

**EL PASO WATER UTILITIES PUBLIC SERVICE BOARD****ADDENDUM NO. 1  
FOR  
NORTHEAST DYER/RAILROAD 30-INCH SANITARY SEWER INTERCEPTOR  
& 16-INCH WATER MAIN IMPROVEMENTS  
PHASE III****BID NO. 52-23****AUGUST 09, 2023**

In accordance with the Instruction to Bidders of the Contract Documents, the following revision to the Plans and/or Specifications shall become part of the Contract Documents and the Bidders shall acknowledge receipt thereof on their Bid Proposal.

**EL PASO WATER UTILITIES**

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**Mirtha Solis**  
Senior Purchasing Agent  
August 09, 2023



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**Abel Garcia, P.E.**  
Project Manager  
August 08, 2023

\*The EPWater representative's signature certifies that this Document shall become part of the Contract Documents for the referenced project. The signature is not a representation that the content of this document is technically correct.

Receipt of this Addendum must be acknowledged in writing to El Paso Water Utilities as required by the bid documents.

**BID MILESTONES – No Changes**

**BID ADVERTISEMENT – No Changes**

**VOLUME 1 – CONTRACT DOCUMENTS**

**BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT**

AD-1.01. SECTION 00010 – INFORMAL NOTICE

- A. REMOVE Section 00010 in its entirety and REPLACE with revised Section 00010R, attached to this Addendum, as Attachment A.

*The project description was updated.*

AD-1.02. SECTION 00015 – TABLE OF CONTENTS

- A. REMOVE Section 00015 in its entirety and REPLACE with revised Section 00015R, attached to this Addendum, as Attachment A.

*The Table of Contents was updated.*

AD-1.03. SECTION 00020 – INVITATION TO BID

- A. REMOVE Section 00020 in its entirety and REPLACE with revised Section 00020R, attached to this Addendum, as Attachment C.

*The project description was updated.*

AD-1.04. SECTION 00300 – BID FORM

- B. REMOVE Section 00300 in its entirety and REPLACE with revised Section 00300R, attached to this Addendum, as Attachment D.

*The bid items were modified. Contractor to review the entirety of the section.*

AD-1.05. SECTION 00500 – STANDARD FORM OF AGREEMENT

- A. REMOVE Section 00500 in their entirety and REPLACE with revised Section 00500R, attached to this Addendum, as Attachment E.

*The project description was updated.*

AD-1.06. SECTION 00800 – STANDARD SUPPLEMENTARY CONDITIONS

- A. REMOVE Section SC-7.11.D.1.a on Page 00800R-19 in its entirety and REPLACE with the following:

*Minimum prevailing wage rates of the City of El Paso, Texas. The prevailing minimum wage rate determination, comprised of 5 pages, applicable to the Project is part of the Contract Documents.*

AD-1.07. SECTION 00840 – GENERAL WAGE REQUIREMENTS

- A. REMOVE Section 00840 in their entirety and REPLACE with revised Section 00840R, attached to this Addendum, as Attachment F.

*The Construction Type/Wage Decision Table was modified.*

**TECHNICAL SPECIFICATIONS**

AD-1.08. SECTION 01025 – MEASUREMENT AND PAYMENT

- A. REMOVE Section 01025 in their entirety and REPLACE with revised Section 01025R, attached to this Addendum, as Attachment G.

*The Measurement and Payment section was updated. Contractor to review the entirety of the section.*

AD-1.09. SECTION 02603 – CONNECTIONS TO AND WORK ON EXISTING SYSTEM

- A. REMOVE Section 02603 in its entirety and REPLACE with revised Section 02603R, attached to this Addendum, as Attachment H.

*The section was revised.*

AD-1.10. SECTION 02605 – MANHOLES FOR SANITARY SEWER FACILITIES

- A. ADD Section 02605 in its entirety, attached to this Addendum, as Attachment I.

AD-1.11. SECTION 02606 – POLYMER CONCRETE MANHOLES

- A. DELETE Section 02606 in its entirety.

AD-1.12. SECTION 02607 – MANHOLES FOR WATER FACILITIES

- A. ADD Section 02606 in its entirety, attached to this Addendum, as Attachment J.

## VOLUME 2 – DRAWINGS

### AD-1.13. SHEET C4.1R – OVERALL WATER MAP

- A. REMOVE Sheet C4.1 in its entirety and REPLACE with revised Sheet C4.1R, attached to this Addendum, as Attachment K.

*The water main tie-in at the intersection of O'Donnell St. and Dyer St was added.*

### AD-1.14. SHEET C7.1R – SANITARY SEWER DETAILS

- A. REMOVE Sheet C7.1 in its entirety and REPLACE with revised Sheet C7.1R, attached to this Addendum, as Attachment L.

*Polymer manhole detail was Removed and Replaced with an EPWater Sanitary Sewer Manhole Detail.*

### AD-1.15. SHEET ADDENDUM NO.1 – O'DONNELL STREET & DYER STREET WATER TIE-IN CONNECTION PLAN AND DETAILS

- A. ADD Sheet ADD-1 (1 of 2) Plan sheet and ADD-1 (2 of 2) Water Details, attached to this Addendum, as Attachment M.

*The new plan sheet shows the water main tie-in at the intersection of O'Donnell St. and Dyer St.*

## SUBMITTED QUESTIONS AND ANSWERS

The following are answers to questions that were received prior to the cutoff date for questions.

### Q-1.01. Will PS 46 and PS 115 PVC Vylon pipe (ASTM F1803) be approved for this project?

*A-1.01. **No.** Vylon pipe (ASTM F1803) is not an acceptable pipe material according to the El Paso Water Design Standards Manual for Water, Wastewater, and Reclaimed Water Systems.*

### Q-1.02. Will the contract time for this project be extended or provide a limited notice to proceed to allow for material delivery lead times?

*A-1.02. **Yes.** The contract time will be extended to 300 days to substantial completion and 330 days to final completion.*

### Q-1.03. Since the project consists primary of pipeline work, can the General Wage Decision include the City of El Paso 2016 Paving and Street Construction, Dirt Work, Heavy Construction, Pipeline Work, Highway Wage Rates Adopted by El Paso City Council February 28, 2017 be added to Section 08400 General Wage Requirements?

*A-1.03. **Yes.** Section 00840 to be REMOVED in its entirety and REPLACE with revised Section 00840R under this Addendum.*

## **ATTACHMENTS:**

Attachment A	SECTION 00010 – INFORMAL NOTICE
Attachment B	SECTION 00015 – TABLE OF CONTENTS
Attachment C	SECTION 00020 – INVITATION TO BID
Attachment D	SECTION 00300 – BID FORM
Attachment E	SECTION 00500 – STANDARD FORM OF AGREEMENT
Attachment F	SECTION 00840 – GENERAL WAGE REQUIREMENTS STANDARD
Attachment G	SECTION 01025 – MEASUREMENT AND PAYMENT
Attachment H	SECTION 02603 – CONNECTIONS TO AND WORK ON THE EXISTING SYSTEM
Attachment I	SECTION 02605 – MANHOLES FOR SANITARY SEWER FACILITIES
Attachment J	SECTION 02607 – MANHOLES FOR WATER SYSTEM FACILITIES
Attachment K	SHEET 4.1R – OVERALL WATER MAP
Attachment L	SHEET 7.1R – SANITARY SEWER DETAILS
Attachment M	SHEET ADDENDUM NO.1 – O’DONNELL STREET & DYER STREET WATER TIE- IN CONNECTION PLAN AND DETAILS

Addendum No. 1, pages 1 through 79, shall become part of the Contract and all provisions of the Contract shall apply thereto. The time provided for completion of the Contract has been changed. Bidders shall acknowledge receipt of all Addenda by number in the space provided in the Proposal.

**\*\*\*END OF ADDENDUM NO. 1\*\*\***

# **ATTACHMENT A**

**EL PASO WATER UTILITIES  
PUBLIC SERVICE BOARD**

PSB BID NO. 52-23

**INFORMAL NOTICE**

Sealed proposals for construction of **Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor & 16-Inch Water Main Improvements Phase III** will be received by the City of El Paso Water Utilities - Public Service Board at the Board's principal office located at 1154 Hawkins Boulevard or by mail to 1154 Hawkins Boulevard, El Paso, Texas, 79925 until **August 15, 2023, 1:30 p.m.** local time. **After 1:30 p.m., bids will not be accepted.** Bid Opening will occur at **2:00 p.m.** and bids will be publicly opened and read aloud via the "GoToMeeting" format noted in Section 00020.

The work under this contract shall be for furnishing all labor, materials, transportation, and services for the construction and installation of the following work:

Shall include, but is not limited to approximately 20 lineal feet of 21-inch sanitary sewer pipe; 5,340 lineal feet of 24-inch sanitary sewer pipe; Approximately 1,840 lineal feet of 27-inch sanitary sewer pipe; Approximately 1,540 lineal feet of 30-inch sanitary sewer pipe; Approximately 60 lineal feet of 8-inch sanitary sewer pipe; twelve 72-inch diameter manholes with triplex liner; one 72-inch diameter drop manhole with triplex liner; Approximately 170 lineal feet of extra depth for manholes; Approximately 7,166 cubic yards of excavation (cut to export); Approximately 279 cubic yards of excavation (cut to fill); Approximately 8,740 lineal feet of trench excavation protection; Approximately 6,250 lineal feet of removal and replacement of farm fence; Approximately 8,640 lineal feet of 16-inch water pipe; Approximately 30 lineal feet of 24-inch water pipe; Approximately 20 lineal feet of 8-inch water pipe; Approximately seventeen 16-inch gate valves with manhole and bonnet box, one 8-inch gate valve with bonnet box; three blow-off valves with manhole; three 2-inch combination valves with manholes; tie-in connection at O'Donnell Street and Dyer Street; Approximately 10,971 cubic yards of excavation (cut to export); Approximately 275 cubic yards of excavation (cut to fill); Approximately 8,670 lineal feet of trench excavation protection; corrosion protection system; videotaping of project site before and after construction; and a traffic control plan.

Contract documents may be examined and obtained by accessing the following El Paso Water's website:  
[www.epwater.org/business\\_center/purchasing\\_overview/bids](http://www.epwater.org/business_center/purchasing_overview/bids)

If you have trouble accessing the Contract Documents, please contact the Purchasing Department of the El Paso Water Utilities, Public Service Board, at (915) 594-5628. Physical (hard) copies of the Contract Documents will **NO** longer be made available.

A pre-bid meeting will be held on **July 25, 2023** at **10 a.m.**, local time (*see instructions at the end of Section 00020*).

Each Bid shall be submitted in accordance with the Instructions to Bidders and be accompanied by a Bid Security in the amount of five percent of the amount bid.

The Successful Bidder states he or she must furnish a 100 percent (100%) Performance Bond and a 100 percent (100%) Payment Bond, in accordance with the Instructions to Bidders and the General Conditions.

Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque, sealed envelope marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), name and address of the Bidder and accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. The Bid proposal package shall include one original, three copies and an electronic version of the bid, containing a copy of the full bid package submitted, saved on a USB drive.

By submission of the bid, Bidder fully understands the requirements of the Contract Documents and agrees to comply with all requirements thereof.

Wages paid on this project shall be not less than the minimum prevailing wage rates listed in the Contract Documents, Section 00840, General Wage Requirements.

The El Paso Water Utilities (EPWU) adheres to the Cone of Silence policy which prohibits any communication regarding the bid between potential bidders (and subcontractors) and EPWU Board Members, Staff, and assigned Consulting Engineers. The provisions do not apply to oral communications with Purchasing Agent or Administrative Analyst, provided the communications is limited strictly to matters of process or procedure already contained in the solicitation document, oral communications at pre-bid conferences, or communications in writing (email preferred) submitted to the Administrative Analyst in response to inquiries regarding the bid. In addition to any other penalties provided by law, violation of the Cone of Silence by any bidder shall render that bidder's bid voidable. Any person having personal knowledge of a violation of these provisions shall report such violations to the EPWU General Counsel and/or the Purchasing Agent in writing.



## **ATTACHMENT B**

**EL PASO WATER UTILITIES  
PUBLIC SERVICE BOARD**

**Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor  
& 16-Inch Water Main Improvements  
Phase III**

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**Bid Number 52-23**

**CITY OF EL PASO, TEXAS**

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## **ATTACHMENT C**

## SECTION 00020

### INVITATION TO BID

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The Successful Bidder must furnish a 100 percent (100%) Performance Bond and a 100 percent (100%) Payment Bond, in accordance with the Instructions to Bidders and the General Conditions.

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By submission of the bid, Bidder states he or she fully understands the requirements of the Contract Documents and agrees to comply with all requirements thereof.

Wages paid on this project shall be not less than the minimum prevailing wage rates listed in the Contract Documents.

The El Paso Water Utilities (EPWU) adheres to the Cone of Silence policy which prohibits any communication regarding the bid between potential bidders (and subcontractors) and EPWU Board Members, Staff, and assigned Consulting Engineers. The provisions do not apply to oral communications with Purchasing Agent or Administrative Analyst, provided the communications is limited strictly to matters of process or procedure already contained in the solicitation document, oral communications at pre-bid conferences, or communications in writing (email preferred) submitted to the Administrative Analyst in response to inquiries regarding the bid. In addition to any other penalties provided by law, violation of the Cone of Silence by any bidder shall render that bidder's bid voidable. Any person having personal knowledge of a violation of these provisions shall report such violations to the EPWU General Counsel and/or the Purchasing Agent in writing.

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## **PRE-BID MEETING INSTRUCTIONS**

The Pre-Bid meeting will be held via Microsoft Teams. Please join the meeting from your computer, tablet, or smartphone using the link below:

### Microsoft Teams meeting

**Join on your computer, mobile app or room device**

[Click here to join the meeting](#)

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_OGM5ODk1NjUtMjRjYi00NTMxLWI1ODctY2NhYzhkNDdlMjgw%40thread.v2/0?context=%7b%22Tid%22%3a%223eebb7d9-9c59-4af3-aca0-00b46518374d%22%2c%22Oid%22%3a%22076da4a1-b214-437f-b4f9-78ef8a21c477%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_OGM5ODk1NjUtMjRjYi00NTMxLWI1ODctY2NhYzhkNDdlMjgw%40thread.v2/0?context=%7b%22Tid%22%3a%223eebb7d9-9c59-4af3-aca0-00b46518374d%22%2c%22Oid%22%3a%22076da4a1-b214-437f-b4f9-78ef8a21c477%22%7d)

Meeting ID: 278 326 989 467

Passcode: E9m2b2

[Download Teams](#) | [Join on the web](#)

**Or call in (audio only)**

[+1 915-255-2297](tel:+19152552297).,928979710# United States, El Paso

Phone Conference ID: 928 979 710#

[Find a local number](#) | [Reset PIN](#)

[Learn More](#) | [Meeting options](#)

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## **BID OPENING INSTRUCTIONS**

Bid Openings are now to be broadcast through “GoToMeeting” format.

To View Bid Opening Click the Link Below:

**52-23 Northeast Dyer/Railroad Interceptor and Water Line Extension Phase 3**

Aug 15, 2023, 2:00 – 2:30 PM (America/Denver)

**Please join my meeting from your computer, tablet or smartphone.**

<https://meet.goto.com/319681541>

**You can also dial in using your phone.**

Access Code: 319-681-541

United States (Toll Free): [1 866 899 4679](tel:18668994679)

United States: [+1 \(571\) 317-3116](tel:+15713173116)

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## **ATTACHMENT D**



**SECTION 00300**

**BID FORM**

PROJECT IDENTIFICATION: El Paso Water Utilities

**Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor  
& 16-Inch Water Main Improvements Phase III**

BID NO.: **52-23**

Name and Address of OWNER:  
El Paso Water Utilities  
Public Service Board  
1154 Hawkins Boulevard  
P. O. Box 511  
El Paso, Texas 79961

Name and Address of BIDDER:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for ninety days after the day of Bid opening. In the case of State, Federal, or NADBank-funded projects, all Bids will remain subject to acceptance for 90 days or such reasonable time as the funding agency may require. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after the date of OWNER's Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
  - A. BIDDER has examined copies of all the Bidding Documents and of the following Addenda (**receipt of all which is hereby acknowledged**):

Date	Number
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

- B. BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance, or furnishing of the Work.
  - C. BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraph 5.03 of the General Conditions, and accepts the determination set forth in Paragraph SC-5.03 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings.
  - D. BIDDER has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in "C." above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 5.03 of the General Conditions.
  - E. BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities.
  - F. BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents.
  - G. BIDDER has given ENGINEER written notice of all conflicts, errors, or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER.
  - H. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
  - I. All prices quotes by the bidder shall be entirely in United States Currency (U.S. Dollars).
4. Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

\*\*\*\*\* HIGH IMPORTANCE \*\*\*\*\*

**TEXAS ETHICS COMMISSION  
REQUIREMENT**

\*\*\*\*\*IN THE EVENT YOU RECEIVE AN AWARD OF THIS CONTRACT\*\*\*\*\*

**Reference: FORM 1295 (revised 12/22/17) "Certificate of Interested Parties"**

**A business entity must file Form 1295 electronically with the Texas Ethics Commission using the Commission's online filing application, which can be found at:**

[https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm)

**SEE INSTRUCTIONS: Form 1295 and Sample Form 1295 (Section 00302)**

**BASE BID I: SANITARY SEWER**

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>UOM</u>	<u>Brief Description of Item</u>	<u>Unit Bid Price</u>	<u>Extended Amount (Qty. x Unit Price)</u>
1.	1	L.S.	Insurance, Bonds, and Move-In Related Expenses, Not to Exceed 5% of Bid Item Nos. 2 through 12. If Item No. 1 exceeds 5%, bid may be deemed non-responsive).	\$ _____	\$ _____
2.	7,166	C.Y.	Excavation (Cut to Export), including all material & labor and all related appurtenances. Complete in Place.	\$ _____	\$ _____
3.	279	C.Y.	Excavation (Cut to Fill), including all material & labor and all related appurtenances. Complete in Place.	\$ _____	\$ _____
4.	20	L.F.	Furnish and Install 21-inch Sanitary Sewer Pipe (PVC) (ASTMF679 PS 46), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>UOM</u>	<u>Brief Description of Item</u>	<u>Unit Bid Price</u>	<u>Extended Amount (Qty. x Unit Price)</u>
5.	2,120	L.F.	Furnish and Install 24-inch Sanitary Sewer Pipe (PVC) (ASTMF679 PS 46) , installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
6.	3,220	L.F.	Furnish and Install 24-inch Sanitary Sewer Pipe (PVC) (ASTMF679 PS 115), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
7.	1,380	L.F.	Furnish and Install 27-inch Sanitary Sewer Pipe (PVC) (ASTMF679 PS 46), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
8.	460	L.F.	Furnish and Install 27-inch Sanitary Sewer Pipe (PVC) (ASTMF679 PS 115), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
9.	1,540	L.F.	Furnish and Install 30-inch Sanitary Sewer Pipe (PVC) (ASTMF679 PS 115), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
10.	60	L.F.	Furnish and Install 8-inch Sanitary Sewer Pipe (PVC) (SDR-35), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>UOM</u>	<u>Brief Description of Item</u>	<u>Unit Bid Price</u>	<u>Extended Amount (Qty. x Unit Price)</u>
11.	12	EA	Furnish and Install 72-inch Sanitary Sewer Manhole (6FT), with Triplex C.I.P. Liner installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
12.	1	EA	Furnish and Install 72-inch Sanitary Sewer Manhole (DROP) with Triplex C.I.P. Liner, installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
13.	153	L.F.	Furnish and Install 72-inch Sanitary Sewer Manhole (Extra Depth), including all material, labor & related appurtenances. Complete in Place	\$ _____	\$ _____
14.	8,710	L.F.	Trench Safety System: Trench Box Method or Shoring, Sheeting, and Bracing Method	\$ _____	\$ _____
15.	6,250	L.F.	Remove and Replace Fence, including all material & labor and all related appurtenances. Complete in Place.	\$ _____	\$ _____
16.	1	L.S.	Provide and Maintain Approved Traffic Control Plan, including all material, labor & all related appurtenances.	\$ _____	\$ _____
17.	1	L.S.	Videotape project, Before and After Construction, including material, labor & all related appurtenances.	\$ _____	\$ _____

**TOTAL BID PRICE (ITEMS 1 THROUGH 17)**

\$ \_\_\_\_\_

(In Words) \_\_\_\_\_

Quantities are not guaranteed.

**BASE BID II: WATER MAIN IMPROVEMENTS**

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>UOM</u>	<u>Brief Description of Item</u>	<u>Unit Bid Price</u>	<u>Extended Amount (Qty. x Unit Price)</u>
1.	1	L.S.	Insurance, Bonds, and Move-In Related Expenses, Not to Exceed 5% of Bid Item Nos. 2 through 9. If Item No. 1 exceeds 5%, bid may be deemed non-responsive).	\$ _____	\$ _____
2.	10,971	C.Y.	Excavation (Cut to Export), including all material & labor and all related appurtenances. Complete in Place.	\$ _____	\$ _____
3.	275	C.Y.	Excavation (Cut to Fill), including all material & labor and all related appurtenances. Complete in Place.	\$ _____	\$ _____
4.	8,640	L.F.	Furnish and Install 16-inch Water Main (DIP) (PC 350), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
5.	30	L.F.	Furnish and Install 24-inch Water Main (DIP) (PC 350), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
6.	20	L.F.	Furnish and Install 8-inch Water Main (PVC) (C-900), installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
7.	17	EA	Furnish and Install 16-inch Gate Valve with Manhole, installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____

<u>Item No.</u>	<u>Estimated Quantity</u>	<u>UOM</u>	<u>Brief Description of Item</u>	<u>Unit Bid Price</u>	<u>Extended Amount (Qty. x Unit Price)</u>
8.	1	EA	Furnish and Install 8-inch Gate Valve, installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
9.	3	EA	Furnish and Install 6-inch Blow-Off Valve with Manhole, installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
10.	3	EA	Furnish and Install 2-inch Combination Valve with Manhole, installed with fittings and accessories in trench, including appurtenances. Complete in Place	\$ _____	\$ _____
11.	8,670	L.F.	Trench Safety System: Trench Box Method or Shoring, Sheeting, and Bracing Method	\$ _____	\$ _____
12.	1	L.S.	Furnish and Install Corrosion Protection System, including all material & labor and all related appurtenances Complete in Place	\$ _____	\$ _____
13.	1	L.S.	Furnish and Install Tie-In Connection Dyer and O'Donnell, Plan Sheets including all material & labor and all related appurtenances Complete in Place	\$ _____	\$ _____

**TOTAL BID PRICE (ITEMS 1 THROUGH 13)**

\$ \_\_\_\_\_

(In Words) \_\_\_\_\_

Quantities are not guaranteed.

