service, flow meter cable, and phone cables are to be separated with each having its own access elbow. All local and national codes must conform to any and all aspects of the installation. All controllers are to be wired for

remote operation with Irritrol RVC units; to achieve this utilize appropriate size universal pigtail adapters. The entire installation must conform to RainMaster specifications and be approved by the Town prior to and be inspected during installation. Such specifications will include grounding and pad configurations and distances of separation from water meter to master valve to flow meter and first fitting. Additional hardware, if applicable, will be needed to control remote devices such as lighting, fountains, or booster pumps; these will also be the responsibility of the contractor to supply, install and ensure proper operation. The Town of Addison may also specify the installation of a RainMaster ET Tracker and any related equipment to make it a functional component of the computer-controlled system. A functional mini-click freeze sensor must be installed at every controller in an approved location and by an approved method. Consult RainMaster for specifics of freeze sensor installation.

13. Use clean and approved topsoil to backfill all pipe to a depth. All heads and boxes are to be backfilled to grade with clean top soil. No rocks greater than 1" are allowed. Compact trenches to alleviate settling. Minimal depth of coverage is 12".
14. All sleeves 2" and smaller will be Schedule 40 PVC with size and location noted on the plan. Larger sizes will be Class 200. All piping underneath paving, including sidewalks, must be sleeved. All sleeves are to be belled PVC pipe.
15. Use appropriate and approved PVC solvent. Avoid excessive use and wipe all joints and fittings clean.
16. The installer is responsible for resetting head and/or box height due to settling. Contractor must supply a workmanship warranty for (1) year from date of completion.
17. All work is to be accomplished by or directly supervised at all times by an on-site irrigator licensed by the State of Texas.
18. Prior to any backfilling of trenches, an inspection by the Town's representative must take place and any necessary changes implemented; otherwise, manual excavation to enable proper inspection will be necessary.
19. Valve sequencing must be performed by the contractor and in an order approved by the Town's representative. At least 6" of extra station wiring within the bottom of the pedestal is necessary for each zone and must be of neat and orderly appearance.
20. Plans are diagrammatic and field adjustments are often necessary. For this reason, prior to trenching, head layout with flags needs to be done and locations approved by Town's representative. Not doing so may result in the relocation of heads at the contractor's expense.
21. Any deficiencies in coverage noted by the Town's inspector will be rectified at the cost of the contractor.
22. Water taps will be 2" in size. All parts must conform to Town of Addison Water Department specifications and are the responsibility of the contractor to provide. Inspection of taps by Water Department representative must occur. Excavation and tap permits are required. Meters are to be 1½" in size and again conform to Water Department specifications for type and installation along with meter boxes and backfilling procedures. Contact: Addison Utilities Department at (972) 450-2871.
23. All paving must have Town-approved sleeve sizes and quantities present. It is the responsibility of the

contractor to notify the Town of any area where sleeving should be present but is not and provide such materials at his cost. Any paving installed without sleeving will necessitate a bore and subsequent sleeving at the contractor's expense.

24. RainMaster controllers and associated hardware will be utilized on the job. Reference Town's Irrigation Specifications for this aspect of the job. Note: separate stations may be necessary for operation of lights, fountains, etc.; additional hardware is also needed and is to be purchased and installed by the contractor. For part numbers and pricing of any RainMaster equipment, contact Matt Swor of Longhorn, Inc. at (972) 406-0222. For technical questions, contact John Terosian of RainMaster at (800) 777-1477.
25. Communication is the key. If you are unsure - CALL Ron Lee, Addison Parks Department, (972) 450-2851.

SECTION TR

TOWN OF ADDISON TESTING REQUIREMENTS



**PUBLIC INFRASTRUCTURE
CONSTRUCTION TESTING REQUIREMENTS**

1. Trench Safety

Plans shall be submitted by Registered Professional Engineer in the State of Texas for any trenching greater than five feet in depth.

2. Sanitary Sewer

A. Air Test – 4 psi, no loss.

<u>Pipe Size</u>	<u>Time</u>
Six inches	Four minutes
Eight inches	Six minutes
Ten inches	Eight minutes

B. Mandrel – 5% maximum deflection.

C. Television camera inspection - provide VHS format videotape.

D. Vacuum test new manholes – NCTCOG 6.7.2(c)(B)

3. Water

A. Hydrostatic Test, per NCTCOG 6.7.3(f)

Fire line – 200 psi for two hours.

