



CITY OF PROVIDENCE, RHODE ISLAND

**Department: Providence Water**

**RFP Title: Western Johnston High Service Expansion- Contract 3**

**Opening Date: 03/27/2023**

**Addendum #: 2**

**Issue Date: 03/22/2023**

The purpose of this addendum is to provide the correct documents incorrectly submitted in the form of Addendum 1.

The following addendum serves as revisions, clarifications, additions and/or deletions, are hereby made as part of the Bid Documents for the Western Johnston High Service Expansion-Contract 3 RFP.

**ADDENDUM NO. 2  
FOR  
WESTERN JOHNSTON HIGH SERVICE EXPANSION – CONTRACT 3  
JOHNSTON, RHODE ISLAND  
PROVIDENCE WATER SUPPLY BOARD  
MARCH 10, 2023**

Inclusion of this Addendum must be acknowledged by the bidders by inserting its number on the appropriate line on Page 3 of the Bid Form (Section 00310). Failure to acknowledge any and all addenda in the above specified bid form may be cause for rejection of the bid by the Providence Water Supply Board, on the grounds that the bid is not responsive.

The following revisions, clarifications, additions and/or deletions, are hereby made as part of the Bid Documents for the Central Avenue Transmission Main Installation project.

A pre-bid meeting was held on March 10, 2023 at the Philip J Holton Water Purification Plant in Scituate, Rhode Island.

**CONTRACT CLARIFICATIONS**

1. The start date for the project is (15) days following the Notice to Proceed.
2. Following the initial approved schedule, the Contractor shall produce updated weekly schedules to the engineer for review and approval. Failure to produce weekly schedules will result in \$1,000/week liquidated damages.
3. Contractor shall utilize Providence Water’s project management software – eBuilder, latest edition, for the duration of the project concerning any project related submissions. No alternate method will be accepted. Providence Water will provide the awarded Contractor with a software license to utilize for the duration of the project.
4. Contractor shall perform a pre-conditions survey in accordance with General Conditions of the contract prior to the start of any work.
5. The Contractor may begin transporting the pipe from Providence Water’s property to the project site no earlier than 8 a.m. of each working day, Monday through Friday. Contractor shall notify the Owner/Engineer at least (48) hours prior to arriving at Providence Water property.
6. Gauged piping shall be provided by Providence Water to be used on an as-needed basis. Gauged pipes are included with the transmission main piping and are marked “green”. Gauged pipe shall be used for all field cutting of 16-in pipe.
7. Contractor shall submit a chlorination plan to be approved by the Owner/Engineer prior to any testing of the transmission main. The contractor shall install 2-inch temporary taps for samples to be collected every 1,200 feet.

**CONTRACT SPECIFICATIONS**

**00310 – BID FORM**

1. Replace Specification 00310 in its entirety with Revised Specification 00310 – Bid Form (Addendum No. 1) attached to this addendum.

Please note that the following items have been added/modified in the Bid Form:

Item 22: Unknown Conditions Allowance

Item 10: Furnish and Install 12-inch Gate Valve and Box

Item 14: Rock Removal

## **01150 – MEASUREMENT AND PAYMENT**

1. In Specification 01150, add the following Section under PART 2 – PRODUCTS on page 11:

### **“2.19 UNKNOWN CONDITIONS ALLOWANCE (BID ITEM NO. 22)**

#### **A. Measurement**

1. The Work for this section shall be the submitted invoice for any work associated with any unknown conditions discovered at the site.

#### **B. Payment**

1. Payment for this item will be made from the Allowance amount specified on the Bid Form, subject to approval by Owner and Engineer. If the total cost for such charges is greater or less than the allowance amount stated under this Bid Item of the Bid, a debit or credit of the difference in cost shall be to the Owner.”

2. In Specification 01150, remove Paragraph A. – Measurement in its entirety under Section 2.21 – TRAFFIC MANAGEMENT ALLOWANCE on page 12 and replace with the following:

#### **“A. Measurement**

1. The Work for this section shall be the submitted invoice for any work associated with coordinating, installing, and maintaining detours. This work will also include traffic management labor, equipment, and materials, excluding police detail (see bid item No. 21).”