**TOTAL PRICE (BASE BID I & II)**

\$ \_\_\_\_\_

(In Words) \_\_\_\_\_

If multiple awards are contemplated under a single bid document, an additional breakdown of bid amounts, subcontractors, and suppliers is required. It will also be necessary to adjust the MWBE Certification and Participation Summary Form accordingly.

In accordance with Section 151.311 of the Texas Tax Code (V.A.T.C.S.), regarding taxes on materials and services, and requiring a separated contract, the following is the breakdown of cost for materials and cost for labor for this bid:

<b>MATERIALS TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX:</b>	\$ _____
<b>LABOR TO BE INCORPORATED IN PROJECT NOT SUBJECT TO SALES TAX:</b>	\$ _____
<b>RENTAL EQUIPMENT AND OTHER TAXABLE ITEMS:</b>	\$ _____
<b>OTHER (I.E. BONDS, INSURANCE, CAPITAL EQUIPMENT, ETC.)</b>	\$ _____
<b>*TOTAL CONTRACT: *(TOTAL MUST EQUAL TOTAL BID PRICE)</b>	\$ _____

5. BIDDER agrees that the Work will be Substantially completed within 300 Calendar Days from the date when the Contract Time commences to run as provided in Paragraph 2.03 of the General Conditions, and as revised in Supplementary Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions, and as revised in the Supplementary Conditions, within 330 calendar days. Final completion includes CONTRACTOR'S resolution of all punch list items and CONTRACTOR'S submission of required close-out documentation. Any failure of the CONTRACTOR to complete the project within the contract time will be considered a material breach of this contract.

BIDDER accepts the provisions of the Supplementary Conditions and the Agreement as to liquidated damages in the event of failure to complete the Work on time.

6. BIDDER MUST ANSWER THE FOLLOWING QUESTIONS: (Refer to INSTRUCTIONS TO BIDDERS for definitions.)

- A. Is the bidder that is making and submitting this bid a "RESIDENT BIDDER" or a "NONRESIDENT BIDDER"?

Answer: \_\_\_\_\_

- B. If the bidder is a "NONRESIDENT BIDDER", does the state in which the Nonresident Bidder's principal place of business is located have a law requiring a Nonresident Bidder of that state to bid a certain amount of percentage under the bid or a Resident Bidder of that state in order for the nonresident bidder of that state to be awarded a contract on his or her bid in such state?

Answer: \_\_\_\_\_



- C. If the answer to the question in Paragraph 6B above is "yes", then what amount or percentage must a Texas Resident Bidder bid under the bid of a Resident Bidder of that state in order to be awarded a contract on such bid in said state?

Answer: \_\_\_\_\_

7. The following documents are attached to and made a condition of this Bid:

- A. Required Bid Security in the form of \_\_\_\_\_
- \_\_\_\_\_

- B. A tabulation of all Subcontractors who will provide labor at the site of the work or render services to the CONTRACTOR in or about the construction of the work and Suppliers and other persons and organizations is required to be identified in this Bid. Complete the following table, designating each as Small Locally-Owned Business Enterprise (SLBE), Minority Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), or Other (not either SLBE, WBE MBE) is required. Only one category may be checked. Include the work item and value of work to be provided by the Prime Contractor, as well as its category.

**Tabulation of Subcontractors and Suppliers**

SUBCONTRACTOR/SUPPLIER	WORK ITEM	SUBCONTRACT OR PURCHASE ORDER VALUE  (If value is unknown, please list <i>Pending</i> )	S	M	W			O
			L	B	B			T
			B	E	E			H
			E					R
			Please check one box					
<b>Prime Contractor:</b>								

C. Will the Contractor meet the Small Locally Owned Business Enterprise, Minority Business Enterprise and Women-Owned Business Enterprise goals as required by these contract documents and the funding agencies?

YES \_\_\_\_\_

NO \_\_\_\_\_

If "YES", include above each of the firms to be used, their business status as a SLBE, MBE, or WBE, the proposed dollar value and type of work to be performed.

If "NO", documentation supporting good faith effort is required.

8. Communications concerning this Bid shall be addressed to the following named individual, address, telephone number, facsimile number, and e-mail address:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

9. The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

SUBMITTED on \_\_\_\_\_, 20\_\_.

If BIDDER is:

**An Individual**

By \_\_\_\_\_ (SEAL)  
(Name of Bidder)

\_\_\_\_\_  
(Title) (Signature)

doing business as \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone No.: \_\_\_\_\_

**A Partnership**

By \_\_\_\_\_ (SEAL)  
(Firm Name)

\_\_\_\_\_  
(Signature - general partner)

Business Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

**A Corporation** (Revised 10/12/92, 1/7/93, 4/13, 3/1/22)

By \_\_\_\_\_  
(Corporation Name)

\_\_\_\_\_  
(State of Incorporation and State of Principal Place of Business)

By \_\_\_\_\_  
(Name of Person Authorized to Sign)

\_\_\_\_\_  
(Title) (Signature)

(Corporate Seal)

Attest \_\_\_\_\_  
(Secretary)

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone No.: \_\_\_\_\_

Federal Tax Identification Number: \_\_\_\_\_

When proposing as a Corporation, Bidder swears and affirms by signing this Bid that the proposing Corporation is currently in existence, is currently authorized to do business in the State of Texas (or State of incorporation) and that no franchise tax reports or payments are delinquent as of the date of this Bid Proposal. The Bidder will provide a Certificate of Account Status with the signed Contract Documents. See Section 00510, for the sample form which is to be obtained by the successful Contractor from the Texas (or other state) Comptroller of Public Accounts and submitted as part of the final, executed Contract Documents.

**CERTIFICATION OF INSURANCE AVAILABILITY**

Date \_\_\_\_\_

I, \_\_\_\_\_ (Name of Insurance Agent), certify that I have reviewed the insurance requirements listed in Article 5 of the Supplementary Conditions of the specifications for the **Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor & 16-Inch Water Main Improvements Phase III** (Name of Project), Bid No. **52-23**, and further certify that \_\_\_\_\_ (Name of Bidder) has or can obtain the insurance coverage required by this Project so that a certificate of insurance and a copy(s) for the actual insurance policies can be submitted to the Owner within ten (10) days of the Notice of Award.

Signed \_\_\_\_\_

Title \_\_\_\_\_

Insurance Agency \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

**MINORITY CERTIFICATION  
AND  
PARTICIPATION SUMMARY**  
*(EPWU CIP FUNDED PROJECTS)*

BID NUMBER: 52-23

BID TITLE: **Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor & 16-Inch Water Main Improvements Phase III**

I certify that the Small Locally-Owned Businesses (SLBE), Minority (MBE) and Women's Business Enterprises (WBE) participating in this project are qualified in accordance with the Minority requirements included in the above listed Bid Documents and that we will ensure all consultants, contractors, suppliers, and subcontractors will comply with the Minority guidelines. Definitions of each category are found in the 00100, Instructions to Bidders Section. Attached are:

Solicitation Documents: \_\_\_\_\_

Proposed Subcontracts for the below listed firms: \_\_\_\_\_

SLBE, MBE, or WBE FIRM NAME	ADDRESS	PHONE	CONTRACT AMOUNT	SLBE	MBE	WBE

The attached documents outline the Good Faith Effort taken in complying with the Minority Guidelines.

\_\_\_\_\_  
CONTRACTOR

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED REPRESENTATIVE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PRINTED NAME OF AUTHORIZED REPRESENTATIVE

## **ATTACHMENT E**

**SECTION 00500**

**STANDARD FORM OF AGREEMENT BETWEEN OWNER  
AND CONTRACTOR ON THE BASIS OF A STIPULATED PRICE**

THIS AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year 20\_\_ by and between El Paso Water Utilities-Public Service Board, a component unit of the City of El Paso, a Texas municipal corporation (hereinafter called OWNER), and \_\_\_\_\_ (hereinafter called CONTRACTOR). OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The work is generally described as follows:

**Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor  
& 16-Inch Water Main Improvements Phase III**

The work under this contract shall be for furnishing all labor, materials, transportation and services for the construction and installation of the following work:

Shall include, but is not limited to approximately 20 lineal feet of 21-inch sanitary sewer pipe; 5,340 lineal feet of 24-inch sanitary sewer pipe; Approximately 1,840 lineal feet of 27-inch sanitary sewer pipe; Approximately 1,540 lineal feet of 30-inch sanitary sewer pipe; Approximately 60 lineal feet of 8-inch sanitary sewer pipe; twelve 72-inch diameter manholes with triplex liner; one 72-inch diameter drop manhole with triplex liner; Approximately 170 lineal feet of extra depth for manholes; Approximately 7,166 cubic yards of excavation (cut to export); Approximately 279 cubic yards of excavation (cut to fill); Approximately 8,740 lineal feet of trench excavation protection; Approximately 6,250 lineal feet of removal and replacement of farm fence; Approximately 8,640 lineal feet of 16-inch water pipe; Approximately 30 lineal feet of 24-inch water pipe; Approximately 20 lineal feet of 8-inch water pipe; Approximately seventeen 16-inch gate valves with manhole and bonnet box, one 8-inch gate valve with bonnet box; three blow-off valves with manhole; three 2-inch combination valves with manholes; tie-in connection at O'Donnell Street and Dyer Street; Approximately 10,971 cubic yards of excavation (cut to export); Approximately 275 cubic yards of excavation (cut to fill); Approximately 8,670 lineal feet of trench excavation protection; corrosion protection system; videotaping of project site before and after construction; and a traffic control plan.

ARTICLE 2. ENGINEER

The Project has been designed by CEA GROUP who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME (Revised 9/2/92, 10/9/98, 6/3/99, 4/13, 10/16/20)

- 3.1 The Work will be Substantially completed within 300 Calendar Days from the date when the Contract Time commences to run as provided in Paragraph 4.01 of the General Conditions, and as revised in Supplementary Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions, and as revised in the Supplementary Conditions, within 330 calendar days. Final completion includes CONTRACTOR'S resolution of all punch list items and CONTRACTOR'S submission of required close-out documentation. Any failure of the CONTRACTOR to complete the project within the contract time will be considered a material breach of this contract.
- 3.2 Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss and public inconvenience if the Work is not completed and the submittals are not submitted within the times specified in Paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 11 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER the sum of **\$1,750.00** (*\$ One thousand seven hundred fifty dollars*) for each Calendar Day that expires after the time specified in the Agreement for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER **\$980.00** (*\$ Nine hundred Eighty dollars*) for each Calendar Day that expires after the time specified in the Agreement for completion and readiness for final payment.

ARTICLE 4. CONTRACT PRICE (Revised 10/12/92, 6/7/93; 2/13/97)

- 4.1 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds, per the attached CONTRACTOR's Bid in accordance with the below listed separate charges:

**MATERIALS TO BE INCORPORATED IN  
PROJECT NOT SUBJECT TO SALES TAX:** \$ \_\_\_\_\_

**LABOR TO BE INCORPORATED IN  
PROJECT NOT SUBJECT TO SALES TAX:** \$ \_\_\_\_\_

**RENTAL EQUIPMENT  
AND OTHER TAXABLE ITEMS:** \$ \_\_\_\_\_

**OTHER (I.E. BONDS, INSURANCE,  
CAPITAL EQUIPMENT, ETC.)** \$ \_\_\_\_\_

**\*TOTAL CONTRACT:** \$ \_\_\_\_\_

**\* (TOTAL MUST EQUAL TOTAL BID PRICE)**



ARTICLE 5. PAYMENT PROCEDURES (Revised 5/14/96, 7/13, 10/16/20, 3/4/22)

CONTRACTOR shall submit Applications for Payment in accordance with Article 15 of the General Conditions and Article 15 of the Supplementary Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

- 5.1 Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER for Work which is completed in accordance with the terms and conditions of the Contract Documents. All progress payments will be on the basis of the progress of the Work measured by the schedule of values established in Paragraph 2.03 and referenced in Paragraph 2.05 of the General Conditions (and in the case of Unit Price Work based on the number of units completed and accepted) or, in the event there is no schedule of values, as provided in the General Requirements. Each invoice, regardless of contract type, shall contain a summary indicating the budget, the current invoiced amount, less a withholding of a 5% retainage amount, and the billed to date figure.

Prior to Substantial Completion, progress payments will be made in an amount equal to the percentages indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall recommend, or OWNER may withhold, in accordance with Paragraph 15.06 of the General Conditions.

Ninety-five percent of Work completed (ninety percent for contracts under \$400,000.00), including 95 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in Paragraph 15.01 of the General Conditions).

- 5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Article 15 of the General and Supplementary Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said Article.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS (Revised 10/12/92, 7/13, 11/9/17, 10/16/20, 3/4/22)

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

- 6.1 CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
- 6.2 CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraph 5.03 of the General Conditions, and accepts the determination set forth in Paragraph SC-5.03 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings.

- 6.3 CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 6.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise which may affect the cost, progress, performance or furnishing of the Work necessary for the performance or furnishing of the Work at the Contract Price, specifically within the provisions of Paragraph 5.03 of the General Conditions. CONTRACTOR understands that the correctness of such information is not guaranteed by the OWNER or the ENGINEER and CONTRACTOR understand(s) that the conditions encountered in performing the work may be different from the approximations shown.
- 6.4 CONTRACTOR has reviewed all information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the location of said Underground Facilities as determined by his or her own field investigations. CONTRACTOR understands that the correctness of such information is not guaranteed by the OWNER or the ENGINEER and CONTRACTOR understand that the conditions encountered in performing the work may be different from the approximations shown.
- 6.5 CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 6.6 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.
- 6.7 CONTRACTOR affirms it is not a foreign-owned company that is owned or controlled by citizens of or directly controlled by the government of China, Iran, North Korea, Russia or a designated country pursuant to Chapter 2274 of the Texas Government Code. Additionally, CONTRACTOR affirms it is not a company that is headquartered in China, Iran, North Korea, Russia, or a designated country pursuant to Chapter 2274 of the Texas Government Code.
- 6.8 CONTRACTOR affirms it does not boycott Israel and will not boycott Israel during the term of the Agreement.
- 6.9 In accordance with Chapter 2274 of the Texas Government Code, CONTRACTOR affirms that it does not boycott energy companies and will not boycott energy companies during the term of the Agreement.
- 6.10 In accordance with Section 2274.002 of the Texas Government Code, CONTRACTOR affirms that it does not have a practice, policy, guidance or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the Agreement against a firearm entity or firearm trade association.

ARTICLE 7. CONTRACT DOCUMENTS (Revised 11/16/94, 1/12/11, 7/13, 11/2/16, 10/16/20, 3/4/22)

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 7.1 CONTRACTOR's Bid (Section 00300)
- 7.2 Agreement (Section 00500)
- 7.3 Performance and Payment Bonds, and Certificate of Insurance, and insurance policies identified as Sections 00610, 00630 and 00650.
- 7.4 Notice of Award.
- 7.5 General Conditions (Section 00700)
- 7.6 Supplementary Conditions (Section 00800)
- 7.7 Supplement for Special-Funded Project (Section 00805) – IF APPLICABLE
- 7.8 General Wage Rates (Section 00840)
- 7.9 Specifications bearing the title Project Manual for the Construction of **Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor & 16-Inch Water Main Improvements Phase III** consisting of division numbers 1 through 3.
- 7.10 Drawings consisting of a cover sheet and sheets listed in the Index to Drawings, each sheet bearing the following general title:

CITY OF EL PASO, TEXAS  
EL PASO WATER UTILITIES - PUBLIC SERVICE BOARD  
**Northeast Dyer/Railroad 30-Inch Sanitary Sewer Interceptor  
& 16-Inch Water Main Improvements Phase III**

Bid No. 52-23

(Drawings not attached to this Agreement.)

- 7.11 Addenda numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive (not attached to this Agreement.)
- 7.12 Documentation submitted by CONTRACTOR prior to Notice of Award (Pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).
- 7.13 Contractor Health and Safety Plan
- 7.14 The Instructions to Bidders, Information Available to Bidders, Bid Form and Bid Security, as well as any supplements to the Bid Form.

- 7.15 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraphs 11.01 of the General Conditions.
- 7.16 The documents listed in Paragraphs 7.2 et. seq. above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in Paragraphs 11.01 of the General Conditions.

#### ARTICLE 8. MISCELLANEOUS

- 8.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 8.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

#### ARTICLE 9. OTHER PROVISIONS (Revised 3/4/22)

- 9.1 It is agreed that should any dispute arise under this Contract which culminates in litigation, venue of that suit shall be in a court of competent jurisdiction sitting in El Paso County, Texas. The court shall apply the laws of the State of Texas in construing and interpreting the terms of this Contract and the Contract Documents.
- 9.2 In case any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal, or unenforceable in any respect, that invalidity, illegality, unenforceability shall not affect any other provisions and this Agreement shall be construed as if such invalid, illegal, or unenforceable provisions had never been included, and the Agreement provisions shall be read and interpreted so as to harmonize with the Agreement itself.
- 9.3 The captions or headings of paragraphs in this Contract are for convenience only and shall not be considered in constraining the provisions hereof if any question of intent should arise.
- 9.4 For NADBank-funded projects, Contractor agrees to indemnify and hold harmless North American Development Bank (NADB) and each of its directors, officers, employees, agents and representatives (collectively, "NADB's Associated Persons") against all claims for death, personal injury, damages, or other relief against NADB or NADB's Associated Persons, including costs, expenses and attorney's fees, resulting from negligence or willful acts or failure to act by the Contractor.

- 9.5 In accordance with Sections 552.371 and 552.372 of the Texas Government Code, the following language is included, and applicable in contracts that require or result in the expenditure of public funds of at least \$1,000,000:

CONTRACTING INFORMATION. CONTRACTOR must preserve all contracting information related to this Agreement as provided by the records retention schedule requirements applicable to the OWNER for the duration of this Agreement. CONTRACTOR will promptly provide the OWNER any contracting information related to this Agreement that is in the custody or possession of the CONTRACTOR on request of the OWNER. On completion of this Agreement, CONTRACTOR will either provide at no cost to the OWNER all contracting information related to this Agreement that is in the custody or possession of the CONTRACTOR or preserve the contracting information related to this Agreement as provided by the records retention requirements applicable to the OWNER.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Agreement will be effective on \_\_\_\_\_, 20\_\_\_\_.

OWNER: El Paso Water Utilities  
Public Service Board of  
the City of El Paso, Texas

CONTRACTOR: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By \_\_\_\_\_  
Purchasing Agent

By \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Address for giving notices:  
  
1154 Hawkins Boulevard  
El Paso, Texas 79925

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_

Date Signed \_\_\_\_\_

Date Signed \_\_\_\_\_

Federal Tax I.D. No. \_\_\_\_\_

Agent for service or process:  
\_\_\_\_\_

INSTRUCTIONS FOR EXECUTING CONTRACT

If the CONTRACTOR be a corporation, the following certificate should be executed:

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ of the corporation named as CONTRACTOR hereinabove; that, \_\_\_\_\_ who signed the foregoing Contract on behalf of the CONTRACTOR was then, \_\_\_\_\_ of said Corporation; that said Contract was duly signed for and in behalf of said Corporation by authority of its governing body and is within the scope of its corporate powers.

\_\_\_\_\_  
Corporate Seal

If the Contract is signed by the secretary of the corporation, the above certificate should be executed by some other officer of the corporation under the corporate seal. In lieu of the foregoing certificate, there may be attached to the Contract copies of so much of the records of the corporation as will show the official character and authority of the officers signing, duly certified by the Secretary or Assistant Secretary under the corporate seal to be true copies.

The full name and business address of the CONTRACTOR should be inserted and the Contract shall be signed with his or her official signature. Please have the name of the signing party or parties typewritten or printed under all signatures to the Contract.

If the CONTRACTOR should be operating as a partnership, each partner should sign the Contract. If the Contract is not signed by each partner, there should be attached to the Contract a duly authenticated Power of Attorney, or other appropriate resolution or document evidencing the signer's (signers') authority to sign such Contract for and in behalf of the partnership.

If the CONTRACTOR is an individual, the trade name (if the CONTRACTOR is operating under an assumed or trade name) should be indicated in the Contract and the Contract should be signed by such individual. If signed by one other than the CONTRACTOR, there should be attached to the Contract a duly authenticated Power of Attorney evidencing the signer's authority to execute such Contract for and in behalf of the CONTRACTOR.

### CONTRACT SUBMITTAL CHECKLIST

(The following items must be submitted within **10** calendar days of the Notice of Award unless stated otherwise in the General or Supplemental Conditions)

1.	Executed Agreement
2.	Payment and Performance Bonds
3.	Insurance Certificate and Policies. Policies should be sent in electronic format to <a href="mailto:rguevara@epwater.org">rguevara@epwater.org</a> , with copy to <a href="mailto:becky.ramirez@hubinternational.com">becky.ramirez@hubinternational.com</a> (Owner's Risk Manager) and to <a href="mailto:Purchasing.Info@epwater.org">Purchasing.Info@epwater.org</a> .
4.	If employees provided by leasing company, evidence of Texas State License and copy of their Worker's Compensation policy. If no leased employees will be used, provide a letter on Contractor's letterhead stating so.
5.	Certificate of Account Status (paid franchise taxes)
6.	Final/Updated (if applicable) Minority Certification and Participation Summary
7.	Preliminary Schedule of Values
8.	Preliminary Construction Schedule
9.	Schedule of Shop Drawings
10.	Trench Safety System (sealed by a Professional Engineer)
11.	Trench Safety Plan
12.	Stormwater Pollution Prevention Plan
13.	Traffic Control Plan
14.	Health and Safety Plan

- **Deliver all items to the OWNER's Purchasing Department**
- **Deliver electronic copies of items 7-14 to EPWater Project Manager**



## **ATTACHMENT F**

**SECTION 00840**

**GENERAL WAGE REQUIREMENTS**

The following Wage Decision(s) will be utilized for this project. **A Wage Rate for one or both Wage Decisions for a construction type(s) included in the Contract Document, the Contractor is required to indicate on his Certified Payroll Reports, the Wage Decision description/construction type under which the works being reported. The wage decision is attached to this form.**

<b>CONSTRUCTION TYPE / WAGE DECISION</b>	<b>PORTION OF PROJECT FOR WHICH THE WAGE DECISION IS APPLICABLE</b>
City of El Paso 2016 Paving and Street Construction, Dirt Work, Heavy Construction, Pipeline Work, Highway Wage Rates  Adopted by El Paso City Council February 28, 2017	All improvements.