Domestic lines – 150 psi for four hours.

Combination lines – 200 psi for four hours.

B. Bacteriological Test – Total Coliform. All lines greater than 2" diameter and 20' in length. One sample for each 500 feet of pipe installed.

4. Storm Sewer

Visual only. Television inspection (VHS format tape) may be required at the discretion of the Town of Addison.

5. Trench Compaction

Test every five hundred feet, each eight-inch lift (loose), to 95% compaction standard proctor, optimum moisture to +3%.



PUBLIC WORKS DEPARTMENT

(972) 450-2871

Post Office Box 9010 Addison, Texas 75001-9010

16801 Westgrove

Testing Requirements, Cont.

6. Street Compaction

- A. Lime treated base per NCTCOG Item 4.6.4.
- B. Three tests every 2000 square yards of base area.
- C. Two tests every subgrade materials change, minimum.

7. Concrete

- A. Submit batch design for approval by Town of Addison
- B. Three cylinders or beams (based on type of concrete) per 100 cubic yards.
- C. Pours of less than 100 cubic yards may require testing at the direction of the Town of Addison Public Works Department.
- D. Concrete shall be tested by a certified testing lab for temperature, slump, air entrainment for each set of beams or cylinders.
- E. Cores to verify depth may be required at the Town's discretion.

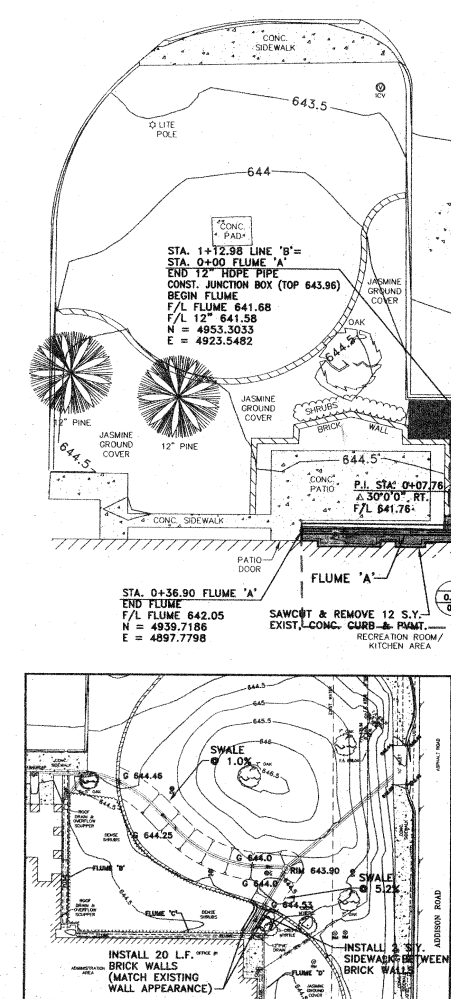
8. Joints and Sealants

- A. Submit joint plan for approval by the Town.
- B. Provide material submittals for joint sealant for approval by the Town.

9. As-Builts

- A. Must be stamped "As-Built" or "Record Set".
- B. Must be dated, sealed, and certified by a Registered Professional Engineer in the State of Texas.
- C. Must be dimensioned.
- D. One reproducible set, two blue line sets, and one electronic media (Intergraph or AutoCAD), shall be provided to the Town of Addison Public Works Department prior to final acceptance by the Town of Addison.

CURVE DATA:					
NUMBER	RADIUS	DELTA	LENGTH	CORD BEARING	CHORD LENGTH
C1	35.00	45°00'00"	27.49	N 67°10'14" W	26.79
C2	35.00	45°27'50"	27.77	N 67°24'09" W	27.05



GRADING PLAN:
SCALE - 1"=20'

LEGEND:

- CO
- TELEPHONE MH
- ELECTRIC MH
- SANITARY SEWER MH
- STORM DRAIN MH
- GAS MH
- STREET SIGN
- LAMP POST
- WATER VALVE
- WATER METER
- GAS METER
- IRRIGATION CONTROL VALVE
- OAK TREE
- WILLOW TREE
- CREPE MYRTLE
- MISC. TREE
- PINE TREE
- HACKBERRY TREE
- ASH TREE
- FIRE HYDRANT
- MISC. MH
- MAILBOX
- REMOVE EXIST. CURB, PAVEMENT OR SIDEWALK, AND REPLACE WITH SOD
- REMOVE & REPLACE EXIST. CURB, PAVEMENT OR SIDEWALK
- REGRADE EXIST. GRASS AREA
- × G 644.46 PROPOSED GRADE
- 600 EXISTING GRADE
- 600 EXISTING CONTOUR
- 600 EXISTING GRADE
- 600 DRAINAGE AREAS
- 600 DRAINAGE AREA
- 600 ACRES
- 600

UTILITY CONTACTS:

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.