## **02640 – VALVES, TAPPING SLEEVES, AND APPURTENANCES**

1. In Specification 02640, remove Paragraph A. – E. in its entirety under Section 2.04 – STRAIGHT AND TRANSITION PIPE COUPLINGS on page 3 and replace with the following:

“A. Straight and Transition Couplings shall be restrained, couplings to be Romac Alpha or approved equal.”

## **02220 – EARTHWORK**

Section 3.07 – COMPACTION states that compaction testing of utility trenching shall be done at intervals of 50 feet at each backfill layer. Cost for compaction testing are included in the various bid items whether or not directly called for in the contract documents.

## **CONTRACT DRAWINGS**

### 1. Drawing C2.1

Replace the call-out for the double-checked backflow to read “Approx. location of separation for temporary 8” Watts 709 double-check backflow prevention device to be used for testing of transmission line”.

### 2. Drawing C2.3, C2.4 & C2.5

Remove one (1) 12-inch gate valve on each sheet. Each cross connection between the existing 8-inch distribution line and 16-inch transmission line now has only one (1) 12-inch gate valve.

### 3. Drawing C2.1 – C2.6

Replace the note section on each sheet with the following language:

#### **“NOTES:**

1. Sediment protection shall be installed and maintained on all drain inlet structures along the route of the water main construction. Contractor is responsible to ensure proper drainage for duration of project. All sediment controls shall be removed and disposed after final surface restoration is complete.
2. Contractor shall provide all bends required for elevation differences between the 8” and 16” mains.
3. 90-degree bends will not be allowed. contractor shall utilize 45-degree bends as the maximum allowable offset.
4. All fittings, valves, and bell spigot joints shall be restrained at these cross connections.”

### 4. Drawing C3.2

Add “5’-6” Pay Limit” to Temporary Trench Patch Detail and “7-6” Pay Limit” to Permanent Trench Patch Detail.

## **QUESTIONS**

The following questions were received during the Pre-Bid meeting:

- Will traffic control costs be included in the Traffic Management Allowance?

Yes, any traffic control labor, equipment, and material costs are included in the Traffic Management Allowance.

- Will the contractor be responsible for providing the backflow preventer used for testing the transmission main?

Yes, it will be the responsibility of the Contractor to provide the backflow preventer. Contractor to keep backflow preventer after the completion of the project.

- Will the Contractor need to mill and overlay the roadway as part of the project?

Currently mill and overlay is not included in this project. The Town of Johnston has confirmed that any roadway restoration will be limited to temporary/permanent patches. If the Town decides that the roadway will need to be mill and overlaid, it will be addressed in a future addendum.

- What is the required width for the temporary/permanent trench patch?

The required width for temporary trench patch will be 5'-6". The required width for permanent trench patch will be 7'-6".

- Will Providence Water provide any water for testing purposes?

Yes, Providence Water will provide water for chlorination and pressure testing of the transmission main.

- Will the project include service installations?

No service installations will be incorporated into the project.

#### **PRE-BID MEETING ATTENDEES**

<b>Company</b>	<b>Address</b>
R. Zoppo Corp.	160 Old Maple St, Stoughton, MA 02072
EJ Prescott Inc.	38 Albion Rd, Lincoln, RI 02865
D'Ambra Construction Co., Inc.	80 Centre of New England Blvd, Coventry, RI 02816
Biszko Contracting Corp.	20 Development St, Fall River, MA 02721
J.H. Lynch & Sons Inc.	50 Lynch Pl, Cumberland, RI 02864
D'ercole Construction Co.	9 Dercole Dr Cranston RI 02920
Manafort Brothers Inc.	24 Martin St UNIT 10, Cumberland, RI 02864
Boyle & Fogarty Construction Co., Inc.	2 Industrial Dr S # 1, Smithfield, RI 02917
Ricci Drain-Laying Co., Inc.	19 Lily, Providence, RI 02909
Providence Water Supply Board	125 Dupont Dr, Providence, RI 02907
Pare Corp.	8 Blackstone Valley Pl, Lincoln, RI 02865

#### **Attachments:**

- 1.) Revised Specification 00310 – Bid Form (Addendum No. 1)
- 2.) Revised Specification 01150 – Measurement and Payment (Addendum No. 1)
- 3.) Revised Specification 02640 – Valves, Tapping Sleeves, and Appurtenances (Addendum No. 1)
- 4.) Pre-Bid meeting Attendance Sheet