**CITY OF EL PASO, TEXAS**  
**2016 Paving and Street Construction, Dirt Work,**  
**Heavy Construction, Pipeline Work, Highway Wage Rates**

CLASSIFICATION	BASE WAGE PER HOUR	TOTAL FRINGES PER HOUR	HOURLY PREVAILING WAGE RATE	(8 HOURS) PER DIEM WAGE RATE
Asphalt Distributor Operator	14.64	0.00	14.64	117.12
Asphalt Paving Machine Operator / Spreader Box Operator	14.20	0.00	14.20	113.60
Asphalt Raker	12.99	0.00	12.99	103.92
Backhoe Operator	15.95	0.00	15.95	127.60
Concrete Finishers (Paving and Structures)	13.88	0.00	13.88	111.04
Crane Operator, Lattice Boom	17.50	0.00	17.50	140.00
Crane Operator, Hydraulic	17.50	0.00	17.50	140.00
Electrician	23.09	0.00	23.09	184.72
Excavator Operator	16.10	0.00	16.10	128.80
Form Builder/Setter	15.02	0.00	15.02	120.16
Form Setter (Paving and Curb)	12.86	0.00	12.86	102.88
Front End Loader	14.82	0.00	14.82	118.56
Laborer	11.89	0.00	11.89	95.12
Laborer (Skilled)(Utility)	13.65	0.00	13.65	109.20
Mechanic	17.50	0.00	17.50	140.00
Motor Grader Operator (Fine)	17.54	0.00	17.54	140.32
Pipe Layer	12.94	0.00	12.94	103.52
Reinforcing Steel Setter (Structure and Paving)/ Structural Steel Worker	17.00	0.00	17.00	136.00
Rock Mason	12.00	0.00	12.00	96.00
Roller Operator	13.70	0.00	13.70	109.60
Servicer	14.33	0.00	14.33	114.64
Truck Driver, Single Axle	13.19	0.00	13.19	105.52
Truck Driver, Tandem Axle	15.32	0.02	15.34	122.72
Utility Operator Grade 1	12.00	0.00	12.00	96.00
Utility Operator Grade 2	13.95	0.00	13.95	111.60
Welder, Certified/ Structural Steel Welder	13.83	0.00	13.83	110.64

All persons required to be licensed or certified must meet those qualifications to be paid the associated rate.

## 2016 HEAVY / HIGHWAY DEFINITIONS

1	<b>Asphalt Distributor Operator</b>	Drives distributor truck, sets spray bars and operates valves and levers to control distribution of bituminous material for highway surfacing. May oil, grease or otherwise service and make adjustments to equipment as needed. Performs other related duties.
2	<b>Asphalt Paving Machine Operator/Spreader Box Operator</b>	Operates paving machine that spreads and levels asphaltic concrete on highway. Controls movement of machine, raises and lowers screed, regulates width of screed. Operates spreader box by adjusting hopper and strike-off blade so that gravel, stone or other material may be spread to a specific depth on road surface during seal coat and surface treatment operations. May oil, grease, service and make adjustments to equipment as needed. Performs other related duties.
3	<b>Asphalt Raker</b>	Distributes asphaltic materials evenly over road surface by hand-raking and brushing material to correct thickness; may control screed to regulate width and depth of materials; directs Laborers (skilled and unskilled) when to add or take away material to fill low spots or to reduce high spots.
4	<b>Backhoe Operator</b>	Operates a rubber-tired machine mounted with a backhoe bucket on one end and a loader bucket on the other end. Used for excavating ditches and structures, laying pipe and precast concrete structures, carrying material in the loader bucket, and general excavation and backfill. May also be equipped with hydraulic attachments. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.
5	<b>Concrete Finisher (Paving and Structures)</b>	Finishes the exposed surfaces of fresh concrete paving, median barrier and every element of concrete structures. Operates bridge deck finishing machine. Forms and finishes edges and joints. Finishes concrete curbs and gutters. Finishes exposed surface of concrete after forms have been removed by patching imperfections with fresh concrete, rubbing surface with abrasive stone, and directing others in removing excess or defective concrete with power tools. Performs other related duties.
6	<b>Crane Operator, Lattice Boom</b>	A worker who operates a lattice boom type crane to hoist and move materials, raise and lower heavy weights and perform other related operations. May be crawler type or rubber tired. May include placement of rock riprap, clamshell, dragline, pipe and pile driving operations. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.
7	<b>Crane Operator, Hydraulic</b>	A worker who operates a hydraulic telescoping boom type crane to hoist and move materials, raise and lower heavy weights and perform other related operations. May be crawler type or rubber-tired. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

8	<b>Electrician</b>	Plan and execute the layout and installation of electrical conduit, switch panels, buss bars, outlet boxes, electrical wires and cables, lighting standards, lighting fixtures, receptacles, switches, and other electrical devices and apparatus necessary for the complete installation of wiring systems, works on overhead distribution systems and underground distribution systems. Includes installation of photovoltaic solar panels.
9	<b>Excavator Operator</b>	Operates a crawler or rubber-tired machine mounted with an excavator bucket. Used for excavating ditches and structures, laying pipe and precast concrete structures, loading trucks and placing rock riprap. May also be equipped with various hydraulic attachments. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.
10	<b>Form Builder/Setter</b>	Works from plans to build, assemble, fit together, align, plumb, and set in place forms for molding concrete structures. Forms may be wood, steel, aluminum, fiberglass or any other type of material. Checks forms while concrete is being placed. May install miscellaneous materials integral to concrete structures. May set precast concrete elements. Prepares for slipforming traffic rail and median barrier. May install permanent metal deck forms. May work with power tools. Performs other related duties. Includes guardrail installation.
11	<b>Form Setter (Paving and Curb)</b>	Fits together, aligns and sets to grade metal and wooden forms for placement for concrete paving and curbs. Works with survey crew to set stringline for paving, curb and gutter and curb. Performs other related duties.
12	<b>Front End Loader</b>	Operates a rubber-tired, skid steer or crawler type tractor with an attached scoop type bucket on front end. Machine is used to load materials from stockpiles, excavation, charging batch plants, loading and unloading trucks. May be used with attachments in lieu of the bucket. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.
13	<b>Laborer</b>	A general term used on construction work covering many unskilled classifications requiring work of a physical nature. Performs a variety of work ranging from pick and shovel work to cleaning up lumber with hammer, shoveling and placing concrete, uses air tools, under the supervision of qualified personnel. Cleans concrete joints and fills joints with sealing compound from bucket or with hose and nozzle from a central source, applies coating of oil to inside face of forms and strip forms, unloads and transports reinforcing steel, cures newly poured concrete, assists pipelayers, works with dirt crew keeping construction layout stakes out of the way of dirt-moving equipment. May fine grade excavation and ditches, shovels hot asphalt material. May use power tools and other necessary equipment in demolition work under the supervision of qualified personnel. Does not ordinarily perform work permitting exercise of independent judgment or without close direction by other workers. Installs and maintains erosion control. Performs other related duties.

14	<b>Laborer (Skilled) (Utility)</b>	Performs a variety of manual duties, usually working in a utility capacity by working on multiple projects and tasks where demands require workmen with varied experience and ability to work without close direction. Unloads and transports reinforcing steel. Directs laborers in pouring concrete. Erects trench shoring and bracing. Installs, operates, and maintains watering systems. May assist equipment operators in positioning machines, verifying grades and signaling operators to dumping positions to maintain grades as directed. Uses power tools and air tools. May work as lead man in a labor crew. Is more or less a general utility construction worker. May be a second step in learning a skill. Includes Concrete/Granite Pump Operator, Concrete Saw Operator, Fence Erector, Flagger, and Sign Erector. Performs other related duties.
15	<b>Mechanic</b>	Assembles, assist set up, adjusts and maintains and repairs all types of construction equipment and trucks. May perform the duties of a welder in repair of equipment. Performs other related duties.
16	<b>Motor Grader Operator (Fine)</b>	Operates motor grader. Performs many of the same duties of Motor Grader, Rough, but in addition performs finish grade work to bluetops or other close specification control. This work is subject to strict inspection and must conform closely to specifications. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.
17	<b>Pipe Layer</b>	Installs concrete, clay, steel, ductile iron, plastic, corrugated pipe and any other type of pipe for storm drainage, water lines, gas lines and sanitary sewer lines. Lays underground communication and electrical ducts. May install and set electrical ground boxes, hand holes, manholes, inlets and other structures. Caulks joints, makes threaded and flanged connections. Installs valves and other accessories. Performs other related duties.
18	<b>Reinforcing Steel Setter (Structure and Paving)/ Structural Steel Worker</b>	Works from plans to lay out and install reinforcing steel within forms or in mats of concrete paving. Erects and places reinforcing steel and fabricated structural steel members, such as girders, plates, diaphragms, lateral bracing, and unites them permanently to form a completed structural steel unit, including reinforcing members. Fastens steel members together by welding or bolting. May include dismantling and erecting large units of equipment. Gives direction to reinforcing steel worker apprentice or utility laborers. Performs other related duties.
19	<b>Rock Mason</b>	Constructs partitions, fences, walls, using rock. Cutting, grouting and pointing of materials listed above which is necessary shall be part of this classification. May also build or repair rock retaining walls, cutting or placing of rock in mortar or other similar material.
20	<b>Roller Operator</b>	Operates a self-propelled machine with either steel wheels or pneumatic tires which is used to compact and smooth bituminous and flexible base materials and compact earth fills, subgrade, and all other types of materials. May oil, grease or otherwise service and make necessary adjustments to equipment as needed. Performs other related duties.

21	<b>Servicer</b>	Drives a truck which carries various fuels, oils, greases and filters. Must have knowledge of and is responsible for the correct oiling and greasing and changing of filters on equipment according to manufacturers' specifications. Uses compressed air grease guns, wrenches and other tools. May make adjustments to clutches, brakes and other mechanical items. Keeps record of service for preventive maintenance records. . May require a Commercial Driver's License if driving truck on public highways. Performs other related duties.
22	<b>Truck Driver, Single Axle</b>	Drives a light capacity truck for transporting loads of construction material. The truck is of single rear axle type, may have various kinds of beds attached such as dump, flat bed, tank, etc. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.
23	<b>Truck Driver, Tandem Axle</b>	Drives a tandem axle powered vehicle. Hauls dirt, rock, aggregates or other material. May require CDL license for driving on highway. May service and make necessary adjustments for proper operation of equipment. Performs other related duties.
24	<b>Utility Operator Grade 1</b>	Clam, ditching machine, side booms (except those in Grade 2), operator on dredges, cleaning machine, coating machine, , blending machine, water-kote machine, equipment welder, track tractor, derrick, dragline, shovel, motor grader rough grade, Crawler tractor, foundation drill operator, crawler and truck mounted, and piledriver.
25	<b>Utility Operator Grade 2</b>	Pipe, gin truck or winch truck with poles when used for hoisting, side boom (cradling rock drill), tow tractor, farm tractor road boring machine, fork lift ( <b>industrial type</b> ), pot fireman (power agitated), straightening machine, boring machine, bombardier (track or tow rig), , hydrostatic testing operator, scraper, staking machine, plant mix pavement roller operator, plant mix pavement, pneumatic motor operator. Concrete paving curing, float, texturing machine, subgrade trimmer, slip-form machine, milling machine, self-propelled sweeping machine, trenching machine, directional drill, , trenching, screening plant, and joint sealer. Off Road Hauler, Pavement Marking Machine Operator Reclaimer/Pulverizer Operator, Slurry Seal or Micro-Surfacing Machine Operator.
26	<b>Welder, Certified/ Structural Steel Welder</b>	Certified by the American Welding Society to perform structural steel welding. Operates welding equipment. Welds structural steel girders and diaphragms. May weld permanent metal deck forms. Cuts, lays-out, fits and welds metals or alloyed metal parts to fabricate or repair equipment. Welds the joints between lengths of pipe for oil, gas or other types of pipelines. May assist in welding of permanent metal deck forms. Performs other related duties.

## **ATTACHMENT G**



## SECTION 01025 – MEASUREMENT AND PAYMENT

### PART 1 GENERAL

#### 1.01 REQUIREMENTS

- A. Measurement and payment shall be as specified in this Section.
- B. General scope of work under each bid item includes all labor and materials required for construction of completely functional and operational facilities as shown on the Drawings and in these Specifications.
- C. All estimated quantities for unit price bid items stipulated in the bid proposal 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 unit price work and materials will be the actual amount of work done and materials furnished.
- D. All measurements and payments will be based on completed and accepted work performed in strict accordance with the Drawings and Specifications and in accordance with contract-unit prices and schedule of values. Incidental work and items not listed in the contract-unit price schedule will not be paid for separately, but will be included in the payment for the listed item or items and shall be full compensation for all labor, equipment, materials, testing and incidentals necessary to perform the work in accordance with these contract documents.
- E. Cost of work or materials shown on the Drawings, called for in the Specifications and on which no separate payment is made shall be included in the bid price on the various pay items for which they are associated. A claim by the Contractor for extra compensation for an item shown on the Drawings or described in the Specifications will not be considered for any reason including but not limited to the claim that it does not fall within the scope of one of the Bid items.

### PART 2 MEASUREMENT AND PAYMENT

#### 2.01 MOBILIZATION/DEMobilIZATION (**Base Bid I: Item 1**) (**Base Bid II: Item 1**)

- A. Payment for this item shall be on a Lump Sum (LS) price not to exceed five (5) percent of the total bid price for the bid item 2 through 15 (Base Bid I) and bid item 2 through 10 (Base Bid II). Payment for this item will be made as follows:
  - 1. 50% once the temporary facilities are on site and ready for work/start up.
  - 2. Remaining 50% upon demobilization.
- B. Shall include all costs for Contractor's mobilization and demobilization, insurance and bond, construction permits and fees, job/office trailers, site administration expenses, and utilities to the job trailers including power, coordination with any and all utility companies, telephone, etc. for the entire project. Shall include all costs for contract closeout, site cleanup, and all costs associated with Contractor's demobilization from the site. Payment for mobilization and demobilization shall be on a Lump Sum basis as noted in the Bid Form. Mobilization/demobilization is only considered to and from the project site, not within project limits.

#### 2.02 EXCAVATION (CUT TO EXPORT) (**Base Bid I: Item 2**) (**Base Bid II: Item 2**)

- A. Measurement shall be made per cubic yard excavation (cut to export) exported (complete in place) to the nearest whole cubic yard.
- B. Payment shall be made at the stated unit price per cubic yard and shall include transporting material as required for excavating and filling of site, reworking or replacing material, scarification, and compaction. Payment shall also include all labor, coordination, deliveries, tools, equipment, and any incidentals necessary to complete the work. No extra payment for excess cut and/or replacement as called for on the plans shall be made without prior written approval by the Engineer.

2.03 EXCAVATION (CUT TO FILL) **(Base Bid I: Item 3) (Base Bid II: Item 3)**

- A. Measurement shall be made per cubic yard excavation (cut to fill) installed (complete in place) to the nearest whole cubic yard.
- B. Payment shall be made at the stated unit price per cubic yard and shall include transporting material as required for excavating and filling of site, reworking or replacing material, scarification, and compaction. Payment shall also include all labor, coordination, deliveries, tools, equipment, and any incidentals necessary to complete the work. No extra payment for excess fill and/or replacement as called for on the plans shall be made without prior written approval by the Engineer.

2.04 SANITARY SEWER PIPELINES **(Base Bid I: Items 4 through 10)**

- A. Measurement shall be the actual linear feet of new pipeline installed as determined by measurement along the centerline of the pipe using horizontal stationing, with no deduction being made for manholes or fittings.
- B. Payment will be made at the unit price bid for each size and type of pipe as stated in the Proposal and will be compensation in full for furnishing and installing the necessary materials and work as follows:

Construction and easement staking, construction facilities, submittals, coordination with property owners, coordination with utilities companies, quality control site preparation, barricades, excavation, hand excavation, testing, backfilling and successful passing of compaction test for utilities, protection and relocations of adjacent utilities and structures, relocation, removal and replacement and protection of power and/or light poles, power pole guy wires, filter fabric for trench bedding, furnishing and installation of stub-outs and plugs, temporary water and sewer bypasses, removal and replacement or repair of rock walls and fences, repair of driveways, removal and reinstallation of mailboxes, removal and replacement of traffic/street signs, providing uninterrupted mail access, protection and reconstruction of irrigation ditches (concrete lined or otherwise) and culverts, and operation, providing temporary irrigation bypass systems, all pipe bedding material, repair/replacement of curb and gutter, header curb, repair/replacement of sidewalks, all pipe and accessories, concrete, equipment, mechanical and electrical, access outlets, fittings and blind flanges shown and called out on the Drawings, blind flanges or dished heads and appurtenances for pressure testing, field closures, concrete encasements, concrete thrust blocks, all mechanically restrained joints or welded joints, flexible connections, couplings, tie-ins and connections to existing lines or work including the lowering or raising of existing lines to grades of new line if necessary for proper connection and cover, **licensed plumber or master plumber on project site to witness tie-ins and connections**, removal and replacement of shrubbery, miscellaneous concrete and reinforcement, brick, stone, miscellaneous painting, temporary cold mix patch where required, restoring natural drainage, protection, hanging, relocation of existing utilities, repairing and replacing broken or interfering utility mains damaged during construction, salvage operations, revegetation of easements or construction limits, flushing and all other items of the project not indicated as being covered under the other specific bid items shown in the Proposal. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications for a functioning system.

- C. A maximum of 80% of the unit bid price for sanitary sewer pipe shall be paid until such time that each section of sewer line passes all tests and is accepted by the Owner.

2.05 SANITARY SEWER MANHOLES with TRIPLEX LINER **(Base Bid I: Items 11 & 12)**

- A. Manholes of the various diameters and types shall be measured for each type installed to a depth of 6 feet for manholes, including bases, pipe penetrations, drop connections, sealant, c.i.p. liner, frames, covers, concrete collars, testing and other appurtenances as shown on the drawings.
- B. Manholes of the various diameters and types (standard and drop) shall be measured for each type installed to a depth of 6 feet for 48-inch diameter manholes, including excavation (including rock removal), backfill compaction, bases, pipe penetrations, grout, concrete, concrete collars, sealant, c.i.p. liner, frames, covers, concrete collars, testing and other appurtenances as shown on the drawings. The additional depth of manhole risers shall be measured by the vertical foot as determined by measuring the total depth of a manhole from its base to the top of its frame and subtracting 6 feet from the total measured depth.

2.06 ADDITIONAL VERTICAL DEPTH **(Base Bid I: Item 13)**

- A. The additional depth of manhole risers shall be measured by the vertical foot as determined by measuring the total depth of a manhole from its base to the top of its frame and subtracting 6 feet from the total measured depth.
- B. The additional depth of manhole risers shall be paid at the unit price bid per vertical foot for each accepted manhole, as determined in paragraph 2.05A.

2.07 TRENCH SAFETY SYSTEM **(Base Bid I: Item 14) (Base Bid II: Item 11)**

- A. Measurement of trench safety systems shall be determined by the actual length along the centerline of any installed pipe with no deduction being made for manholes or fittings.
- B. Payment shall be made at the unit price bid per linear foot as stated in the Proposal and shall be full compensation for the trench safety system including any design, P.E. seal, testing, inspection or additional excavation and backfill required for furnishing, placing, maintaining and removing of all shoring, sheeting, plating or bracing for required compaction or any other method of shoring that the contract may select to use, and for all other labor, materials, tools, equipment and incidentals necessary to complete the trench safety system work, as specified.

2.08 REMOVE AND REPLACE FENCE **(Base Bid I: Item 15)**

- A. Measurement shall be made on the linear foot of fence removed and replaced (complete in place) to the nearest whole linear foot as measured.
- B. Payment shall be made at the stated unit price per linear foot installed (complete in place) at the locations identified on the plans, and in accordance with project specifications to maintain a safe working site. Payment shall also include all material, equipment, site preparation, and all labor, coordination, testing, deliveries, tools, and any incidentals necessary for completing the work.

2.09 WATER PIPELINES (**Base Bid II: Items 4, 5 & 6**)

- A. Measurement shall be the actual linear feet of new pipeline installed as determined by measurement along the centerline of the pipe using horizontal stationing, with no deduction being made for gate valves or fittings.
- B. Payment will be made at the unit price bid for each size and type of pipe as stated in the Proposal and will be compensation in full for furnishing and installing the necessary materials and work as follows: Construction and easement staking, construction facilities, submittals, coordination with property owners, coordination with utilities companies, quality control site preparation, barricades, excavation, hand excavation, testing, backfilling and successful passing of compaction test for utilities, protection and relocations of adjacent utilities and structures, relocation, removal and replacement and protection of power and/or light poles, power pole guy wires, filter fabric for trench bedding, furnishing and installation of stub-outs and plugs, temporary water and sewer bypasses, removal and replacement or repair of rock walls and fences, repair of driveways, removal and reinstallation of mailboxes, removal and replacement of traffic/street signs, providing uninterrupted mail access, protection and reconstruction of irrigation ditches (concrete lined or otherwise) and culverts, and operation, providing temporary irrigation bypass systems, all pipe bedding material, repair/replacement of curb and gutter, header curb, repair/replacement of sidewalks, all pipe and accessories, concrete, equipment, mechanical and electrical, access outlets, fittings and blind flanges shown and called out on the Drawings, blind flanges or dished heads and appurtenances for pressure testing, field closures, concrete encasements, concrete thrust blocks, all mechanically restrained joints or welded joints, flexible connections, couplings, tie-ins and connections to existing lines or work including the lowering or raising of existing lines to grades of new line if necessary for proper connection and cover, a person with a Class C Water Distribution Operator License, licensed journeyman or master plumber on project site to witness tie-ins and connections, removal and replacement of shrubbery, miscellaneous concrete and reinforcement, brick, stone, miscellaneous painting, temporary cold mix patch where required, restoring natural drainage, protection, hanging, relocation of existing utilities, repairing and replacing broken or interfering utility mains damaged during construction, salvage operations, revegetation of easements or construction limits, flushing and all other items of the project not indicated as being covered under the other specific bid items shown in the Proposal. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications for a functioning system.
- C. A maximum of 80% of the unit bid price for water pipe shall be paid until such time that each section of water line passes all tests and is accepted by the Owner.