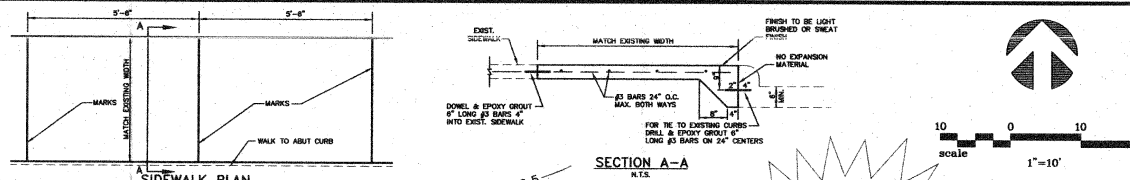
CONTRACTOR SHALL CONTACT 1-800-DIG-TESS (344-8377) PRIOR TO ANY EXCAVATION.

TYPICAL IRRIGATION NOTES:

- THE CONTRACTOR SHALL HIRE A LICENSED IRRIGATOR AS A SUBCONTRACTOR TO OVERSEE ALL ACTIVITIES THAT IMPACT EXISTING OR PROPOSED IRRIGATION SYSTEMS.
- PRIOR TO DEMOLITION OR CONSTRUCTION ACTIVITIES, EXISTING IRRIGATION SYSTEMS SHALL BE TURNED ON, THE LOCATION OF HEADS, VALVES, AND PIPE SHALL BE MARKED WHERE DEMOLITION AND CONSTRUCTION WILL IMPACT THE SYSTEM. RECORDS IN THE SYSTEM SHALL BE NOTED AND REPORTED TO THE SYSTEM OWNER. A PHOTOGRAPHIC OR VIDEO RECORD SHALL BE MADE IF APPROPRIATE.
- PIPING SHALL BE CUT, CAPPED AND MARKED AT THE LIMITS OF CONSTRUCTION.
- AT THE COMPLETION OF CONSTRUCTION, THE LICENSED IRRIGATOR SHALL RESTORE AND TEST THE IRRIGATION SYSTEM FOR PROPER FUNCTION. THE TEST SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER'S PUBLIC WORKS INSPECTOR AND THE SYSTEM OWNER.
- MAINTAIN REPAIR EXISTING IRRIGATION SYSTEMS TO ENSURE WATERING OCCURS ON EXISTING GRASS AND LANDSCAPING.

BENCHMARK:

1. [] FOUND ON C/L INLET, WEST SIDE OF ADDISON RD. SOUTHWEST CORNER OF THE INTERSECTION OF AIRPORT PKWY. AND ADDISON RD. ELEV. = 642.53 (PER PLAN SHEET 4 OF AIRPORT PKWY. PLANS.) N = 4855.8037 E = 5062.3745



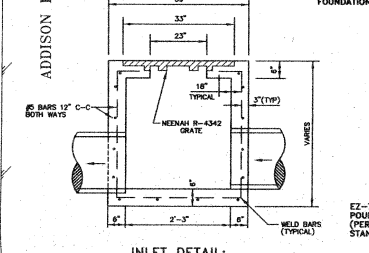
SECTION A-A

PIPE CONNECTION TO EXISTING INLET DETAIL:

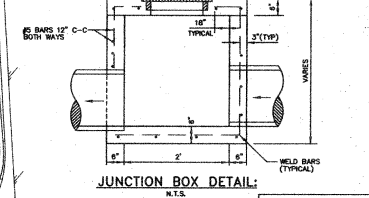
TYPICAL WATERLINE LOWERING DETAIL:

!!!CAUTION!!!
EXISTING UNDERGROUND UTILITIES LOCATED IN THIS AREA.

!!!CAUTION!!!
EXISTING UNDERGROUND UTILITIES LOCATED IN THIS AREA.