### 3.00 UNIT PRICES

#### BID FORM

Central Ave Tranmisison Main Installation

Bid Item	Description	Quantity	Unit Bid Price	Unit	Total Cost	Total Price in Words
NOTE: THE UNIT PRICE FOR EACH ITEM MUST BE WRITTEN IN WORDS AND FIGURES. IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN.						
1.	Site Mobilization and Demobilization (up to 5% of construction cost)	1	\$	LS	\$	
2.	Payment and Performance Bond (up to 1.5% of construction cost)	1	\$	LS	\$	
3.	Erosion and Sedimentation Controls	4,500	\$	LF	\$	
4.	Test Pits	5	\$	EA	\$	
5.	Furnish and Install 12x12-inch Tapping Sleeve and Valve	1	\$	EA	\$	
6.	Furnish and Install 8-inch Zinc-coated Class 52 Water Main and Fittings	50	\$	LF	\$	
7.	Furnish and Install 12-inch Zinc-coated Class 52 Water Main and Fittings	50	\$	LF	\$	
8.	Install 16-inch Class 52 Water Main and Furnish and Install Fittings	5,300	\$	LF	\$	
9.	Furnish and Install 8-inch Gate Valve and Box	6	\$	EA	\$	
10.	Furnish and Install 12-inch Gate Valve and Box	3	\$	EA	\$	
11.	Furnish and Install 16-inch Resilient Wedge Gate Valve w/ Gear Actuator, Extension Stem and Box	6	\$	EA	\$	
12.	Furnish and Install 5x5-foot Precast Water Service Manhole	6	\$	EA	\$	
13.	Furnish and Install Hydrant Assembly	3	\$	EA	\$	
14.	Rock Removal	1,000	\$	CY	\$	
15.	Unsuitable Material and Replacement w/ Processed Gravel	500	\$	TON	\$	
16.	2-inch Temporary Trench Pavement	700	\$	TON	\$	
17.	3-inch Permanent Trench Pavement	1,500	\$	TON	\$	
18.	Loam and Seed	1	\$	LS	\$	
19.	Unknown Conditions	1	\$ 100,000.00	ALLOW	\$ 100,000.00	One Hundred and Thousand Dollars and Zero Cents
20.	Uniformed Officer Traffic Control	1	\$ 60,000.00	ALLOW	\$ 60,000.00	Sixty Thousands Dollars and Zero Cents
21.	Traffic Mangament	1	\$ 120,000.00	ALLOW	\$ 120,000.00	One Hundred and Twenty Thousand Dollars and Zero Cents
<b>TOTAL</b>					<b>\$</b>	

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**SECTION 01150**

**MEASUREMENT AND PAYMENT**

**PART 1 GENERAL**

**1.1 EXTENT OF WORK**

- A. Measurement. The quantities to be measured under the various items in the proposal will be those quantities of work completed in accordance with the Drawings and Specifications. The methods of measurement will be as stated hereinafter for the individual items.
- B. Prices. The unit or lump sum prices for all items in the schedule of prices shall be full compensation for the work of the Contractor specified and shall include the cost of furnishing all materials, labor, tools and equipment and all work and expense incidental to and necessary to complete the work in accordance with the Drawings and Specifications.

**1.2 WORK NOT PAID FOR SEPARATELY**

- A. Stripping Topsoil. Payment for stripping topsoil, including stockpiling, is included in the prices for the various items of work in the Schedule of Prices and no separate payment will be made thereof.
- B. Clearing and Grubbing. Payment for clearing and grubbing, including disposal, is included in the prices for the various items of work in the Schedule of Prices and no separate payment will be made thereof.
- C. Earth Excavation. Payment for earth excavation to the depths indicated on the Drawings or authorized by the Engineer for the construction of all structures, pipelines, and appurtenances, including disposal of the excavated materials in fills, backfills, embankments, designated stockpiles, or as spoil, as approved by the Engineer, is included in the prices for the various items of work in the Schedule of Prices and no separate payment will be made thereof.
- D. Filling, Backfilling, Embankment, and Disposal of Surplus Materials. Payment for filling, backfilling for all structures, underground electric conduits and pipelines, including appurtenances, construction of embankments, and disposal of surplus material is included in the prices for the various items of work in the Schedule of Prices and no separate payment will be made thereof, except for selected material if needed to complete the work.
- E. Sheeting, Shoring and Bracing. Payment for all necessary sheeting, shoring, and bracing is included in the prices for the various items in the Schedule of Prices and no separate payment shall be made thereof.
- F. Pumping, Draining, and Bailing. Payment for all necessary pumping, draining, bailing, etc., including the use of underdrains or well points, is included in the prices for the various items in the Schedule of Prices and no separate payment will be made thereof.
- G. Preparation of Site. Payment for preparation of site is included in the Lump Sum Price Bid for Item 1 in the Schedule of Prices and no separate payment will be made thereof.