2.10 16-INCH GATE VALVES WITH MANHOLES (**Base Bid II: Item 7**)

- A. Valves of the various types and sizes shall be paid for at the unit price per item installed/constructed (each) and the number of valves actually installed. This unit price will include manholes, manhole covers, manhole base, concrete collars, valve and operator supports, gravel sumps, pipe penetrations, valve/bonnet box and cover, copper pipe, double strap saddles, ball valves, riser pipe and other pipe and valve appurtenances as shown on the drawings as they pertain to the particular valve and size of valve installed.
- B. This item will be measured for payment per each.

2.11 GATE VALVES (**Base Bid II: Item 8**)

- A. Gate valves of the various types and sizes shall be paid for at the unit price per item installed/constructed (each) and the number of valves installed. This unit price will include valves and operator supports, gravel sumps, pipe penetrations, valve boxes, and other pipe and valve appurtenances as shown on the drawings as they pertain to the valve and size of valve installed.
- B. This item will be measured for payment per each.

2.12 BLOW-OFF VALVES with MANHOLE **(Base Bid II: Item 9)**

- A. This item will be measured for payment by per each valve with manhole assembly installed.
- B. Work under this item shall include all costs associated with furnishing labor, materials, equipment, additional removal and replacement of asphaltic pavement structure; restoration of concrete sidewalk and curb and gutter; and incidentals to install combination air release/vacuum valves and blow-off valves with manholes and associated appurtenances. Manholes of standard precast or cast-in-place bases shall be measured for each type installed to a depth as shown in plans for manholes, including bases, pipe penetrations, grout, concrete, sealant, protective coatings, frames, covers, concrete collars, testing and other appurtenances as shown on the drawings and in accordance with EPW requirements. The additional depth of manhole risers shall be included in this item and will not be paid separate.

2.13 COMBINATION AIR RELEASE/VACUUM VALVE-AIR RELEASE ASSEMBLY with MANHOLES **(Base Bid II: Item 10)**

- A. This item will be measured for payment by per each valve with manhole assembly installed.
- B. Work under this item shall include all costs associated with furnishing labor, materials, equipment, additional removal and replacement of asphaltic pavement structure; restoration of concrete sidewalk and curb and gutter; and incidentals to install combination air release/vacuum valves and blow-off valves with manholes and associated appurtenances. Manholes of standard precast or cast-in-place bases shall be measured for each type installed to a depth as shown in plans for manholes, including bases, pipe penetrations, grout, concrete, sealant, protective coatings, frames, covers, concrete collars, testing and other appurtenances as shown on the drawings and in accordance with EPW requirements. The additional depth of manhole risers shall be included in this item and will not be paid separate.

2.14 CATHODIC PROTECTION SYSTEM **(Base Bid II: Item 12)**

- A. Work under this item shall include all cost associated with furnishing and installing cathodic protection system including all test stations, bond wires, conductors, concrete collars and other incidentals required to complete the work as intended by the drawings. The Contractor shall provide electrical continuity of all pipelines and shall verify proper functioning of all test stations.
- B. This item will be made at the lump sum price.

2.15 TIE-IN CONNECTION DYER AND O'DONNELL STREET **(Base Bid II: Item 13)**

- A. Measurement of this item shall be made at the lump sum price stated in the bid form.
- B. Payment shall be full compensation for the water tie-in connection on Dyer Street and O'Donnell Street including but not limited to traffic control plans and TXDOT traffic control permits, coordination with all affected parties, night time work operations, lighting for night time operation, extra working crews, abandon and fill existing water pipe with flowable fill, cut and plug, remove and salvaging fire hydrant to owner, remove and salvaging gate valves to the owner, trench excavation protection, compaction, densities, installation of 16-inch by 8-inch tapping sleeve and valve, couplings, installation of water pipe, installation of new fire hydrant and appurtenances, reconnections of water services lines, performing hydrostatic and bacterial testing, and any other item required to have a complete and operational potable water system and any other El Paso Water requirements.

2.16 TRAFFIC CONTROL **(Base Bid I: Item 16)**

- A. Measurement of this item shall be made at the lump sum price stated in the bid form.
- B. Payment shall be full compensation for the traffic control including but not limited to permits, plans, coordination, barrels, concrete barricades, water barricades, traffic cones, caution signs, warning signs, construction signs, barrels with flashing lights, speed bumps, flag man, message boards, sand bags, impact attenuators, and any other item required to have a complete and operational traffic control system and any other jurisdictional R.O.W. requirements.

2.17 LUMP SUM ITEMS

- A. Lump sum items include, but are necessarily not limited to:
  - 1. Videotape of Project Area Before and After Construction (provide 2 copies in DVD format.) Pre and Post construction videos shall be narrated and of high definition quality. The Pre-Construction video shall be submitted to El Paso Water at least five (5) working days prior to construction. The Post-Construction Video shall be submitted no later than ten (10) working days after substantial completion. Item shall be paid contingent El Paso Water's approval of fifty (50%) percent for videotape before construction and fifty (50%) percent for videotape after construction.  
**(Base Bid I: Item 17)**

No separate measurement will be made of any materials, equipment, supplies, testing, labor, earthworks or any other individual work item associated with the work for any individual lump sum item noted in the Proposal.

- B. Lump sum items shall be paid for at the lump sum price bid for each individual work item as noted in the Proposal.

**END OF SECTION**

## **ATTACHMENT H**

## **SECTION 02603 – CONNECTIONS TO AND WORK ON THE EXISTING SYSTEM**

### **PART 1 GENERAL**

#### **1.01 SCOPE OF WORK**

- A. Furnish all labor, materials, and equipment required to maintain flow in existing pipelines, construct and maintain all temporary connections and bypasses, and construct the permanent connections to the new system as shown on the drawings as directed by the Engineer.
- B. Furnish all labor, materials, and equipment required to plug existing pipelines, all work on existing manholes (including all work and materials required to reshape existing manhole inverts with mortar or concrete, and connecting new pipes to existing manholes), and all additional work required.
- C. Should damage of any kind occur to any existing system, the Contractor, at the Contractor's own expense, and as part of the work under this Item, shall make repairs to the satisfaction of the Engineer.
- D. Notify the Engineer immediately of any discrepancies in elevations of existing facilities between those shown on the drawings and those established during construction in order that the Engineer can make the necessary modifications.
- E. All new pipe for connection shall conform to the pipe specifications for this project.
- F. Contractor shall have licensed personnel to comply with all TCEQ requirements (Class C Water Distribution Operator License or Licensed-Journeyman or Master Plumber, etc.) at the project site to witness all tie-ins and connections. (All Construction Practices and Procedures shall comply with TCEQ Regulations).
- G. Shut-off request form shall be submitted by Contractor before any tie-in connection(s). It is the responsibility of the Contractor to provide a detailed plan and/or illustration of tie-in connections, valves to be temporary shut-down and identify the number of potential service disruption. EPW Operations Department Personnel must be present when connecting to existing water and sewer mains. Refer to page 3 at these specifications.
- H. Contractor shall perform water tie-in connections after El Paso Operations isolates valves and if a small amount of water discharges downstream of valves. Contractor shall notify Engineer the depth of water discharging out of the water pipe to determine if tie-in connection can be performed. The Contractor shall dewater existing pipe as needed.

#### **1.02 RELATED WORK**

- A. Coordination requirements are included in Section 01040
- B. Excavating, Backfilling, and Compaction for Utilities is included in Section 02221.
- C. Concrete manholes are specified in Section 02605.

### **PART 2 PRODUCTS**

Not Used.



PART 3 EXECUTION

3.01 REMOVING INFILTRATION

- A. Furnish all labor, equipment, and materials necessary to remove water from infiltration, including all pumping that may be required. Remove all offensive matter at Contractor's own Expense.

PART 4 MEASUREMENT AND PAYMENT

- 4.01 No separate measurement or payment shall be made for this work item, but it shall be included in the unit price bid for the pipeline work as noted in the proposal.

**END OF SECTION**



## WATER SHUT-OFF REQUEST FOR TIE-IN SHUT-OFF PLAN AND DUE-DILLIGENCE CHECKLIST

PROJECT NAME: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

CONTRACTOR CONTACT PERSON: \_\_\_\_\_ PHONE: \_\_\_\_\_  
(ON-SITE DURING WATER TIE-IN SHUT-OFF)

SHUT-OFF REQUEST DATE & TIME: \_\_\_\_\_

TOTAL SERVICES IMPACTED: \_\_\_\_\_

DESCRIPTION OF WORK TO BE PERFORMED:

CHECKLIST ITEM DESCRIPTION	Y	N
1.) WATER SHUT-OFF PLAN DEVELOPED AND INCLUDED IN THIS REQUEST? _____	<input type="checkbox"/>	<input type="checkbox"/>
2.) EPW CONDUIT INTERSECTION SHEETS REVIEWED AND INCLUDED IN THIS REQUEST? <i>(EPW PM TO PROVIDE)</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
3.) WATER SERVICE IMPACT AREA PLAN DEVELOPED AND INCLUDED IN THIS REQUEST? _____	<input type="checkbox"/>	<input type="checkbox"/>
A.) 3 GALLONS OF WATER TO BE DISTRIBUTED TO ALL IMPACTED SERVICES? _____	<input type="checkbox"/>	<input type="checkbox"/>
D.) WATER BUFFALOS NEEDED? IF YES PROVIDE LOCATION _____	<input type="checkbox"/>	<input type="checkbox"/>
i.) _____ ii.) _____		
4.) TCP APPROVED AND IN PLACE? _____	<input type="checkbox"/>	<input type="checkbox"/>
5.) MATERIALS ON-HAND / ON-SITE? _____	<input type="checkbox"/>	<input type="checkbox"/>
A.) EPW REP. CONFIRMING MATERIALS AVAIL. _____		
6.) TIE-IN LOCATIONS POT-HOLED/EXPOSED? _____	<input type="checkbox"/>	<input type="checkbox"/>
7.) ALTERNATIVES CONSIDERED? _____	<input type="checkbox"/>	<input type="checkbox"/>
DESCRIBE:		
8.) "DO-NOTHING" ALTERNATIVE IMPACT TO COST & SCHEDULE:		

LOCATION OF VALVES TO BE CLOSED (INTERSECTION):	DATE EXERCISED	CONFIRMED CLOSED? (Y/N)	LOCATION OF VALVES TO BE CLOSED (INTERSECTION):	DATE EXERCISED	CONFIRMED CLOSED? (Y/N)
1.) _____	_____	_____	6.) _____	_____	_____
2.) _____	_____	_____	7.) _____	_____	_____
3.) _____	_____	_____	8.) _____	_____	_____
4.) _____	_____	_____	9.) _____	_____	_____
5.) _____	_____	_____	10.) _____	_____	_____

COORDINATION MEETING WITH EPW OPERATIONS STAFF HELD? (Y/N) \_\_\_\_\_ DATE MEETING HELD: \_\_\_\_\_

**REVIEWED:**

CONTRACTOR: \_\_\_\_\_ EPW OPERATIONS SUPERINTENDENT \_\_\_\_\_ DIV. MGR - PROJ. ADMIN \_\_\_\_\_

ENGINEER \_\_\_\_\_ EPW PROJECT MANAGER \_\_\_\_\_ DIV. MGR - CONST. MGMNT \_\_\_\_\_

**IN CONFORMANCE:**

**APPROVED:**

CHIEF TECHNICAL OFFICER \_\_\_\_\_ CHIEF OPERATIONS OFFICER \_\_\_\_\_ VICE PRESIDENT \_\_\_\_\_

# **ATTACHMENT I**

## **SECTION 02605 – MANHOLES FOR SANITARY SEWER FACILITIES**

### **PART 1 GENERAL**

#### **1.01 SCOPE OF WORK**

- A. Furnish all labor, materials, and equipment to install standard manholes and concrete manhole bases, frames and covers and appurtenances as shown on the drawings and as specified herein.
- B. Manholes for the various sized lines shall be Standard Type "A" (48-inch inside diameter) or Type "B" (72-inch inside diameter) constructed at the locations designated, and in accordance with Utility Standard Details, and as otherwise indicated in the project drawings.
- C. Manholes shall be constructed pre-cast concrete sections, as herein specified.

#### **1.02 RELATED WORK**

- A. Excavating, Backfilling, and Compacting for Utilities is included in Section 02221.
- B. Granular Fill Material is included in Section 02235.

#### **1.03 SUBMITTALS**

- A. Shop drawings, product data, materials of construction, and details of installation shall be submitted in accordance with Section 01300. Submittals shall include the following:
  - 1. Details of base sections, riser sections, concentric conical top sections, flat slab tops, and grade rings, with certificate indicating compliance with ASTM C478.
  - 2. Pipe connection to manhole details.
  - 3. Manhole frame and cover with certificate indicating compliance with ASTM A48, Class 30.
  - 4. Method of repair for minor damage to precast concrete sections.
- B. Design Data
  - 1. Precast concrete structures:
    - a. 5 copies plus Contractor's requirements of sections plan(s) and elevations showing dimensions, reinforcing steel placement and pipe connections to manhole.
    - b. 5 copies plus Contractor's requirements of concrete design mix.
    - c. Manhole frame and cover.

#### **1.04 REFERENCE STANDARDS**

- A. American Society for Testing and Materials (ASTM)
  - 1. ASTM A48 Specification for Gray Iron Castings
  - 2. ASTM A615 Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
  - 3. ASTM C32 Specification for Sewer and Manhole Brick (made from clay or shale)
  - 4. ASTM C33 Specification for Concrete Aggregates

5. ASTM C62 Standard Specifications for Building Brick (solid masonry units made from clay or shale)
  6. ASTM C150 Standard Specification for Portland Cement
  7. ASTM C207 Specification for Hydrated Lime for Masonry Purposes
  8. ASTM C443 Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
  9. ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections
  10. ASTM D4101 Specification for Propylene Plastic Injection and Extrusion Materials
  11. ASTM A82 Specification for Steel Wire, Plain, for Concrete Reinforcement
  12. ASTM A185 Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement
  13. ASTM C144 Specification for Aggregate for Masonry Mortar
  14. ASTM C309 Specification for Liquid Membrane-Forming Compounds for Curing Concrete
  15. ASTM C923 Specification for Resilient Connectors between Reinforced Concrete Manhole Structures and Pipes
  16. ASTM D-1557 Test Methods for Moisture-Density Relations of Soils and Soil Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in (457-mm) Drop
- B. American Concrete Institute (ACI)
1. ACI 318 Building Code Requirements for Reinforced Concrete
- C. American Association of State Highway and Transportation Officials (AASHTO)
1. Standard Specifications for Highway Bridges
- D. Occupational Safety and Health Administration (OSHA)
- E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

#### 1.05 QUALITY ASSURANCE

- A. All material shall be new and unused, and supplied by a single manufacturer for each product.
- B. Material quality, manufacturing process, and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at worksite following delivery, or both.
- C. Materials will be examined for compliance with ASTM specifications, these specifications, and approved manufacturer's drawings. Additional inspection criteria shall include: appearance, dimension(s), blisters, cracks, and soundness.

- D. Materials shall be rejected for failure to meet any specification requirement. Rejection may occur at place of manufacture, at worksite, or following installation. Mark for identification rejected materials and remove from worksite immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage to precast concrete sections by approved method, if repair is authorized by Engineer.

## PART 2 PRODUCTS

### 2.01 GENERAL

- A. Manholes shall be El Paso Water Utilities Standard, Type "A" (48" inside diameter), in accordance with EPWater Standard Details, for water valves and as otherwise indicated in the project drawings.
- B. Manholes shall be constructed of pre-cast concrete sections, as herein specified.
- C. Provide lifting lugs or holes in each precast section for proper handling.

### 2.02 PRECAST CONCRETE MANHOLE SECTIONS

- A. The manhole riser and conical section shall be designed for water installations in the diameter specified or shown. All manhole sections shall have a 5-inch wall thickness with tongue and groove joints. Rings shall be available in various lengths from 1 foot to 4 feet. The conical sections shall be concentric and adapted to the ring at one end and to EPWU standard cast iron frame at the other. The base ring shall have a flat bottom joint. Steps or rungs are not required. Manufacturing of manhole section(s) shall comply with ASTM C478 and any additional specifications listed here forth:
  - 1. Bottom slab thickness shall be 8-inches thick for depths 0-12 feet and 12-inches thick for depths greater than 12 feet.
  - 2. Top section shall be a concentric cone placed upon manhole diameter section as shown in the drawings.
  - 3. Base, riser and top sections shall have tongue and groove joints.
  - 4. Sections shall be cured by an approved method, in accordance with referenced standards.
  - 5. Concrete shall have a minimum 28 day compressive strength of 4,000 psi. Water cement ratio shall be 0.5 or less by weight or not more than 5.5 gallons per sack.
  - 6. All aggregates fine and coarse other than lightweight aggregate shall conform to specifications outlined by ASTM C33. Aggregates shall be free of deleterious substances causing reactivity with oxidized hydrogen sulfide. Both types of aggregates shall be graded in order to produce a homogeneous concrete mix. All materials are to be accurately weighed at a central batching facility for mixing.
  - 7. All cement shall be Portland Cement conforming to ASTM C150, Type I or Type II. Cement content shall be sufficient to produce a minimum strength of 4,000 psi.
  - 8. Design precast concrete base, riser, top, and grade ring for a minimum H-20 loading plus earth load. Calculate earth load with a unit weight of 130 pcf.
  - 9. Mark date of manufacture, name, and trademark for manufacture on the inside of each precast section.

10. Install precast concrete base as shown on the drawings.
11. Provide integrally cast knock-out panels in precast concrete manhole sections at locations and with sizes shown on drawings. Knock-out panels shall have no steel reinforcing.
12. All concrete shall be handled from the mixer or transport vehicle to the place of final deposit in a continuous manner, as rapidly as practicable, and without segregation or loss of ingredients, until (the approved unit operation) is completed. Concrete shall be placed in layers not over two feet deep. Each layer shall be compacted by mechanical internal or external vibrating equipment. Duration of the vibration cycle shall be limited to the time necessary to produce satisfactory consolidation without causing objectionable segregation.
13. Purposes of early re-use of forms, Concrete may be heated in the mold after the initial set has taken place. The temperature shall not exceed 160 degrees and shall be raised from normal ambient temperature at a rate not to exceed 40 degrees per hour. The cured unit shall not be removed from forms until sufficient strength is obtained for the unit to withstand any structural strain that may be subjected during the form stripping operation. After the stripping of forms, further curing by means of water spraying or a membrane curing compound may be used and shall be of a clear or white type, conforming to ASTM C309-58.
14. Reinforcing steel shall be as outlined in ASTM C478 and any additional specifications herein. The minimum steel area of 0.12 square inches shall apply to both risers and cone sections and the maximum center to center spacing of 6 inches shall apply as well. Placing of reinforcing steel for one line circumferential reinforcement shall be on the tension side of the wall (the inner half part of the wall with a minimum 1-inch cover) for two lines circular reinforcement, refer to ASTM C478. All reinforcing shall be sufficiently tied to withstand any displacement during the pouring operation.
15. Both tongue and groove shall contain a #4 rebar.
16. Lifters shall be designed to handle the imposed weights, and shall be placed per manufacturer's requirements.
17. All joints to be sealed using Ram-Nek joint sealer. Joint sealer to be provided in sufficient quantities by the vendor as part of the manhole section(s). Size shall be per manufacturer's recommendations. Completed joint shall withstand 15 psi internal water pressure without leakage.

### 2.03 MANHOLES COATING

- A. Concrete and mortar to be dry and clean with all oil, grease, form release agents, curing compounds, sealers, hardeners and any other contaminants removed. Verify dryness by testing with "Tape Down Test".
- B. All manholes that are in ground water shall be externally coated with a bituminous coating such as Coal Tar Epoxy.

### 2.04 MANHOLES Liner

- A. Cured in Place Liners.
  1. Multiple structural layers of fiberglass with non-porous membrane layer between fiberglass, or Polyvinyl Chloride/Polyester (PVCP) liner with a fiberglass layer, bonded to manhole under pressure and heat.
  2. Liner fabricated to match manhole dimensions for custom fit.
  3. All manholes shall be internally lined with a Triplex Liner System by McNeil Technologies or approved equal.

## 2.05 MANHOLE FRAME AND COVER

- A. Manhole frames and covers shall be of good quality, strong, tough, even-grained cast iron, smooth, free from scale, lumps, blisters, sand holes, and defects of any kind which render them unfit for the service for which are intended. The manhole frame and cover shall be of cast iron of the weight, dimensions, and pattern indicated by the Utility Standard Details. Manhole covers and frame seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 30.
- B. No holes shall be in the cover, but edge notches for embedded rings shall be used for lifting. The word "El Paso Water Utilities" is to be on the cover as shown in the drawings. Mating surfaces shall be machined to assure a snug fit of the cover and frame.

## 2.06 PIPE CONNECTIONS TO MANHOLE

- A. At manholes, a water-tight resilient connection shall be made between the wall and the pipe. This shall be accomplished by use of a manhole water stop adaptor such as Indiana Seal Manhole Adaptor, Kor-N-Seal, or approved equal, meeting the requirements of ASTM C923. The connector must be compatible to both the type of pipe wall and manhole wall, and shall be installed in strict accordance with recommendations of the connector manufacturer.

## PART 3 EXECUTION

### 3.01 INSTALLATION

#### A. Manhole Installation

1. The manholes shall be constructed at the location shown on the plans or as directed by the Engineer and in accordance with the details shown on the plans and as specified herein. After the excavation has been completed, the concrete base or bottom shall be poured. When the concrete has sufficiently set, the riser work may proceed. After the manhole rise has been completed, the invert shall be neatly formed in the bottom of the manhole with concrete. The invert shall have a true curve of as large a radius as the size of the manhole will permit and shall be given a smooth trowel finish. Manhole inverts containing sewer pipe passing through with no change in direction may be formed by using up to  $\frac{1}{2}$  of the pipe line diameter (pipe spring line) as the channel. Concrete will be placed around the pass-through pipeline, and a bench formed above the pipe sloping at  $\frac{1}{4}$ -inch per foot toward the pipe.
2. The subgrade under manhole bases shall be compacted to 95 percent density in accordance with ASTM D1557. Compaction limits shall be one foot beyond the perimeter of the concrete base and shall be a minimum of one foot in depth.
4. Set precast concrete barrel sections and structures plumb with a  $\frac{1}{4}$ -inch maximum out of plumb tolerance allowed. Seal joints of precast barrel sections as specified. Fill the outside and inside joint with non-shrink mortar and finished flush with the adjoining surfaces. Caulk the inside of any leaking barrel section joint with non-shrink grout to the satisfaction of the Engineer.
5. Allow joints to set for 14 hours before backfilling.
6. Plug holes in the concrete barrel sections required for handling with a non-shrinking grout or non-shrinking grout in combination with concrete plugs. Finish flush on the inside.
7. Cut holes in precast sections to accommodate pipes prior to setting manhole sections in place to prevent jarring which may loosen the mortar joints.
8. Backfill carefully and evenly around manhole sections.