INLET DETAIL:



JUNCTION BOX DETAIL:

REINFORCED CONCRETE NOTES:

- ALL LAPS AND EXTENSIONS OF REINFORCING BARS SHALL BE 36 BAR DIAMETERS UNLESS NOTED OTHERWISE
- TACK WELD GRATES IN PLACE
- PIPE MAY BE PLACED IN ANY WALL, BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
- CONC. SHALL BE A MIN. OF 4,000 P.S.I.

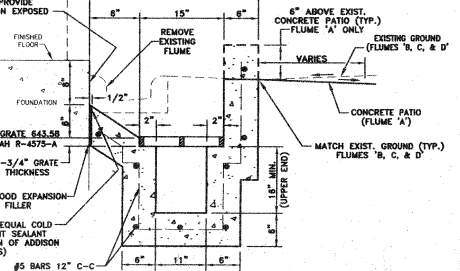
NO.	DATE	REVISION	APPROV.
1			
2			
3			

GENERAL NOTES:

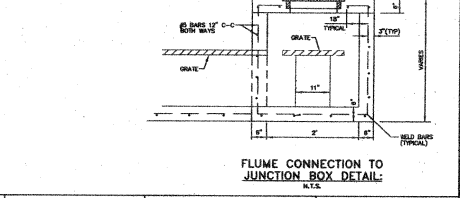
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE TOWN OF ADDISON STANDARDS AND SPECIFICATIONS AND THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENT (NCTCG) STANDARDS AND SPECIFICATIONS, EXCEPT AS NOTED. IN THE EVENT OF A CONFLICT, THE TOWN OF ADDISON STANDARDS AND SPECIFICATIONS SHALL GOVERN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUBLIC SAFETY DURING CONSTRUCTION AND WILL PROVIDE THE NECESSARY TRAFFIC BARRICADES AND WARNING SIGNS, DEVICES, ETC. TO PROTECT THE CONSTRUCTION SITE. ALL BARRICADES, WARNING SIGNS, LIGHTS, DEVICES, ETC. FOR THE GUIDANCE AND PROTECTION OF TRAFFIC MUST CONFORM TO THE 1980 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS CURRENTLY AMENDED BY THE TEXAS DEPARTMENT OF TRANSPORTATION. NO SEPARATE PAY ITEM.
- NO PERSON SHALL MANUALLY TURN OFF, INTERFERE WITH, ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE TOWN UNLESS DULY AUTHORIZED TO DO SO BY THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT. ARRANGEMENTS FOR CONSTRUCTION WATER SHALL BE MADE THROUGH THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT.
- CONTRACTOR SHALL MAINTAIN ADEQUATE SANITARY FACILITIES FOR USE BY WORKERS THROUGHOUT CONSTRUCTION.
- NO TRAFFIC SIGNS ARE TO BE RELOCATED OR REMOVED WITHOUT PRIOR APPROVAL OF THE TOWN OF ADDISON PUBLIC WORKS DEPARTMENT.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES RESULTING FROM CONSTRUCTION WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR HIS EMPLOYEES, AGENT OR REPRESENTATIVES IN PERFORMANCE OF THE WORK. THE SEAL OF ANY ENGINEER, INC. REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREINAFTER BE INCORPORATED IN THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS. NO SEPARATE PAY ITEM.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN NEAT AND ACCURATE PLANS OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE SITE DRAINAGE THROUGHOUT CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT ELECTRIC POWER AND TELEPHONE POLES ARE NOT DISTURBED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL KEEP EXCAVATED TRENCHES FREE OF GROUNDWATER DURING CONSTRUCTION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE DEWATERING IN ORDER TO CONTROL GROUNDWATER RISING CONSTRUCTION SUCH THAT IT DOES NOT AFFECT HIS CONSTRUCTION WORK (NO SEPARATE PAY ITEM).
- EXISTING FACILITIES ARE SHOWN IN APPROXIMATE LOCATIONS PER INFORMATION AND RECORDS AVAILABLE. CONTRACTOR SHALL UNCOVER AND VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL KEEP PROJECT WORK SITE CLEAN AND ORDERLY. IT WILL BE UNACCEPTABLE TO ALLOW TRASH TO BLOW ONTO ADJACENT PROPERTIES. STRICT ATTENTION SHALL BE PAID TO THIS ITEM. IF CONTRACTOR FAILS TO ADHERE TO THIS stipulation, OWNER RESERVES THE RIGHT TO STOP WORK UNTIL TRASH IS CLEANED UP. THE STOPPAGE OF WORK WILL NOT EXTEND THE ORIGINAL CONTRACT TIME.