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Preparation of site includes setting up construction plant, offices, shops, storage areas, sanitary and other facilities required by the specifications or state law or regulations; providing access to the site; obtaining necessary permits and licenses; and payment of fees; general protection, temporary heat and utilities; providing shop and working drawings, certificates and schedules; sampling and testing materials; providing required insurance; cleaning up, and all other work regardless of its nature which may not be specifically referred to in the Schedule of Prices but is necessary for the complete construction of the project set forth by the contract.

- H. Bonds. Payment for bonds required by the contract is included in the prices bid for the various items of work in the Schedule of Prices and no separate payment will be made thereof.
- I. Environmental Protection. Payment for work under this section is included in the prices for the various items in the Schedule of Bid Items and no separate payment will be made thereof.
- J. Signage. Payment for all signage required for this project is included in the prices for the various items in the Schedule of Bid Items and no separate payment will be made thereof.
- K. Pavement Removal. Payment for bituminous concrete pavement excavation and disposal is included in the prices for the various items in the Schedule of Bid Items and no separate payment will be made thereof.
- L. No separate payments will be made for cleaning up. Such cleanup shall be considered incidental to the item to which it applies and shall be included in the price for that item.
- M. All existing work removed or damaged by the Contractor's operations shall be replaced to the satisfaction of the Owner at no additional expense to the Owner.
- N. No separate payment will be made for Division 1 - General Requirements. Contractor shall incorporate the cost for these items into the Bid Items listed in the Bid Form.
- O. All disturbed areas outside the limits of disturbance shall be restored at the Contractor's expense.

**1.3 BID ITEMS**

- A. Appurtenant items of work shown on the Drawings or specified which are required to complete the work but are not listed separately under the various applicable bid items of work, shall have no separate payment for such items. It shall be the responsibility of the Contractor to verify any missing or incomplete items.

**1.4 MEASUREMENT**

- A. The measurement of all quantities of items listed in the Bid Form shall be done by the Contractor. The measurement will include proper and complete documentation of all items to the satisfaction of the Owner and Engineer prior to the submission for payment. The measurement submitted shall be in the same unit description listed in the Bid Form.



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**1.5 PAYMENT**

- A. Payments shall be made to the Contractor only after proper documentation of the unit quantity provided or percentage of work completed, and in accordance with the contract terms and conditions regarding payment.
- B. Payment for bid items shall include full compensation for all incidentals required for the complete installation of the completed product.
- C. Payment shall be made only for that work which is performed within the pay limits shown on the Drawings or detailed in the Specifications. No payment shall be made for work beyond these limits unless the work has been authorized by the Engineer in writing.

**PART 2 PRODUCTS**

**2.01 SITE MOBILIZATION AND DEMOBILIZATION (BID ITEM NO. 1)**

**A. Measurement**

- 1. The Work of this section shall be measured as specified at the Lump Sum price provided on the Bid Form. The payable quantity will be for the preparatory work and operations, which must be performed or for costs which must be incurred prior to beginning work, final cleanup and demobilization of temporary facilities and equipment, restoration of impacted areas disturbed due to construction of all temporary facilities, preparation of as-built drawings, as well as fees for all permits and Federal, State, and local approvals. Mobilization shall include but is not limited to movement of personnel, equipment, supplies, and incidentals to the project site for the establishment of all Contractor's field offices, utilities, temporary fencing, installation, maintenance, and removal of tracking pads, and other facilities necessary for work on the project. Demobilization shall include but is not limited to moving out of personnel and equipment, cleaning entire site, and removing debris and rubbish.
- 2. The Lump Sum price provided on the Bid Form for Bid Item No. 1 - Site Mobilization and Demobilization shall not exceed 10% of the total amount of this bid.
- 3. Should the Contractor install a field office, there shall be no separate payment associated with furnishing, installing, maintaining, and removing a temporary field office for the Contractor's field office.