9. Manholes installed inside farmland shall be buried above flow depth, typically 18"-36" in height. Contractor shall provide a green painted concrete marker post at the right-of-way with an offset distance shown to the center of the manhole location. A tractor tire painted green shall be placed around manhole to protect manhole.

B. Manhole Pipe Connections

1. Construct manhole pipe connections, including any pipe stubs, as specified. Close or seal pipe stubs for future connections with a gasketed watertight plug.

C. Setting Manhole Frame and Cover

1. Set manhole covers and frames in a full mortar bed. Utilize grade rings, a maximum of eight-inches thick, to assure frame and cover are set to the finished grade. Set manhole frame and cover to final grade prior to placement of permanent paving.

3.02 LEAKAGE TESTS

- A. Test each manhole for leakage. Engineer shall observe each test. Manholes shall be tested separately and independently of sewer lines they are attached to.

1. Vacuum Test

- a. Vacuum testing in accordance with ASTM C1244.

- B. Test each manhole for leakage. Engineer shall observe each test.

- C. A complete write up on the vacuum testing procedure shall be presented to the Engineer for review prior to commencing any manhole testing.

3.03 CLEANING

- A. Thoroughly clean all new manholes of all silt, debris, and foreign matter of any kind, prior to final inspection.

PART 4 MEASUREMENT AND PAYMENT

- 4.01 Measurement and payment for this work item shall be in accordance with Section 01025 of these Specifications.

**END OF SECTION**

## **ATTACHMENT J**

## **SECTION 02607 – MANHOLES FOR WATER SYSTEM FACILITIES**

### **PART 1 GENERAL**

#### **1.01 SCOPE OF WORK**

- A. Furnish all labor, materials, and equipment to install standard manholes and concrete manhole bases, frames and covers and appurtenances as shown on the drawings and as specified herein.
- B. Manholes for the various sized lines shall be Standard Type "A" (48-inch inside diameter) or Type "B" (72-inch inside diameter) constructed at the locations designated, and in accordance with Utility Standard Details, and as otherwise indicated in the project drawings.
- C. Manholes shall be constructed pre-cast concrete sections, as herein specified.

#### **1.02 RELATED WORK**

- A. Excavating, Backfilling, and Compacting for Utilities is included in Section 02221.
- B. Granular Fill Material is included in Section 02235.

#### **1.03 SUBMITTALS**

- A. Shop drawings, product data, materials of construction, and details of installation shall be submitted in accordance with Section 01300. Submittals shall include the following:
  - 1. Details of base sections, riser sections, concentric conical top sections, flat slab tops, and grade rings, with certificate indicating compliance with ASTM C478.
  - 2. Pipe connection to manhole details.
  - 3. Manhole frame and cover with certificate indicating compliance with ASTM A48, Class 30.
  - 4. Method of repair for minor damage to precast concrete sections.
- B. Design Data
  - 1. Precast concrete structures:
    - a. 5 copies plus Contractor's requirements of sections plan(s) and elevations showing dimensions, reinforcing steel placement and pipe connections to manhole.
    - b. 5 copies plus Contractor's requirements of concrete design mix.
    - c. Manhole frame and cover.

#### **1.04 REFERENCE STANDARDS**

- A. American Society for Testing and Materials (ASTM)
  - 1. ASTM A48 Specification for Gray Iron Castings
  - 2. ASTM A615 Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
  - 4. ASTM C33 Specification for Concrete Aggregates

5. ASTM C62 Standard Specifications for Building Brick (solid masonry units made from clay or shale)
  6. ASTM C150 Standard Specification for Portland Cement
  7. ASTM C207 Specification for Hydrated Lime for Masonry Purposes
  9. ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections
  10. ASTM D4101 Specification for Propylene Plastic Injection and Extrusion Materials
  11. ASTM A82 Specification for Steel Wire, Plain, for Concrete Reinforcement
  12. ASTM A185 Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement
  13. ASTM C144 Specification for Aggregate for Masonry Mortar
  14. ASTM C309 Specification for Liquid Membrane-Forming Compounds for Curing Concrete
  15. ASTM C923 Specification for Resilient Connectors between Reinforced Concrete Manhole Structures and Pipes
  16. ASTM D-1557 Test Methods for Moisture-Density Relations of Soils and Soil Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in (457-mm) Drop
- B. American Concrete Institute (ACI)
1. ACI 318 Building Code Requirements for Reinforced Concrete
- C. American Association of State Highway and Transportation Officials (AASHTO)
1. Standard Specifications for Highway Bridges
- D. Occupational Safety and Health Administration (OSHA)
- E. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

#### 1.05 QUALITY ASSURANCE

- A. All material shall be new and unused, and supplied by a single manufacturer for each product.
- B. Material quality, manufacturing process, and finished sections are subject to inspection and approval by Engineer or other Owner representative. Inspection may be made at place of manufacture, at worksite following delivery, or both.
- C. Materials will be examined for compliance with ASTM specifications, these specifications, and approved manufacturer's drawings. Additional inspection criteria shall include: appearance, dimension(s), blisters, cracks, and soundness.

- D. Materials shall be rejected for failure to meet any specification requirement. Rejection may occur at place of manufacture, at worksite, or following installation. Mark for identification rejected materials and remove from worksite immediately. Rejected materials shall be replaced at no cost to Owner.
- E. Repair minor damage to precast concrete sections by approved method, if repair is authorized by Engineer.

## PART 2 PRODUCTS

### 2.01 GENERAL

- A. Manholes shall be El Paso Water Utilities Standard, Type "A" (48" inside diameter), in accordance with EPWater Standard Details, for water valves and as otherwise indicated in the project drawings.
- B. Manholes shall be constructed of pre-cast concrete sections, as herein specified.
- C. Provide lifting lugs or holes in each precast section for proper handling.

### 2.02 PRECAST CONCRETE MANHOLE SECTIONS

- A. The manhole riser and conical section shall be designed for water installations in the diameter specified or shown. All manhole sections shall have a 5-inch wall thickness with tongue and groove joints. Rings shall be available in various lengths from 1 foot to 4 feet. The conical sections shall be concentric and adapted to the ring at one end and to EPWU standard cast iron frame at the other. The base ring shall have a flat bottom joint. Steps or rungs are not required. Manufacturing of manhole section(s) shall comply with ASTM C478 and any additional specifications listed here forth:
  - 1. Bottom slab thickness shall be 8-inches thick for depths 0-12 feet and 12-inches thick for depths greater than 12 feet.
  - 2. Top section shall be a concentric cone placed upon manhole diameter section as shown in the drawings.
  - 3. Base, riser and top sections shall have tongue and groove joints.
  - 4. Sections shall be cured by an approved method, in accordance with referenced standards.
  - 5. Concrete shall have a minimum 28 day compressive strength of 4,000 psi. Water cement ratio shall be 0.5 or less by weight or not more than 5.5 gallons per sack.
  - 6. All aggregates fine and coarse other than lightweight aggregate shall conform to specifications outlined by ASTM C33. Aggregates shall be free of deleterious substances causing reactivity with oxidized hydrogen sulfide. Both types of aggregates shall be graded in order to produce a homogeneous concrete mix. All materials are to be accurately weighed at a central batching facility for mixing.
  - 7. All cement shall be Portland Cement conforming to ASTM C150, Type I or Type II. Cement content shall be sufficient to produce a minimum strength of 4,000 psi.
  - 8. Design precast concrete base, riser, top, and grade ring for a minimum H-20 loading plus earth load. Calculate earth load with a unit weight of 130 pcf.

9. Mark date of manufacture, name, and trademark for manufacture on the inside of each precast section.
10. Install precast concrete base as shown on the drawings.
11. Provide integrally cast knock-out panels in precast concrete manhole sections at locations and with sizes shown on drawings. Knock-out panels shall have no steel reinforcing.
12. All concrete shall be handled from the mixer or transport vehicle to the place of final deposit in a continuous manner, as rapidly as practicable, and without segregation or loss of ingredients, until (the approved unit operation) is completed. Concrete shall be placed in layers not over two feet deep. Each layer shall be compacted by mechanical internal or external vibrating equipment. Duration of the vibration cycle shall be limited to the time necessary to produce satisfactory consolidation without causing objectionable segregation.
13. Purposes of early re-use of forms, Concrete may be heated in the mold after the initial set has taken place. The temperature shall not exceed 160 degrees and shall be raised from normal ambient temperature at a rate not to exceed 40 degrees per hour. The cured unit shall not be removed from forms until sufficient strength is obtained for the unit to withstand any structural strain that may be subjected during the form stripping operation. After the stripping of forms, further curing by means of water spraying or a membrane curing compound may be used and shall be of a clear or white type, conforming to ASTM C309-58.
14. Reinforcing steel shall be as outlined in ASTM C478 and any additional specifications herein. The minimum steel area of 0.12 square inches shall apply to both risers and cone sections and the maximum center to center spacing of 6 inches shall apply as well. Placing of reinforcing steel for one line circumferential reinforcement shall be on the tension side of the wall (the inner half part of the wall with a minimum 1-inch cover) for two lines circular reinforcement, refer to ASTM C478. All reinforcing shall be sufficiently tied to withstand any displacement during the pouring operation.
15. Both tongue and groove shall contain a #4 rebar.
16. Lifters shall be designed to handle the imposed weights, and shall be placed per manufacturer's requirements.
17. All joints to be sealed using Ram-Nek joint sealer. Joint sealer to be provided in sufficient quantities by the vendor as part of the manhole section(s). Size shall be per manufacturer's recommendations. Completed joint shall withstand 15 psi internal water pressure without leakage.

## 2.03 MANHOLES COATING

- A. N/A

## 2.04 MANHOLE FRAME AND COVER

- A. Manhole frames and covers shall be of good quality, strong, tough, even-grained cast iron, smooth, free from scale, lumps, blisters, sand holes, and defects of any kind which render them unfit for the service for which are intended. The manhole frame and cover shall be of cast iron of the weight, dimensions, and pattern indicated by the Utility Standard Details. Manhole covers and frame seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 30.
- B. No holes shall be in the cover, but edge notches for embedded rings shall be used for lifting. The word "El Paso Water Utilities" is to be on the cover as shown in the drawings. Mating surfaces shall be machined to assure a snug fit of the cover and frame.

## 2.05 PIPE CONNECTIONS TO MANHOLE

- A. At manholes, a water-tight resilient connection shall be made between the wall and the pipe. This shall be accomplished by use of a manhole water stop adaptor such as Indiana Seal Manhole Adaptor, Kor-N-Seal, or approved equal, meeting the requirements of ASTM C923. The connector must be compatible to both the type of pipe wall and manhole wall, and shall be installed in strict accordance with recommendations of the connector manufacturer.

## PART 3 EXECUTION

### 3.01 INSTALLATION

#### A. Manhole Installation

1. The manholes shall be constructed at the location shown on the plans or as directed by the Engineer and in accordance with the details shown on the plans and as specified herein.
2. The subgrade under manhole bases shall be compacted to 95 percent density in accordance with ASTM D1557. Compaction limits shall be one foot beyond the perimeter of the concrete base and shall be a minimum of one foot in depth.
4. Set precast concrete barrel sections and structures plumb with a ¼-inch maximum out of plumb tolerance allowed. Seal joints of precast barrel sections as specified. Fill the outside and inside joint with non-shrink mortar and finished flush with the adjoining surfaces. Caulk the inside of any leaking barrel section joint with non-shrink grout to the satisfaction of the Engineer.
5. Allow joints to set for 14 hours before backfilling.
6. Plug holes in the concrete barrel sections required for handling with a non-shrinking grout or non-shrinking grout in combination with concrete plugs. Finish flush on the inside.
7. Cut holes in precast sections to accommodate pipes prior to setting manhole sections in place to prevent jarring which may loosen the mortar joints.
8. Backfill carefully and evenly around manhole sections.
9. Manholes installed inside farmland shall be buried above flow depth, typically 18"-36" in height. Contractor shall provide a green painted concrete marker post at the right-of-way with an offset distance shown to the center of the manhole location. A tractor tire painted green shall be placed around manhole to protect manhole.

#### B. Manhole Pipe Connections

1. Construct manhole pipe connections, including any pipe stubs, as specified. Close or seal pipe stubs for future connections with a gasketed watertight plug.

#### C. Setting Manhole Frame and Cover

1. Set manhole covers and frames in a full mortar bed. Utilize grade rings, a maximum of eight-inches thick, to assure frame and cover are set to the finished grade. Set manhole frame and cover to final grade prior to placement of permanent paving.

### 3.02 LEAKAGE TESTS

- A. Test each manhole for leakage. Engineer shall observe each test. Manholes shall be tested separately and independently of water lines they are attached to.
  - 1. Vacuum Test
    - a. Vacuum testing in accordance with ASTM C1244.
- B. Test each manhole for leakage. Engineer shall observe each test.
- C. A complete write up on the vacuum testing procedure shall be presented to the Engineer for review prior to commencing any manhole testing.

### 3.03 CLEANING

- A. Thoroughly clean all new manholes of all silt, debris, and foreign matter of any kind, prior to final inspection.

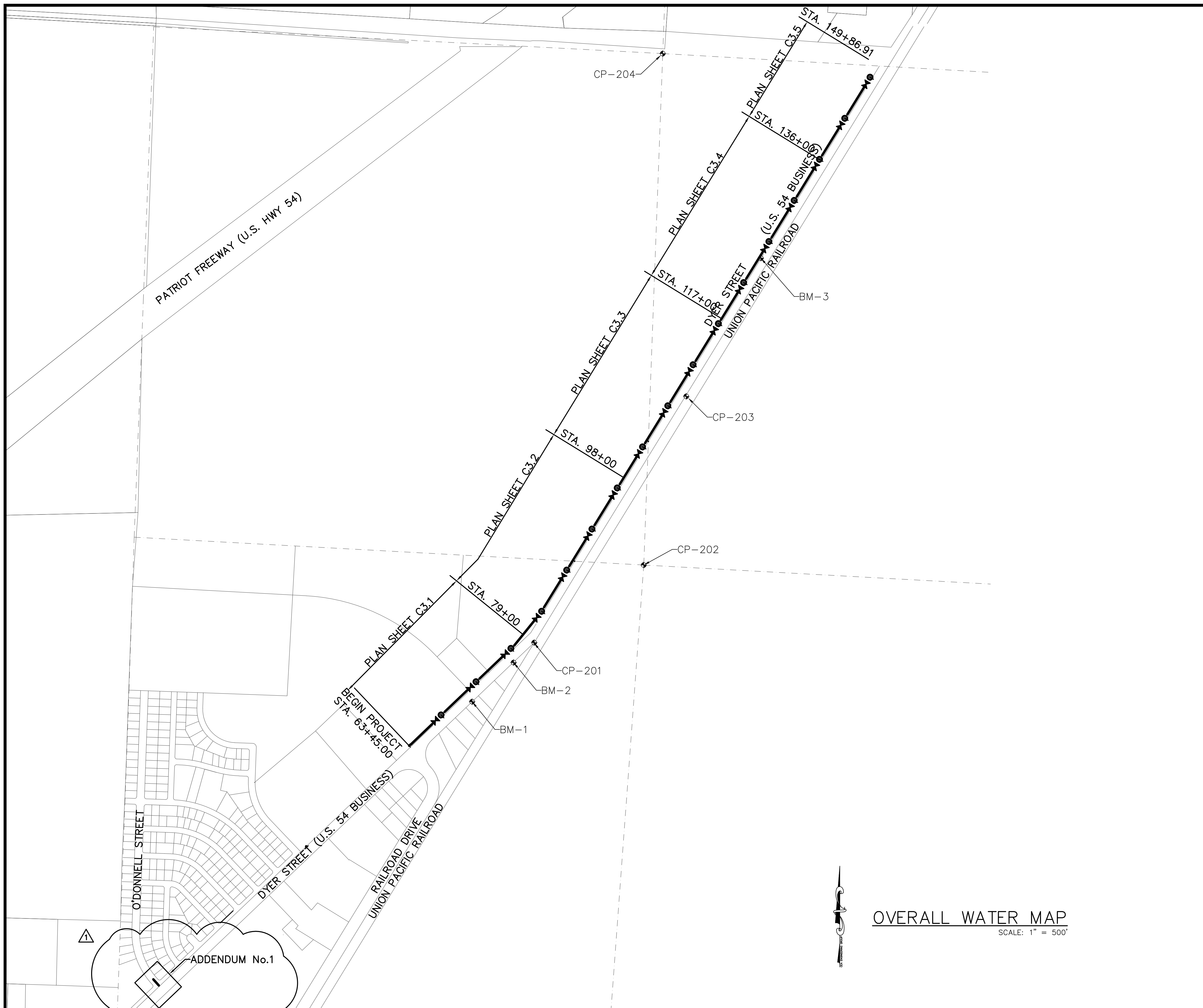
## PART 4 MEASUREMENT AND PAYMENT

- 4.01 Measurement and payment for this work item shall be in accordance with Section 01025 of these Specifications.

**END OF SECTION**

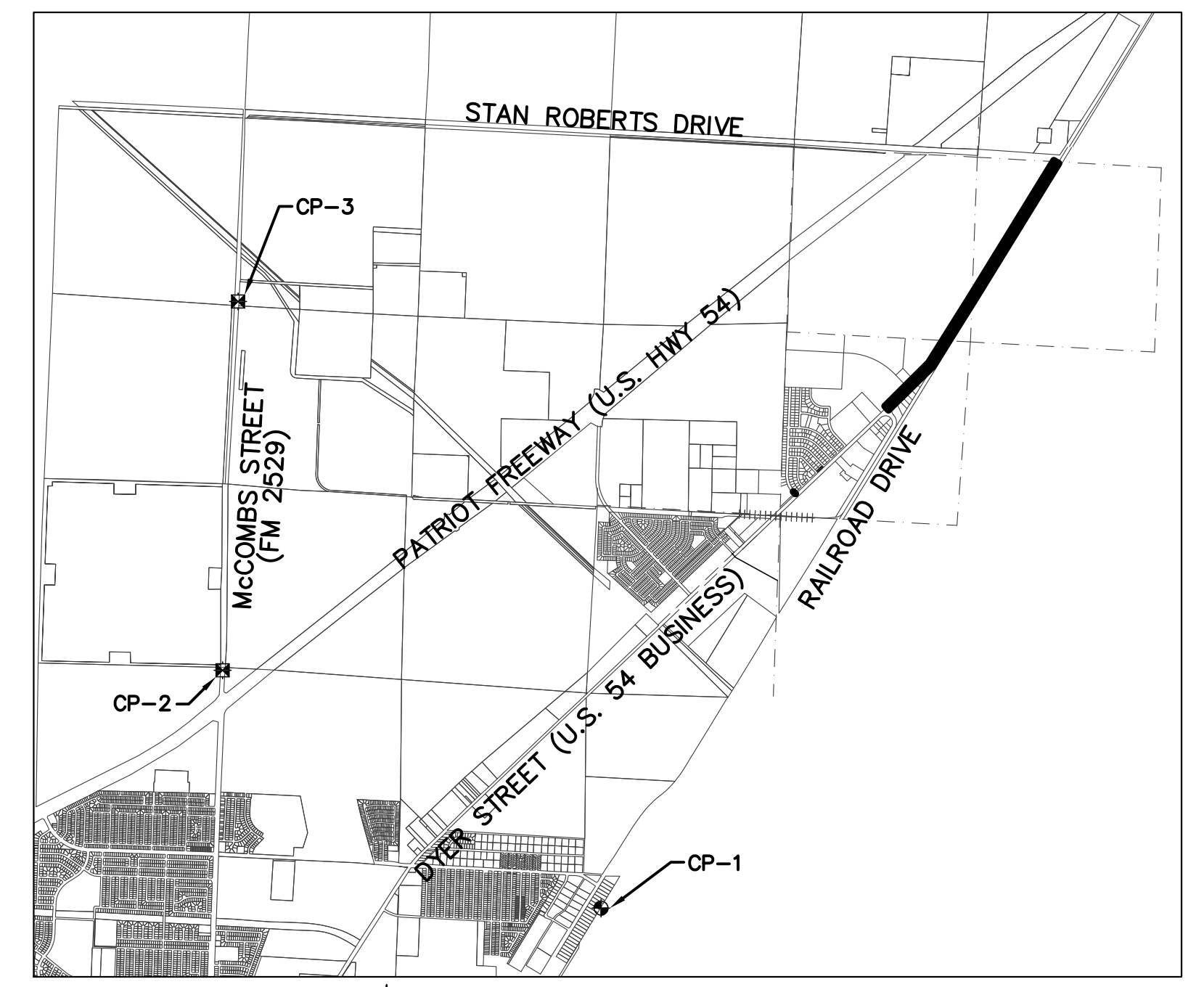


## **ATTACHMENT K**



- BENCHMARK:**
- GRID COORDINATES ARE REFERENCED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, ZONE 4203, NAD 83 HOLDING THE PUBLISHED VALUES OF NGS MONUMENT NE 3 & NE 4.
  - GROUND COORDINATES WERE SCALED TO GROUND USING A SCALE FACTOR OF 1.0002310000.
  - ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), GEOID12A BASED ON THE NGS BENCHMARK E 1383.