GENERAL PAVING NOTES:

- PRIOR TO FINAL ACCEPTANCE, ALL PAVING SURFACES SHALL BE CLEARED OF ALL DISCOLORATION SUCH AS TIE MARKS OR OTHER DISCOLORATION.
- THE CONTRACTOR SHALL BEGIN CONSTRUCTION WITHIN FIVE (5) CALENDAR DAYS OF THE ISSUANCE OF THE NOTICE TO PROCEED AND GIVE NOTICE TO THE TOWN, IN WRITING, BEFORE WORK BEGINS ON THE PROJECT.
- SUBGRADE SHALL BE PROOF ROLLED. NO ADDITIONAL COMPENSATION SHALL BE PAID FOR PROOF ROLLING. IT SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.
- THE CONTRACTOR SHALL FURNISH, AT HIS OWN COST, THE FOLLOWING TESTING SERVICES BY A REPUTABLE INDEPENDENT LABORATORY APPROVED BY THE TOWN: (A) FIELD DENSITY TESTS OF SUBGRADE OR BASE AT LOCATIONS SPECIFIED BY THE INSPECTOR; (B) PAVEMENT TESTING DONE ACCORDING TO SECTION 5.8.8, PAVEMENT TESTING OF THE MIXTURE SPECIES (COMPRESSIVE STRENGTH).
- THE CONTRACTOR SHALL PAY EXTRA ATTENTION TO ITEM 6.2.9 "BACKFILL" OF THE MIXTURE SPECIFICATIONS. THE OWNER WILL EXPECT ALL TRENCHES TO BE BACKFILLED WITH PROPER CARE AND ANY SETTLEMENT TO BE REMOVED IN A TIMELY FASHION.



FLUME DETAIL:



FLUME CONNECTION TO JUNCTION BOX DETAIL:

DATE: JUNE, 2002 SCALE: 1"=10' JOB NO.: 02-314
DRAWN: GBW DESIGN: BRG REVIEWED: DWG NO.: 314DRNPLN

ADDISON FIRE STATION NO. 1
DRAINAGE IMPROVEMENTS
STORM SEWER PLAN

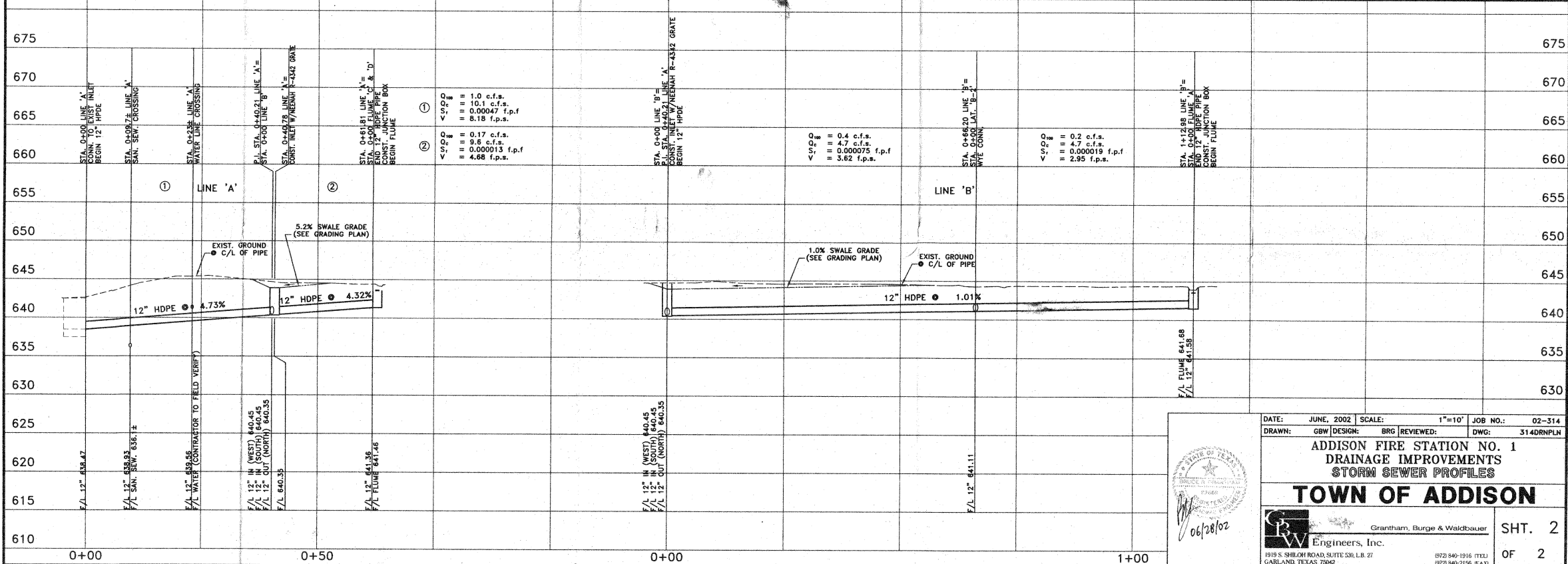
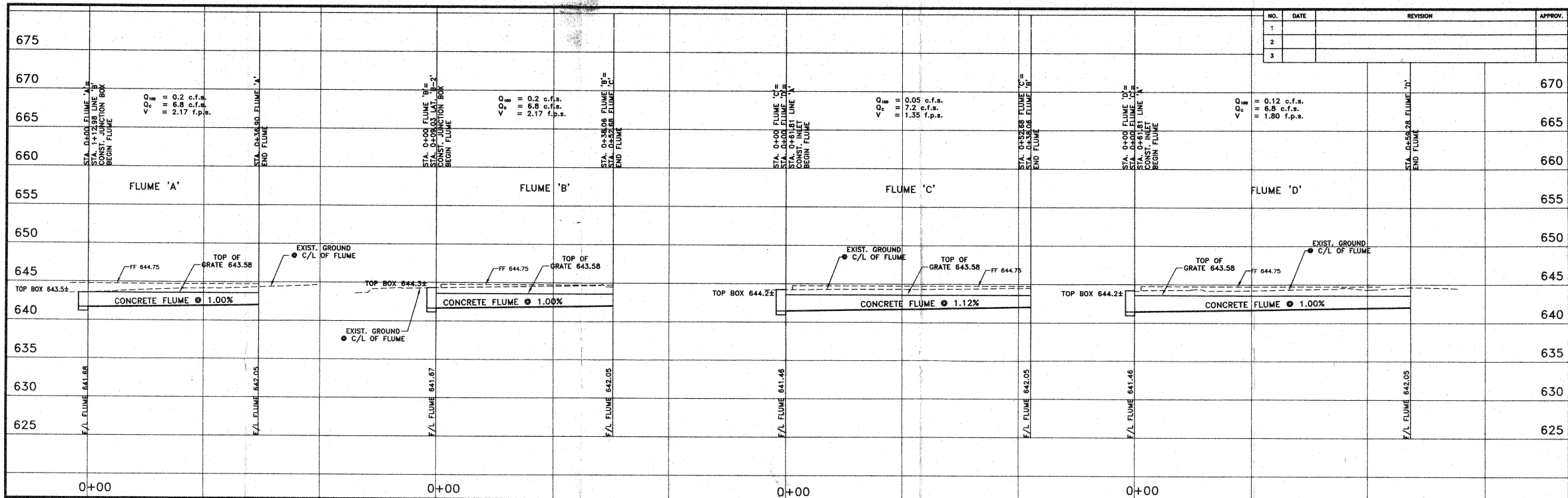
TOWN OF ADDISON

Grantham, Burge & Woldtbauer
Engineers, Inc.
1919 S. SHILOH ROAD, SUITE 500, LB 27 GARLAND, TEXAS 75042
(972) 840-1916 (TEL)
(972) 840-2156 (FAX)

SHT. 1
OF 2



NO.	DATE	REVISION	APPROV.
1			
2			
3			



DATE: JUNE, 2002
DRAWN: GBW

SCALE: 1"=10'
DESIGN: BRG

JOB NO.: 02-314
REVIEWED: DWG: 314DRNPLN

06/28/02

**ADDISON FIRE STATION NO. 1
DRAINAGE IMPROVEMENTS
STORM SEWER PROFILES**

TOWN OF ADDISON

Grantham, Burge & Waldbauer
Engineers, Inc.

1919 S. SHILOH ROAD, SUITE 530, L.B. 27
GARLAND, TEXAS 75042

SHT. 2
OF 2