**B. Payment**

- 1. Payment for this item shall be made as a percentage of the Lump Sum price listed on the Bid Form.

**2.02 PAYMENT AND PERFORMANCE BOND (BID ITEM NO. 2)**

**A. Measurement**

- 1. The Work for this section shall be measured as specified at the Lump Sum Price for furnishing Providence Water with a Performance Bond and a Labor and Material

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Payment Bond, each in the amount of 100% of the contact price, as security for faithful performance of the Contract and executed by a surety company licensed to do business in the State of Rhode Island and approved by Providence Water.

B. Payment

1. Payment for this item shall be made as a percentage of the Lump Sum price listed on the Bid Form.

2.03 EROSION AND SEDIMENTATION CONTROLS (BID ITEM NO. 3)

B. Measurement

1. The Work of this section shall be measured as specified at the Linear Foot price for installation, maintenance, removal, and disposal of erosion and sedimentation controls where shown on the Contract Drawings and as required by the Engineer. Work shall include all necessary equipment, materials, workmen, and all incidental work required for completion of the work specified herein and included on the Contract Drawings and in these Specifications.
2. This work shall include installation, maintenance, removal, and disposal of all tree protection where shown on the Contract Drawings and as required by the Engineer.

B. Payment

1. Payment for this item shall be made at the per Linear Foot price listed on the Bid Form.

2.04 TEST PITS (BID ITEM NO. 4)

A. Measurement

1. Payment for this work shall be measured as specified at the per Each price for the performance of each test pit, up to a maximum of 12 cubic yards in volume, as required by the Engineer. Work shall include, but is not necessarily limited to, saw cutting, removal and disposal of concrete/bituminous pavement and excess soil, excavation to depths required by the Engineer, dewatering, shoring, providing means of egress for the Engineer to safely access the test pit, traffic protection, furnishing and installing bedding material for utilities or structures encountered in the test pit, and furnishing, installing, and properly compacting backfill.

B. Payment

1. Payment for this item shall be made at the per Each price listed on the Bid Form.

2.05 FURNISH AND INSTALL 12x12-INCH TAPPING SLEEVE AND VALVE (BID NO. 5)

A. Measurement

1. The Work of this section shall be measured as specified at the Unit Price provided on

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the Bid Form for each tapping sleeve and valve furnished and installed by Contractor. The number of tapping sleeves and valves with boxes to be paid for under this Item will be measured as the number of each actually installed in the completed project and accepted by the Engineer. The work shall include all necessary trench work, dewatering, support of excavations, furnishing and installing of the valve and valve box with aligner, furnishing and installing required bedding material, backfilling with crushed stone, furnishing and installing required leveling blocks, furnishing and installing thrust blocks where required by the Engineer, providing traffic control, pavement/concrete saw cutting, removing and disposing of pavement/concrete and removing excess soil.

A. Payment

1. Payment for this item shall be made at the per Each price listed on the bid form.

2.06 FURNISH AND INSTALL 8-INCH CLASS 52 DUCTILE IRON WATER MAIN AND FITTINGS (BID ITEM NO. 6)

A. Measurement

1. The Work of this section shall be measured as specified at the Unit Price per Linear Foot provided on the Bid Form to furnish and install new 8", zinc-coated Class 52, double cement lined ductile iron (DI) water main pipe where shown on the Drawings and as required. The work shall include all necessary trench work, dewatering, support of excavations, furnishing and installation of the water pipe, furnishing and installing required bedding material, backfilling with suitable common borrow, furnishing and installing insulation material as required by the Engineer or as shown on the Drawings, furnishing and installing restrained joints as required by the Engineer and as shown on the Drawings, making connections between new and existing water mains where shown on the Drawings including furnishing and installing transitional couplings, fittings, removing and disposing of existing water piping and appurtenances as necessary and where called for on the Drawings, providing traffic control, pavement/concrete saw cutting, removing and disposing of pavement/concrete, and removing excess soil. Required disinfection and testing of the water main shall also be included for payment under this item.
2. New pipe that is furnished but not installed shall not be considered for payment.