CONTROL POINT	COORDINATES		ELEVATION	DESCRIPTION
	NORTHING	EASTING		
BM-1	10732338.63	432925.18	4007.59	TXDOT CONC. MONUMENT (DISTURBED)
BM-2	10732746.62	433352.65	4008.12	TXDOT CONC. MONUMENT (DISTURBED)
BM-3	10736937.96	435917.30	4007.46	TXDOT CONC. MONUMENT (DISTURBED)
CP-1	10717502.66	424098.94	3956.94	NCS BENCHMARK E 1383
CP-2	10724330.45	413235.53	3989.66	NCS CONTROL NE 4
CP-3	10734918.68	413680.75	4013.12	NCS CONTROL NE 3
CP-201	10732951.48	433568.50	4008.72	FOUND 5/8" REBAR W/ CAP TX 2449
CP-202	10733755.87	434703.86	N/A*	FOUND 2" IRON PIPE
CP-203	10735504.71	435144.01	4013.53	SURVEY ROD VERT. B1383/1980
CP-204	10739058.38	434900.48	N/A*	FOUND 5/8" REBAR W/ FLAG



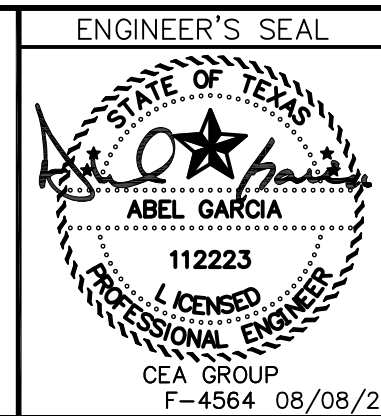
**OVERALL WATER MAP**  
SCALE: 1" = 500'

**LOCATION MAP**  
SCALE: 1" = 4,000'

REV.	DATE	BY	DESCRIPTION
1	8/8/23	MJC	ADDENDUM NO.1

UTILITY LOCATOR SERVICES	
TIME WARNER COMMUNICATIONS	(915) 775-7415
EL PASO ELECTRIC COMPANY	(915) 877-3400
EL PASO WATER UTILITIES	(915) 594-5500
VERIZON COMMUNICATIONS	(800) 624-9675
HOLLY ENERGY PARTNERS	(915) 494-0549
TEXAS GAS SERVICE	(800) 959-5325
KINDER MORGAN	(915) 843-2441
AT&T GENERAL	(915) 595-5151

**WARNING!**  
**BEFORE YOU DIG**  
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FOR FIELD LOCATING EXISTING UTILITIES



DESIGNED: MJC  
DRAWN: MJC  
CHECKED: MJC  
APPROVED: AG  
DATE: 08/08/2023



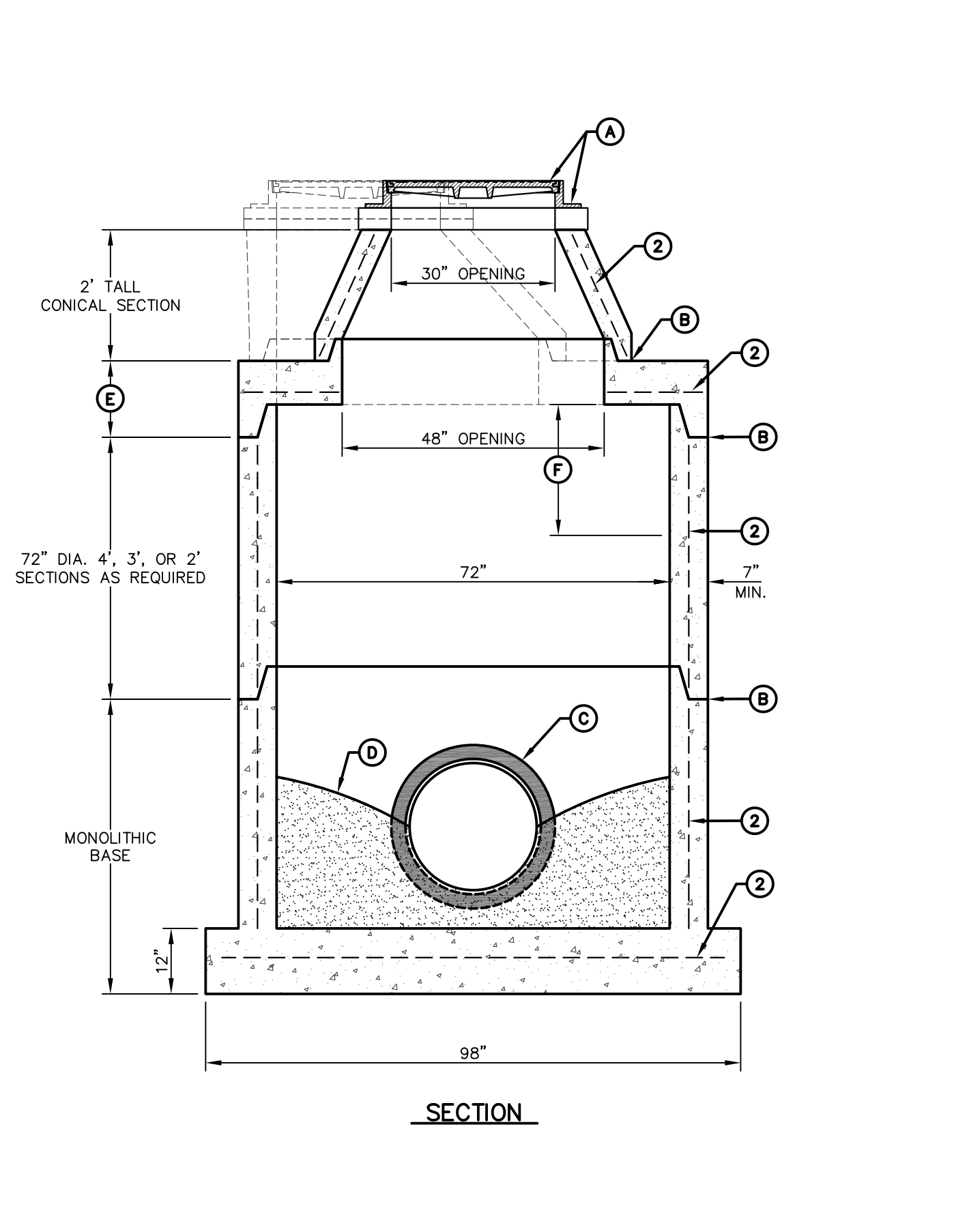
PROJECT: **NORTHEAST DYER/ RAILROAD 30-INCH SANITARY SEWER INTERCEPTOR & 16-INCH WATER MAIN IMPROVEMENTS PHASE III**

SHEET TITLE: **OVERALL WATER MAP**

JOB NO. 1040-064-WS  
SEQUENCE NO. **C4.1R**  
SHEET NO. 10R OF 2

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## **ATTACHMENT L**

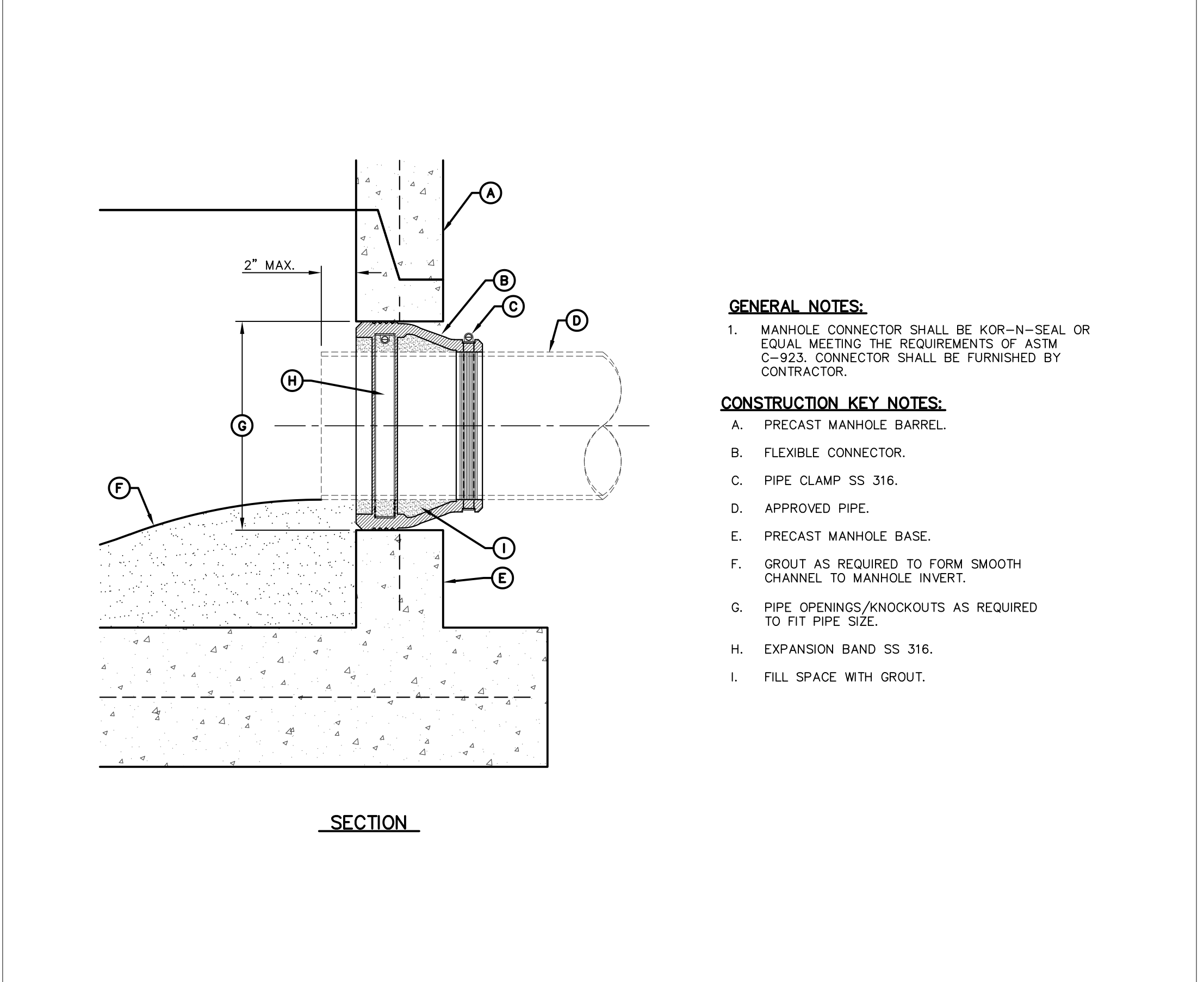


**GENERAL NOTES:**

- MANHOLE TYPE "S-B" SHALL BE USED FOR LINES 24" AND LARGER OR WHEN SEWER MONITORING EQUIPMENT IS REQUIRED.
- PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" @ OPENINGS OR KNOCKOUTS. OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
- CEMENT SHALL BE TYPE I-III, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
- THE BASE & RISER SHALL BE INTEGRALLY CAST. CONCRETE SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4,000 P.S.I.
- MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
- THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.
- MANHOLES BELOW GROUNDWATER TO BE EXTERNALLY AND INTERNALLY COATED WITH BITUMINOUS COATING.
- CONE SECTION REINFORCEMENT IN ACCORDANCE WITH ASTM C-478 (ECCENTRIC CONE APPLICATION SHOWN DASHED).
- OTHER UTILITIES SHALL NOT BE INSTALLED ADJACENT TO THE CONE SECTION AND DIRECTLY ABOVE THE MANHOLE.

**CONSTRUCTION KEY NOTES:**

- MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
- ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEK OR APPROVED EQUAL.
- PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE AND SHALL HAVE FLEXIBLE PIPE TO MANHOLE CONNECTORS (COMPRESSION TYPE ASTM-923), "KOR-N-SEAL" OR APPROVED EQUAL.
- GROUT AS REQUIRED.
- ECCENTRIC/CONCENTRIC LID (CONCENTRIC SHOWN BOLD) WITH KEYS TOP, 8" THICK (SEE DETAIL 379-2).
- MINIMUM 24" DISTANCE FROM BOTTOM OF LID TO TOP OF PIPE FOR DROP CONNECTION.

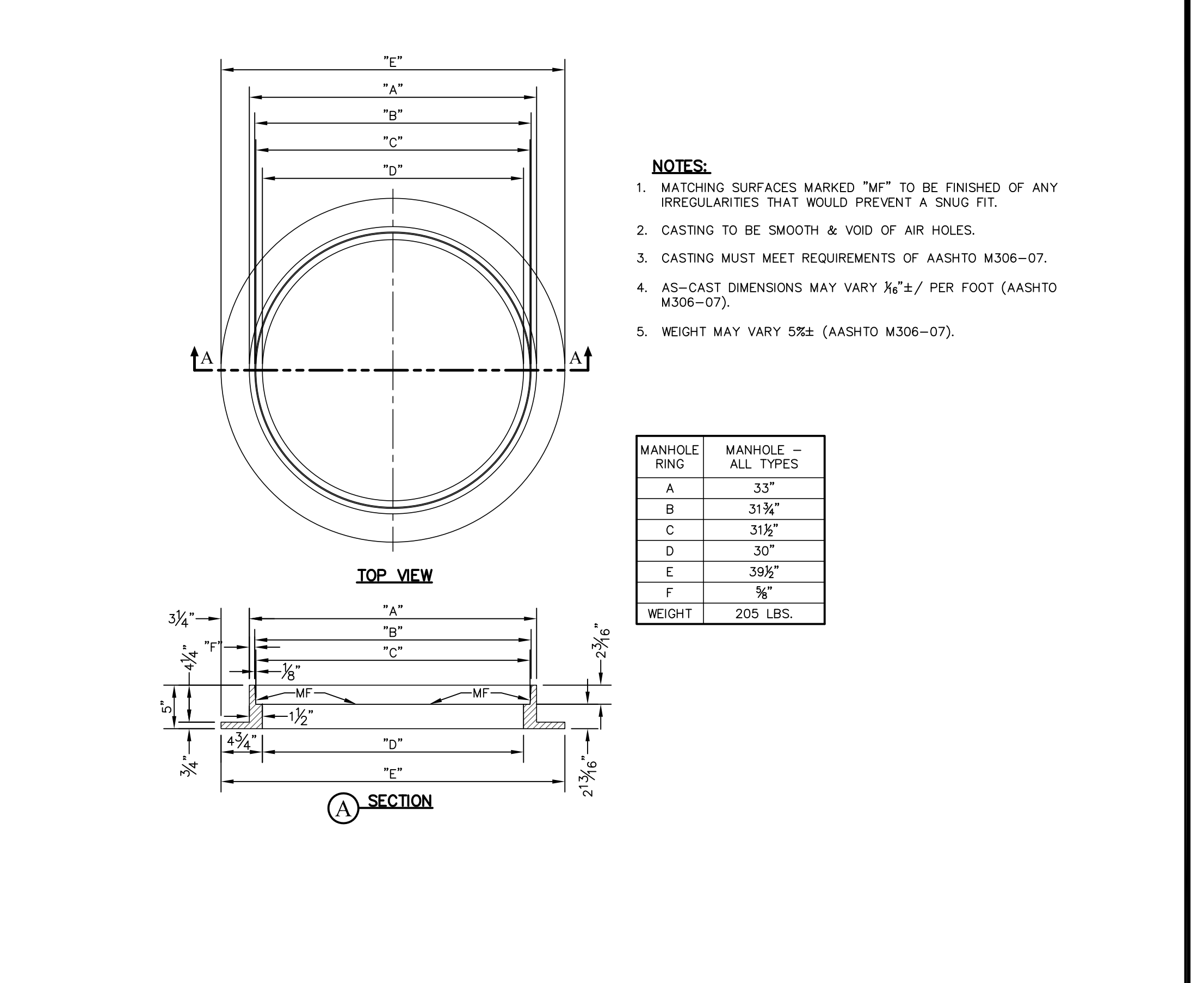


**GENERAL NOTES:**

- MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

**CONSTRUCTION KEY NOTES:**

- PRECAST MANHOLE BARREL.
- FLEXIBLE CONNECTOR.
- PIPE CLAMP SS 316.
- APPROVED PIPE.
- PRECAST MANHOLE BASE.
- GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
- PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
- EXPANSION BAND SS 316.
- FILL SPACE WITH GROUT.



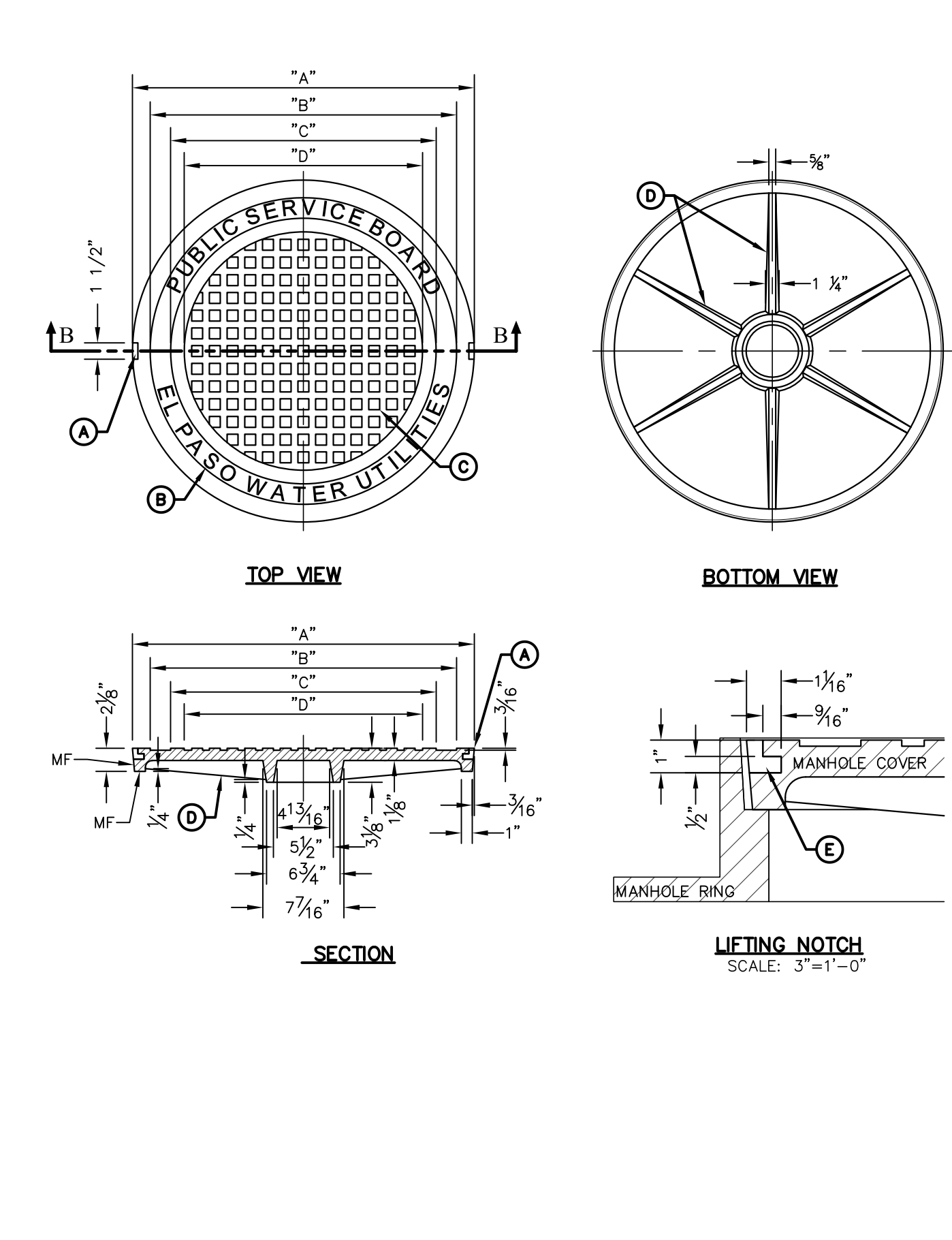
**NOTES:**

- MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
- CASTING TO BE SMOOTH & VOID OF AIR HOLES.
- CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
- AS-CAST DIMENSIONS MAY VARY 1/8" ± PER FOOT (AASHTO M306-07).
- WEIGHT MAY VARY 5% ± (AASHTO M306-07).

STANDARD DETAIL DATE: 11/1992 REV: 9/1/2009 MANHOLE TYPE "B" SCALE: N.T.S. el paso WATER DETAIL No. 371-1

STANDARD DETAIL DATE: 11/1992 REV: 8/13/2009 PIPE CONNECTION TO MANHOLE SCALE: N.T.S. el paso WATER DETAIL No. 376

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 MANHOLE RING SCALE: N.T.S. el paso WATER DETAIL No. 377

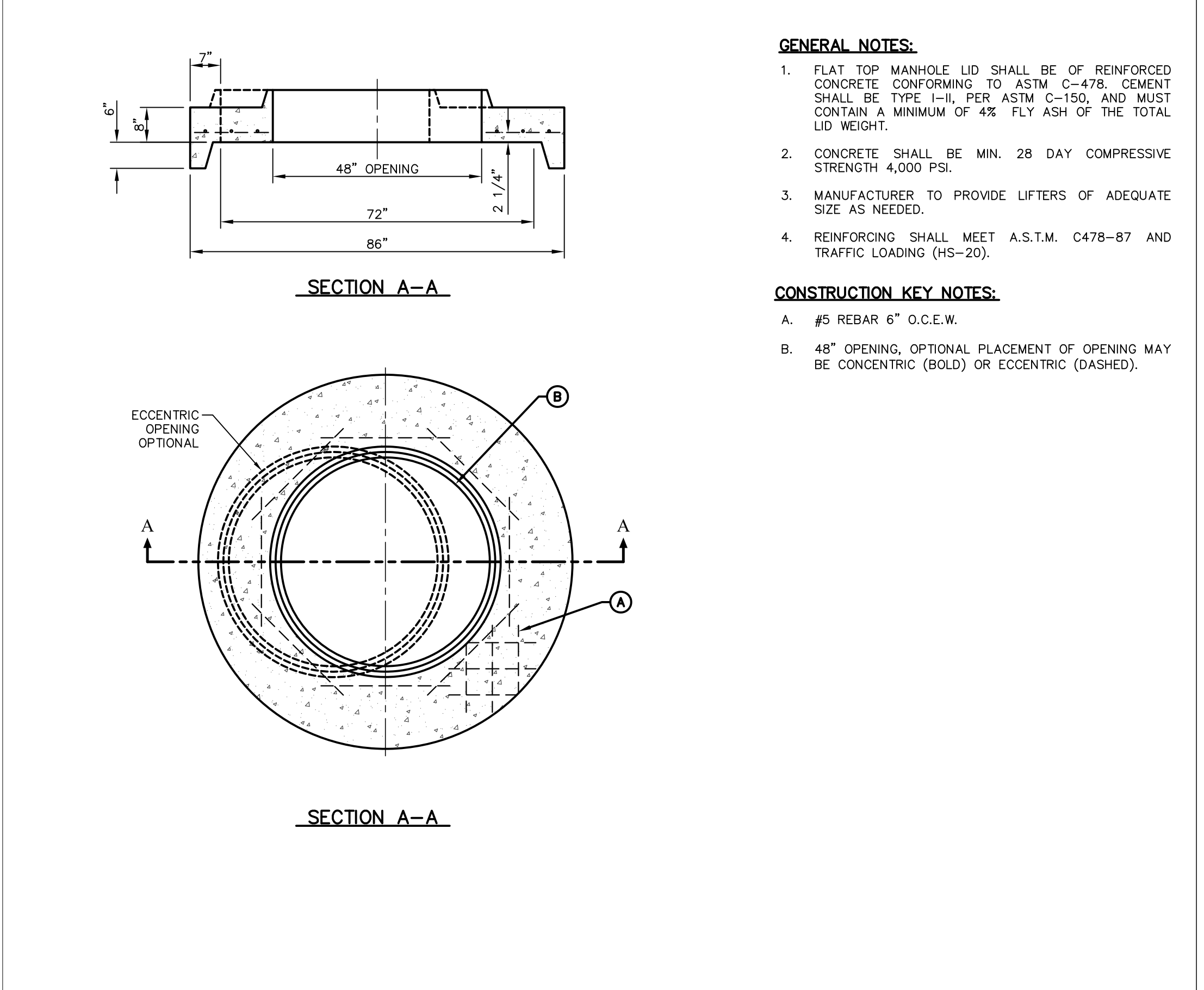


**KEYED NOTES:**

- LIFTING NOTCH.
- 3/8" RAISED LETTERING.
- 1" SQUARES (3/8" TALL) WITH 3/8" SPACE BETWEEN.
- REINFORCING RIBS.
- SLOT.