B. Payment

1. Payment for this item shall be made at the per Linear Foot price listed on the Bid Form.

2.07 FURNISH AND INSTALL 12-INCH CLASS 52 DUCTILE IRON WATER MAIN AND FITTINGS (BID ITEM NO. 7)

A. Measurement

1. The Work of this section shall be measured as specified at the Unit Price per Linear Foot provided on the Bid Form to furnish and install new 12", zinc-coated Class 52, double

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cement lined ductile iron (DI) water main pipe where shown on the Drawings and as required. The work shall include all necessary trench work, dewatering, support of excavations, furnishing and installation of the water pipe, furnishing and installing required bedding material, backfilling with suitable common borrow, furnishing and installing insulation material as required by the Engineer or as shown on the Drawings, furnishing and installing restrained joints as required by the Engineer and as shown on the Drawings, making connections between new and existing water mains where shown on the Drawings including furnishing and installing transitional couplings, fittings, removing and disposing of existing water piping and appurtenances as necessary and where called for on the Drawings, providing traffic control, pavement/concrete saw cutting, removing and disposing of pavement/concrete, and removing excess soil. Required disinfection and testing of the water main shall also be included for payment under this item.

2. New pipe that is furnished but not installed shall not be considered for payment.

**B. Payment**

1. Payment for this item shall be made at the per Linear Foot price listed on the Bid Form.

**2.08 INSTALL 16-INCH CLASS 52 DUCTILE IRON WATER MAIN AND FURNISH AND INSTALL FITTINGS (BID ITEM NO. 8)**

**A. Measurement**

1. The Work of this section shall be measured as specified at the Unit Price per Linear Foot provided on the Bid Form to install new 16", Class 52, double cement lined ductile iron (DI) water main pipe where shown on the Drawings and as required. The work shall include all necessary trench work, dewatering, support of excavations, installation of the water pipe, furnishing and installing required bedding material, backfilling with suitable common borrow, furnishing and installing insulation material as required by the Engineer or as shown on the Drawings, furnishing and installing restrained joints as required by the Engineer and as shown on the Drawings, making connections between new and existing water mains where shown on the Drawings including furnishing and installing transitional couplings, fittings, removing and disposing of existing water piping and appurtenances as necessary and where called for on the Drawings, providing traffic control, pavement/concrete saw cutting, removing and disposing of pavement/concrete, and removing excess soil. Required disinfection and testing of the water main shall also be included for payment under this item.
2. New pipe and gaskets to be furnished by Owner. Pipe and fittings installation to be performed by the Contractor.

**B. Payment**

1. Payment for this item shall be made at the per Linear Foot price listed on the Bid Form.

**2.09 FURNISH AND INSTALL 8-INCH GATE VALVE AND BOX (BID ITEM NO. 9)**

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**A. Measurement**

1. The Work of this section shall be measured as specified at the Unit Price provided on the Bid Form for each 8" gate valve and valve box furnished and installed where shown on the Drawings and as required. The work shall include all necessary trench work, dewatering, support of excavations, furnishing and installing the gate valve and valve box with aligner, furnishing and installing required bedding material, backfilling with suitable common borrow, furnishing and installing required leveling blocks, making connections between new and existing water mains where shown on the Drawings and as necessary, furnishing and installing thrust blocks where required by the Engineer, furnishing and installing tie rods where required by the Engineer, pavement/concrete saw cutting, removing and disposing of pavement/concrete and removing excess soil. Required testing of the water main shall be paid for under other bid items.

**B. Payment**

1. Payment for this item shall be made at the per Each price listed on the Bid Form.

**2.10 FURNISH AND INSTALL 12-INCH GATE VALVE AND BOX (BID ITEM NO. 10)**

**A. Measurement**

1. The Work of this section shall be measured as specified at the Unit Price provided on the Bid Form for each 12" gate valve and valve box furnished and installed where shown on the Drawings and as required. The work shall include all necessary trench work, dewatering, support of excavations, furnishing and installing the gate valve and valve box with aligner, furnishing and installing required bedding material, backfilling with suitable common borrow, furnishing and installing required leveling blocks, making connections between new and existing water mains where shown on the Drawings and as necessary, furnishing and installing thrust blocks where required by the Engineer, furnishing and installing tie rods where required by the Engineer, pavement/concrete saw cutting, removing and disposing of pavement/concrete and removing excess soil. Required testing of the water main shall be paid for under other bid items.

**B. Payment**

1. Payment for this item shall be made at the per Each price listed on the Bid Form.

**2.11 FURNISH AND INSTALL 16-INCH RESILIENT WEDGE GATE VALVE WITH GEAR ACTUATOR, EXTENSION STEM AND BOX (BID ITEM NO. 11)**

**A. Measurement**

1. The Work of this section shall be measured as specified at the Unit Price provided on the Bid Form for each 16" resilient wedge gate valve, extension stem and valve box furnished and installed where shown on the Drawings and as required. The

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work shall include all necessary trench work, dewatering, support of excavations, furnishing and installing the gate valve and valve box with aligner, furnishing and installing required bedding material, backfilling with suitable common borrow, furnishing and installing required leveling blocks, making connections between new and existing water mains where shown on the Drawings and as necessary, furnishing and installing thrust blocks where required by the Engineer, furnishing and installing tie rods where required by the Engineer, pavement/concrete saw cutting, removing and disposing of pavement/concrete and removing excess soil. Required testing of the water main shall be paid for under other bid items.

**B. Payment**

1. Payment for this item shall be made at the per Each price listed on the Bid Form.

**2.12 FURNISH AND INSTALL 5x5-FEET PRECAST WATER SERVICE MANHOLE (BID ITEM NO. 12)**

**A. Measurement**

1. The Work of this section shall be measured as specified at the Unit Price provided on the Bid Form for furnishing and installing manholes of reinforced precast concrete sections, complete, including concrete bases, riser sections, cones or top slabs, landing platforms, and coring. The Contractor shall perform all excavation and backfill, removing excess material from the job, furnishing and placing  $\frac{3}{4}$ -inch crushed stone bedding, furnishing and installing crushed stone backfill, repair and/or relocation of any utility lines broken and/or conflicting with construction, dewatering, support of excavations, furnishing and applying damp proofing, testing for leakage, clean up, and raising manholes to grade under the unit price for this Item.

**B. Payment**

1. Payment for this item shall be made at the per Each price listed on the Bid Form.

**2.13 FURNISH AND INSTALL HYDRANT ASSEMBLY (BID ITEM NO. 13)**

**A. Measurement**

2. The Work of this section shall be measured as specified at the Unit Price provided on the Bid Form for furnishing and installing each new hydrant assembly under this Bid Item. The payable quantity will be for the materials and labor necessary to install the hydrant assembly, including hydrant, valve, valve box and cover, tee, 6" branch piping,  $\frac{3}{4}$ " crushed stone, geotextile fabric, removal and disposal of existing hydrant (if being replaced), and thrust restraint as specified herein and included in the Contract Drawings. This work shall include all labor, equipment, materials, and services required or incidental for the satisfactory completion of the work.

**B. Payment**

1. Payment for this item shall be made at the per Each price listed on the Bid Form.

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**2.14 ROCK REMOVAL (BID ITEM NO. 14)**

**A. Measurement**

1. When rock is encountered, the material shall be uncovered and the Engineer notified. The Engineer shall determine quantities by volumetric computation determined from surveys performed before rock excavation begins and surveys performed after completion of rock excavation. If the Contractor fails to uncover the rock and notify the Engineer to allow ample time for cross sectioning the undisturbed material, the Contractor shall have no right-of-claim to any classification other than that allowed by the Engineer.
2. Measurements of rock excavation will extend to the dimensions specified in Section 02211. Trench widths will be as indicated on the Contract Documents.
3. The quantity of rock and boulder excavation to be paid for will be the number of cubic yards of rock or boulders measured in place. Boulders 1 CY or greater shall be considered rock for the purpose of estimating rock removal.

**B. Payment**

1. Payment for rock and boulder excavation will be made for the quantities as above determined, measured in cubic yards, at the unit price bid on the Bid Form, which price and payment will be full compensation for excavation, drilling, blasting or otherwise breaking (mechanical removal) and hauling of rock off site and legal disposal in accordance with the requirements of Section 02211, backfilling and providing screened gravel, for any deficiency of trench backfill and all work incidental thereto, for which payment is not provided under other items.

**2.15 UNSUITABLE MATERIAL REMOVAL AND REPLACEMENT WITH PROCESSED GRAVEL (BID ITEM NO. 15)**

**A. Measurement**

1. Additional excavation for removal of unsuitable material and replacement with processed gravel will be measured in Tons as determined in the field by the Engineer.
2. Processed gravel used for unspecified purposes and incorporated in the work will be measured, by truck count, in Tons. The Contractor shall acquire Providence Water approval for payment of processed gravel not shown on drawings or described herein, prior to placement.
3. Processed gravel used in accordance with the Specifications, to replace unspecified excavation outside pay limits with specific direction by the Engineer will not be measured for separate payment under any other Bid Item specified.