**NOTES:**

- MATCHING SURFACES MARKED "MF" TO BE MACHINE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
- CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
- CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
- AS-CAST DIMENSIONS MAY VARY 1/8" ± PER FOOT (AASHTO M306-07).
- WEIGHT MAY VARY 5% ± (AASHTO M306-07).

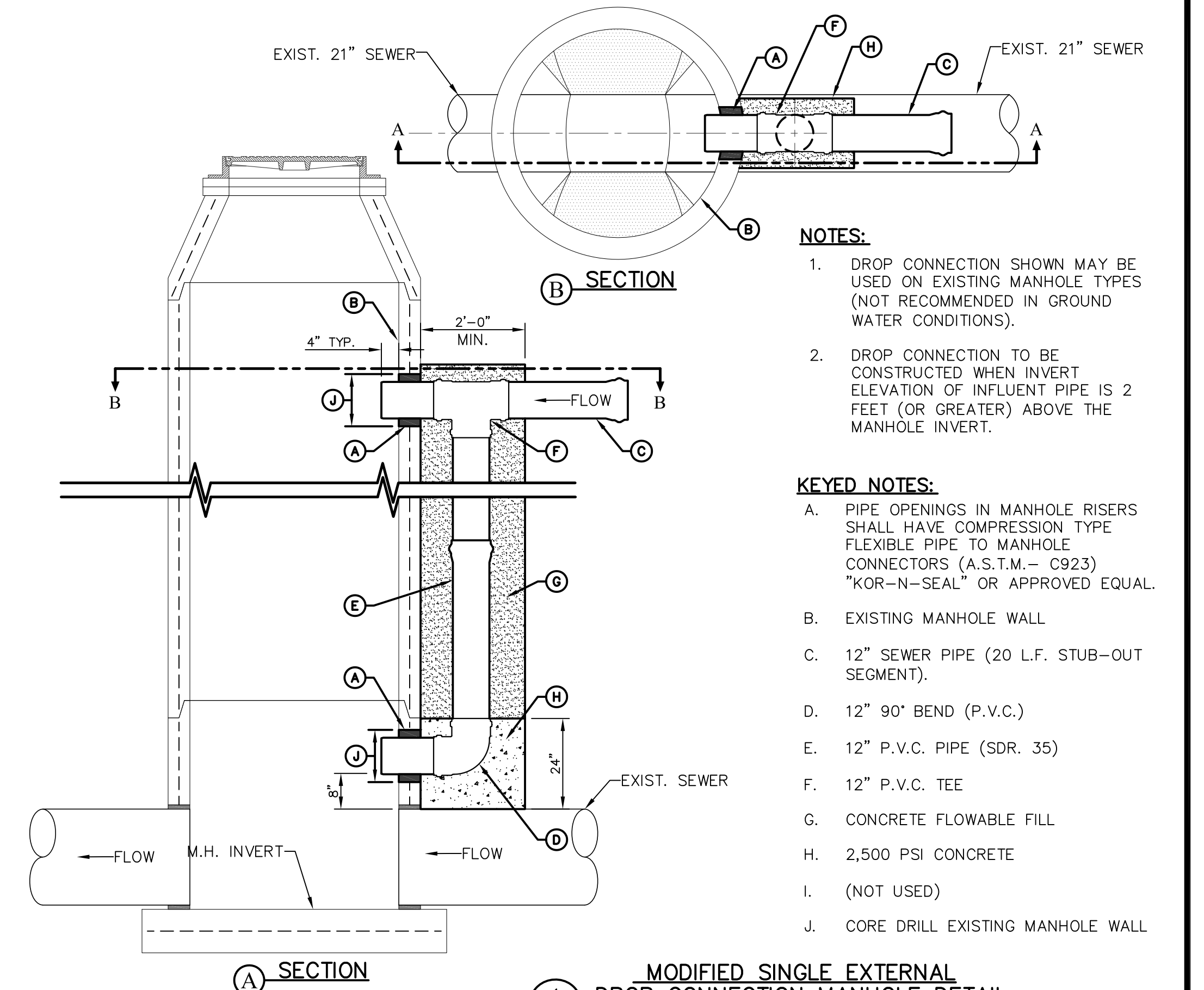


**GENERAL NOTES:**

- FLAT TOP MANHOLE LID SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478. CEMENT SHALL BE TYPE I-III, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL LID WEIGHT.
- CONCRETE SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4,000 PSI.
- MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
- REINFORCING SHALL MEET A.S.T.M. C478-87 AND TRAFFIC LOADING (HS-20).

**CONSTRUCTION KEY NOTES:**

- #5 REBAR 6" O.C.E.W.
- 48" OPENING, OPTIONAL PLACEMENT OF OPENING MAY BE CONCENTRIC (BOLD) OR ECCENTRIC (DASHED).



**NOTES:**

- DROP CONNECTION SHOWN MAY BE USED ON EXISTING MANHOLE TYPES (NOT RECOMMENDED IN GROUND WATER CONDITIONS).
- DROP CONNECTION TO BE CONSTRUCTED WHEN INVERT ELEVATION OF INFLUENT PIPE IS 2 FEET (OR GREATER) ABOVE THE MANHOLE INVERT.

**KEYED NOTES:**

- PIPE OPENINGS IN MANHOLE RISERS SHALL HAVE COMPRESSION TYPE FLEXIBLE PIPE TO MANHOLE CONNECTORS (A.S.T.M.- C923) "KOR-N-SEAL" OR APPROVED EQUAL.
- EXISTING MANHOLE WALL
- 12" SEWER PIPE (20 L.F. STUB-OUT SEGMENT).
- 12" 90° BEND (P.V.C.)
- 12" P.V.C. PIPE (SDR. 35)
- 12" P.V.C. TEE
- CONCRETE FLOWABLE FILL
- 2,500 PSI CONCRETE
- (NOT USED)
- CORE DRILL EXISTING MANHOLE WALL

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 MANHOLE COVER SCALE: N.T.S. el paso WATER DETAIL No. 378

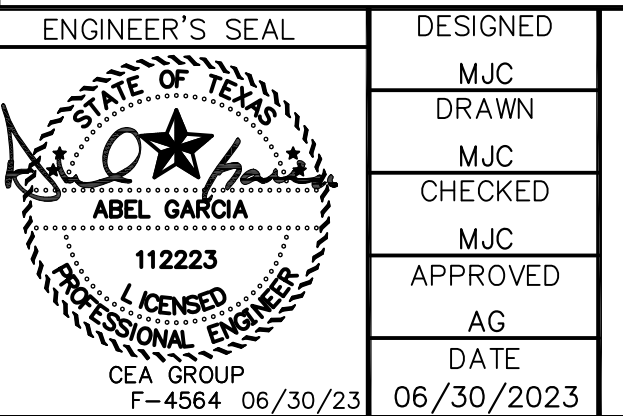
STANDARD DETAIL DATE: 9/1/2006 REV: 9/15/2010 MANHOLE ECCENTRIC/CONCENTRIC CONCRETE LID FOR TYPES "B" AND "C" MANHOLES SCALE: N.T.S. el paso WATER DETAIL No. 379-2

STANDARD DETAIL DATE: 11/1992 REV: 2/21/2011 MODIFIED SINGLE EXTERNAL DROP CONNECTION MANHOLE DETAIL SCALE: 1/2" = 1'-0"

REV.	DATE	BY	DESCRIPTION
1	8/8/23	MJC	ADDENDUM NO. 1

UTILITY LOCATOR SERVICES	
TIME WARNER COMMUNICATIONS	(915) 775-7415
EL PASO ELECTRIC COMPANY	(915) 877-3400
EL PASO WATER UTILITIES	(915) 594-5500
VERIZON COMMUNICATIONS	(800) 624-9675
HOLLY ENERGY PARTNERS	(915) 494-0549
TEXAS GAS SERVICE	(800) 959-5325
KINDER MORGAN	(915) 843-2441
AT&T GENERAL	(915) 595-5151

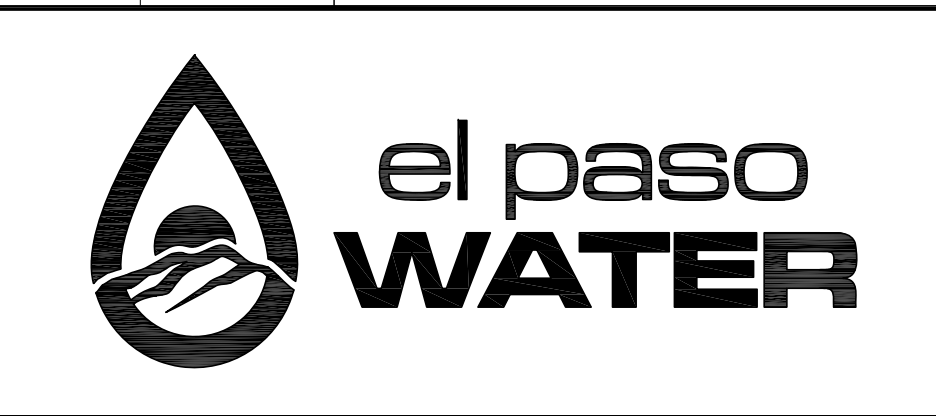
**WARNING!**  
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DRAWN: MJC  
CHECKED: MJC  
APPROVED: AG  
DATE: 06/30/2023

**cea group**  
TEXAS REGISTERED ENGINEERING FIRM F-4564

813 N. Kansas St.  
Suite 300  
El Paso, TX 79902  
915.544.5232  
www.ceagroup.net



PROJECT: NORTHEAST DYER/ RAILROAD 30-INCH SANITARY SEWER INTERCEPTOR & 16-INCH WATER MAIN IMPROVEMENTS PHASE III

SHEET TITLE: SANITARY SEWER DETAILS

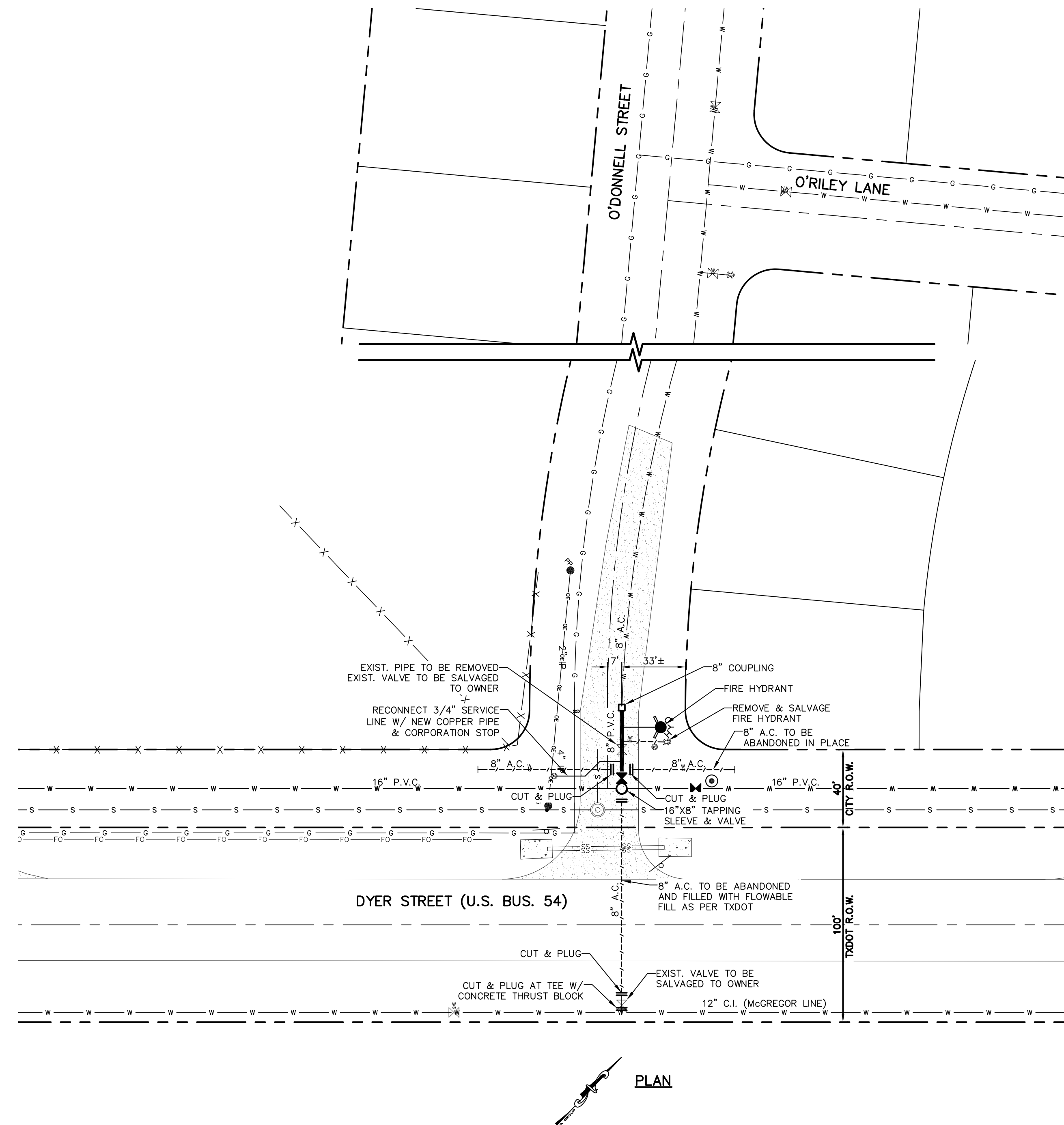
JOB NO. 1040-064-WS  
SEQUENCE NO. C7.1R  
SHEET NO. 17 OF 21

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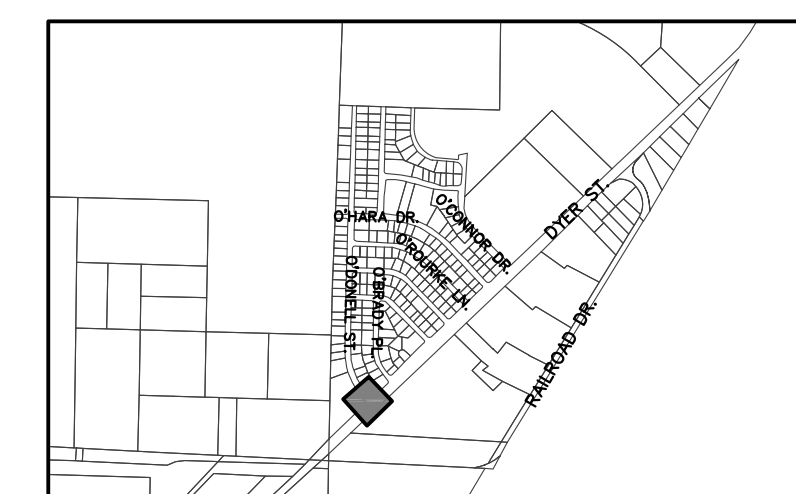
## **ATTACHMENT M**

**NOTES:**

1. THE CONTRACTOR SHALL FOLLOW PROCEDURES AND PROTOCOL FOR WATER SHUT OFF AS PER WATER NOTE 3 OF SHEET C1.3.
2. THE CONTRACTOR SHALL COORDINATE WITH MCGREGOR RANGE FOR WATER SHUT-OFF DATES AND TIMES FOR TIE-IN CONNECTION.
3. THE CONTRACTOR SHALL POT HOLE EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL COORDINATE WITH RESIDENTS WHOSE SERVICES WILL BE AFFECTED.
5. THE CONTRACTOR SHALL OBTAIN AN APPROVED TRAFFIC CONTROL PERMIT FROM TXDOT AND SETUP A PRE-CONSTRUCTION MEETING WITH TXDOT AT LEAST 48 HOURS PRIOR TO WORK.
6. THE CONTRACTOR SHALL PERFORM WORK DURING NIGHT TIME NON-PEAK HOURS. THE CONTRACTOR SHALL PROVIDE LIGHTING FOR NIGHT TIME CONSTRUCTION AND SHALL BE CONSIDERED SUBSIDIARY TO THE LUMP SUM BID ITEM.



PLAN



KEY MAP

1" = 200'  
 1" = 40' HORIZONTAL  
 1" = 5' VERTICAL

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REV.	DATE	BY	DESCRIPTION

UTILITY LOCATOR SERVICES	
TIME WARNER COMMUNICATIONS	(915) 775-7415
EL PASO ELECTRIC COMPANY	(915) 877-3400
EL PASO WATER UTILITIES	(915) 594-5500
VERIZON COMMUNICATIONS	(800) 624-9675
HOLLY ENERGY PARTNERS	(915) 494-0549
TEXAS GAS SERVICE	(800) 959-5325
KINDER MORGAN	(915) 843-2441
AT&T GENERAL	(915) 595-5151

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FOR FIELD LOCATING EXISTING UTILITIES

ENGINEER'S SEAL

ABEL GARCIA  
 112223  
 LICENSED PROFESSIONAL ENGINEER  
 CEA GROUP  
 F-4564 08/08/23

DESIGNED
MJC
DRAWN
MJC
CHECKED
MJC
APPROVED
AG
DATE
08/08/2023

**cea** group  
 TEXAS REGISTERED ENGINEERING FIRM F-4564

813 N. Kansas St.  
 Suite 300  
 El Paso, TX 79902  
 915.544.5232  
 www.ceagroup.net

**el paso**  
**WATER**

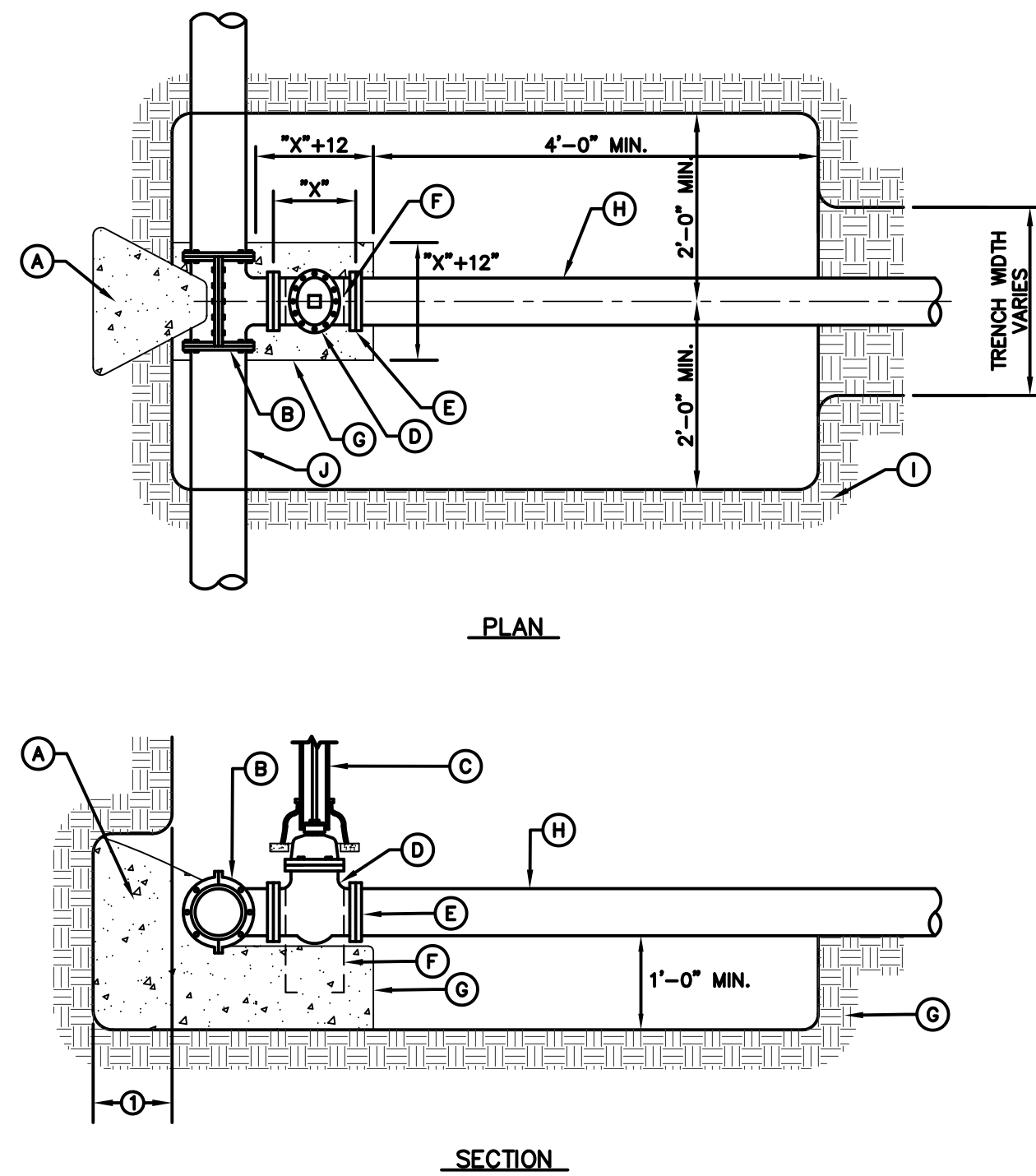
PROJECT: **NORTHEAST DYER/ RAILROAD  
 30-INCH SANITARY SEWER INTERCEPTOR &  
 16-INCH WATER MAIN IMPROVEMENTS PHASE III**

SHEET TITLE: **DYER STREET & O'DONNELL  
 STREET WATER CONNECTION PLAN**

JOB NO.  
 1040-064-WS

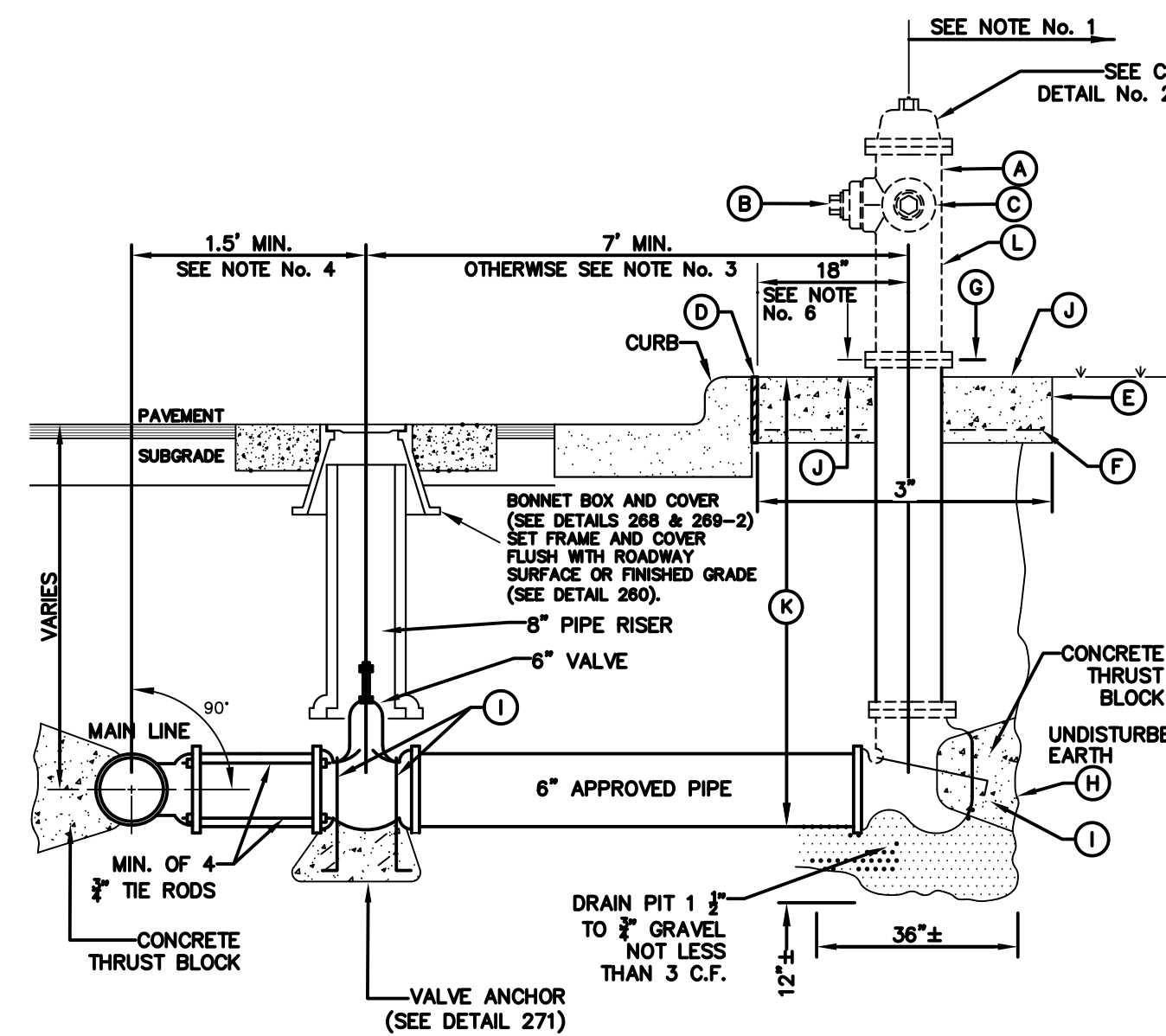
SEQUENCE NO.  
**ADD-1**

SHEET NO.  
 1 OF 2



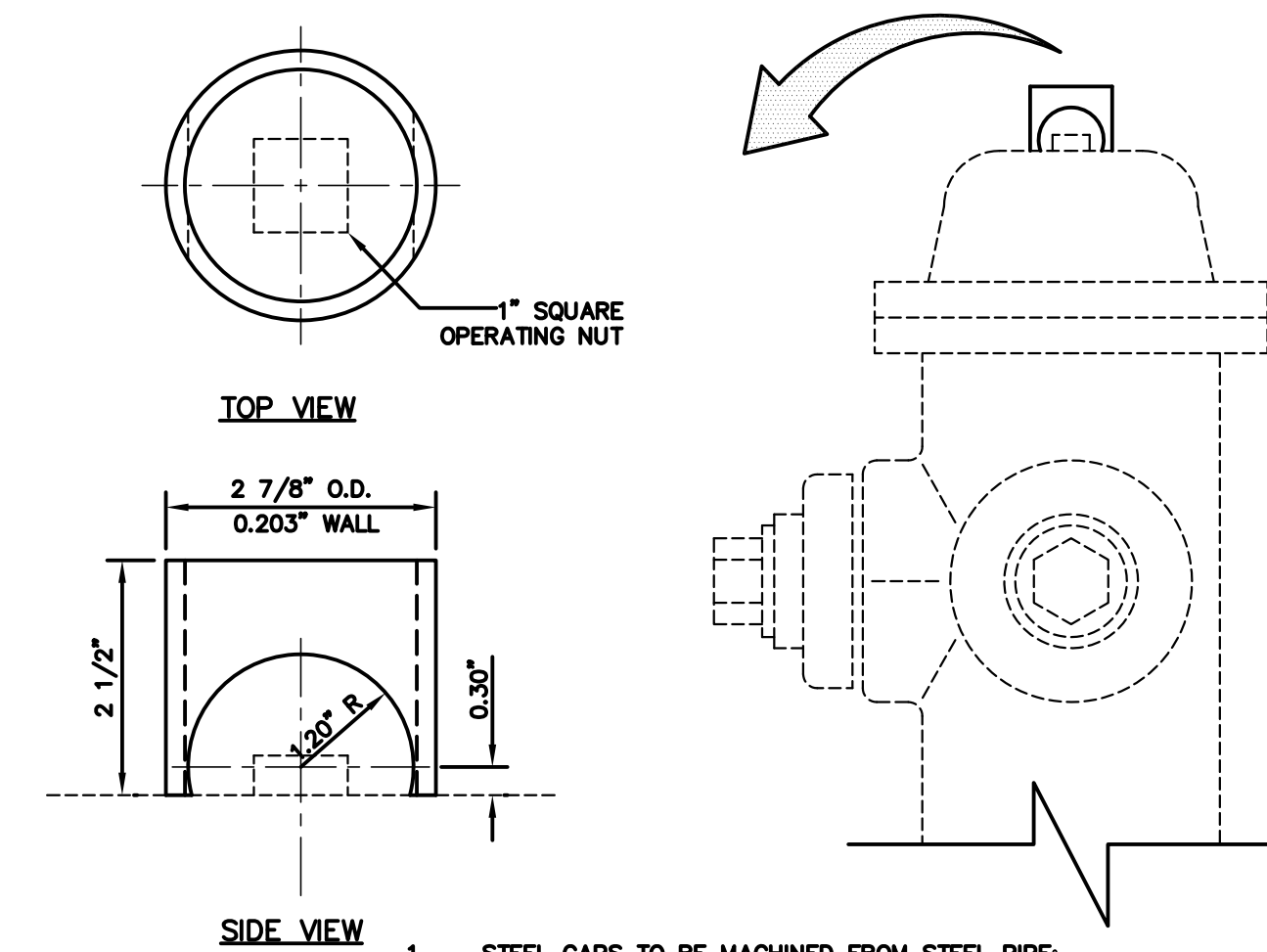
- GENERAL NOTES:**
- THRUST BLOCKING SHALL EXTEND TO UNDISTURBED EARTH.
  - TAPPING SLEEVE SHALL BE 18" MINIMUM FROM ANY BELL COUPLING, VALVE OR FITTING LOCATED ALONG EXISTING WATER LINE TO BE TAPPED.
  - REPLACE EXCAVATED MATERIAL WITH CEMENT STABILIZED BACKFILL PRIOR TO PAVING.
  - JOINTS AND BOLTS SHALL BE CLEAR OF CONCRETE.
  - INSTALL PERMANENT THRUST BLOCKING UNDER VALVE BEFORE TAP IS MADE. JOINTS AND BOLTS TO BE CLEAR OF CONCRETE.

- CONSTRUCTION KEY NOTES:**
- CONCRETE THRUST BLOCKING, PER DETAIL 270.
  - TAPPING SLEEVE.
  - RISER INSTALLATION, PER DETAIL 260.
  - TAPPING VALVE.
  - VALVE ENDS FOR TYPE OF PIPE INSTALLED.
  - 2-#5 REBAR HAIRPINS, PAINT UNEMBEDDED PORTION OF BARS WITH 2-COATS OF COAL TAR EPOXY, THEN COVER WITH 2" MINIMUM OF CEMENT MORTAR.
  - CONCRETE VALVE SUPPORT, PER DETAIL 271.
  - NEW WATER LINE TO BE INSTALLED.
  - UNDISTURBED EARTH.
  - EXISTING WATER MAIN TO BE TAPPED.



- GENERAL NOTES:**
- NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 5 FT. IN ALL DIRECTIONS OF FIRE HYDRANT (PER EL PASO MUNICIPAL CODE, TITLE 12). FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
  - FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL No. 282 FOR SPECIAL CASES.
  - WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL No. 282.
  - VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS. WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED 3/4" MECHANICAL ENDS WITH " DIAMETER TIE RODS.
  - COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
  - WHEN INSTALLATION IS WITHIN 1' RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

- CONSTRUCTION KEY NOTES:**
- FIRE HYDRANT PER SPEC'S.
  - PUMPER NOZZLE 4" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
  - HOSE NOZZLE 2 1/2".
  - 1/2" PREMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
  - 3'x3'x6" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
  - #10; 6/6 WWF.
  - CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYDRANT TO CONTROLLED ELEVATION.
  - CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH. F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
  - 2"x1/4" STEEL ANCHOR PINS.
  - TOP OF SLAB SHALL BE AT CURB LEVEL, 4" TO 6" BELOW THE BREAK LINE OF THE HYDRANT.
  - MAXIMUM OF ONE (1) SPOOL EXTENSION ALLOWED TO MAINTAIN THE CONTROLLED ELEVATION LINE TO TOP OF SLAB. ADDITIONAL ADJUSTMENT MUST BE MADE WITH OFFSETS & FITTINGS AS NEEDED.
  - REQUIRED - DAVIDSON ANTI TERRORISM CORROSION RESISTANT VALVE KIT (DAV).

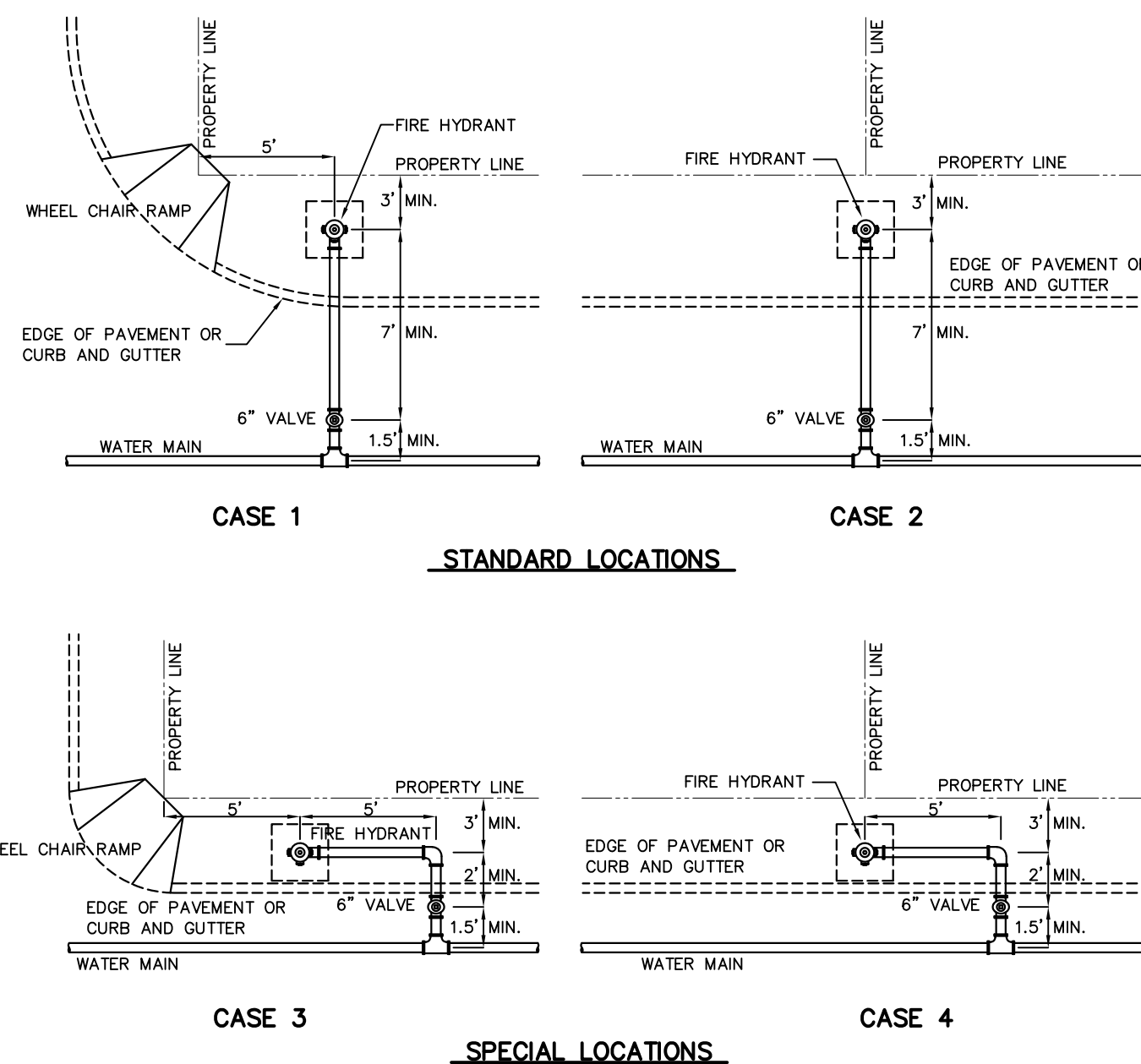


- STEEL CAPS TO BE MACHINED FROM STEEL PIPE: NOMINAL SIZE = 2 1/2" DIA. OUTSIDE DIA. = 2.875" WALL THICKNESS = 0.203 LBS/FT. = 5.79
- CAPS ARE TO BE TACK WELDED OR BRAZED ON FIRE HYDRANT BONNET OR WEATHER CAP.
- THE CAPS OVER THE OPERATING NUT WILL PREVENT ACCESS TO THE UNAUTHORIZED USE OF HYDRANT WATER.

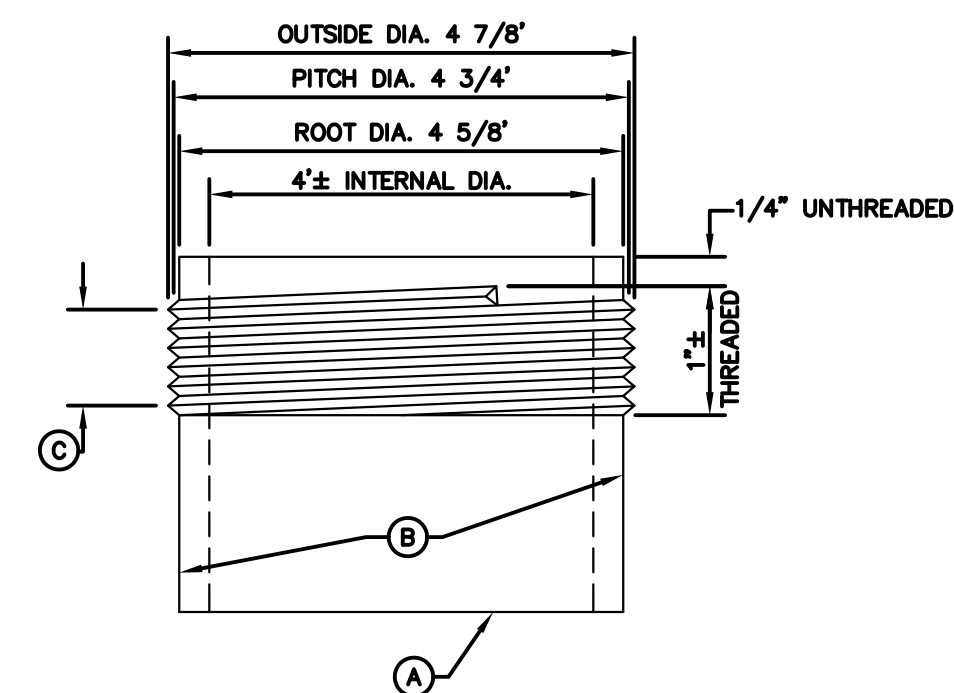
STANDARD DETAIL DATE: 9/1994 REV: 8/9/2006 TAPPING SLEEVE AND VALVE INSTALLATION SCALE: N.T.S. el PASO WATER DETAIL No. 266

STANDARD DETAIL DATE: 2/1993 REV: 3/12/2020 FIRE HYDRANT INSTALLATION SCALE: N.T.S. el PASO WATER DETAIL No. 280-1

STANDARD DETAIL FEB. 1993 REV: FEB. 1994 FIRE HYDRANT CAP SCALE: N.T.S. el PASO WATER DETAIL No. 281



- GENERAL NOTES:**
- FOR CASE 1 FIRE HYDRANT SHALL BE LOCATED AT A DISTANCE OF 5 FT. MINIMUM FROM THE PROPERTY LINE OR AT THE BEGINNING OF CURB RETURN.
  - FOR CASE 2 FIRE HYDRANT SHALL BE LOCATED AT THE PROPERTY LINE COMMON TO ADJOINING LOTS.
  - FOR CASE 3 AND IV WHERE THE DISTANCE BETWEEN THE VALVE AND THE HYDRANT IS LESS THAN 7 FT. PLACE HYDRANT AS SHOWN.
  - FOR INSTALLATION OF FIRE HYDRANT SEE DETAIL 280-1 OR 280-2.
  - A MINIMUM CLEARANCE OF 5 FT. WILL BE PROVIDED BETWEEN A FIRE HYDRANT AND A PERMANENT OBSTRUCTION (UTILITY POLE, LIGHT STANDARD, TRAFFIC SIGNAL, WHEEL CHAIR RAMP, FENCE PROTECTIVE POSTS, ETC.).
  - WHEN INSTALLATION IS WITHIN 1' RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.



- NOTES:**
- CITY OF EL PASO STANDARD THREADS FOR PUMPER NOZZLE.
  - HOSE COUPLING FEMALE THREADS TO BE NO LESS THAN 0.045" LARGER IN DIAMETER.
  - THREAD DIAMETER REDUCED AND CHANGED TO 6 THREADS/INCH TO ACCOMMODATE FIRE DEPARTMENT HOSE COUPLINGS.
- KEYED NOTES:**
- MATERIAL: BRONZE
  - THIS SECTION ADAPTED TO CAULKING OR THREADING MATERIAL
  - 6 THREADS/INCH

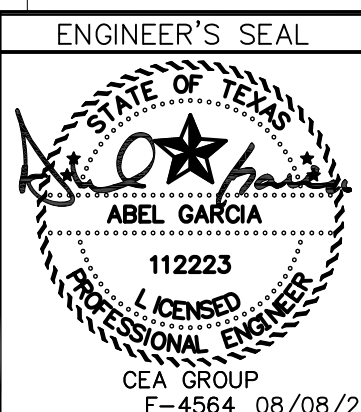
STANDARD DETAIL DATE: 5/1994 REV: 5/8/2017 FIRE HYDRANT LOCATIONS SCALE: N.T.S. el PASO WATER DETAIL No. 282

STANDARD DETAIL JAN. 1995 REV: FIRE HYDRANT STEAMER NOZZLE el PASO WATER DETAIL No. 283

REV.	DATE	BY	DESCRIPTION

UTILITY LOCATOR SERVICES	
TIME WARNER COMMUNICATIONS	(915) 775-7415
EL PASO ELECTRIC COMPANY	(915) 877-3400
EL PASO WATER UTILITIES	(915) 594-5500
VERIZON COMMUNICATIONS	(800) 624-9675
HOLLY ENERGY PARTNERS	(915) 494-0549
TEXAS GAS SERVICE	(800) 959-5325
KINDER MORGAN	(915) 843-2441
AT&T GENERAL	(915) 595-5151

**WARNING!**  
**BEFORE YOU DIG**  
**CALL 811**  
FOR FIELD LOCATING EXISTING UTILITIES



DESIGNED: MJC  
DRAWN: MJC  
CHECKED: MJC  
APPROVED: AG  
DATE: 08/08/2023



PROJECT: NORTHEAST DYER/ RAILROAD 30-INCH SANITARY SEWER INTERCEPTOR & 16-INCH WATER MAIN IMPROVEMENTS PHASE III

SHEET TITLE: WATER DETAILS

JOB NO. 1040-064-WS  
SEQUENCE NO. ADD-1  
SHEET NO. 2 OF 2