**B. Payment**

1. Payment for this item shall be made on a per Ton basis as listed on the bid form, furnished and installed to the satisfaction of the Engineer and Owner.

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**2.16 2-INCH TEMPORARY TRENCH PAVEMENT (BID ITEM NO. 16)**

**A. Measurement**

1. Temporary trench patching shall be measured per Ton as specified at the Unit Price provided on the Bid Form to furnish and install a temporary trench. Only temporary trench patches that are installed to their specified thickness as indicated on the Contract Drawings shall be considered for payment. The work shall include all labor, materials, equipment, and for all other incidentals required to finish the work, complete and accepted by the Engineer. The work shall include maintenance of the temporary patch prior to placement of the permanent trench patch in accordance with the Contract Drawings. This work item shall include all necessary dust control and trench maintenance measures including but not limited to, application of calcium chloride and water to inhibit dust and mechanical street sweeping performed on a weekly basis during construction.

**B. Payment**

1. Payment for this item shall be made at the per Ton price listed on the Bid Form.

**2.17 3-INCH PERMANENT TRENCH PAVEMENT (BID ITEM NO. 17)**

**A. Measurement**

1. The Work of this section shall be measured per Ton as specified at the Unit Price provided on the Bid Form to furnish and install a permanent trench. Only temporary trench patches that are installed to their specified thickness as indicated on the Contract Drawings shall be considered for payment. This work shall also include raising or lowering of all castings, whether existing or installed as part of this project, to finish grade with either courses of brick and mortar or raising or lowering of valve boxes and covers. Installation of extensions on valve boxes shall not be allowed. The total quantity of the permanent pavement placed shall be verified by the Engineer prior to payment.

**B. Payment**

1. Payment for this item shall be made at the per Ton price listed on the Bid Form.

**2.18 LOAM AND SEED (BID ITEM NO. 18)**

**A. Measurement**

1. The work for this section shall be measured as specified at the Square Yard price in the Bid Form of Loaming and Seeding completed. This work shall include restoration of lawned areas with 6-inches of loam and seed, in-kind replacing of all disturbed plantings (including shrubbery and trees), disconnecting, reconnecting and/or repairing all disturbed lawn sprinkler systems, and in-kind replacement and/or repairing of all disturbed landscaping including but not limited to stone walls, decorative crushed stone, mulch, signs, and other landscaping objects disturbed during this project.



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2. This work shall include all necessary maintenance of new plantings and newly seeded areas, including but not limited to watering, mowing, and fertilizing.
3. There shall be a one (1) year warrantee on all new plantings and newly seeded areas, to start on the date of acceptance by the owner. In the case of newly seeded areas, the date of acceptance shall be the date the owner believes acceptable grass coverage, per the specifications, has been achieved.

**B. Payment**

1. Payment for this item shall be made at the per Square Yard price listed on the Bid Form.

**2.19 UNKNOWN CONDITIONS ALLOWANCE (BID ITEM NO. 19)**

**A. Measurement**

1. The Work for this section shall be the submitted invoice for any work associated with any unknown conditions discovered at the site.

**B. Payment**

1. Payment for this item will be made from the Allowance amount specified on the Bid Form, subject to approval by Owner and Engineer. If the total cost for such charges is greater or less than the allowance amount stated under this Bid Item of the Bid, a debit or credit of the difference in cost shall be to the Owner.

**2.20 UNIFORMED OFFICER TRAFFIC CONTROL ALLOWANCE (BID ITEM NO. 20)**

**A. Measurement**

1. The amount to be paid for under this Bid Item shall be the submitted invoice of traffic police service furnished for the purpose of directing traffic. Traffic police service shall be furnished as required by the Town of Johnston for the purpose of directing traffic.
2. The quantity to be paid for under this Bid Item shall be full compensation for the expense involved in furnishing the required services including all administrative costs. Abnormal and unreasonable expenses incurred by the Owner may be charged against the amount owed to the Contractor under this contract and are detailed as follows:
  - a. Contractor caused delays in the prosecution of work that result in hiring traffic police for more hours than would have been required during normal prosecution of work.
  - b. Reconstruction and/or reinstallation of any portions of the work, as a result of improper initial installation, for which traffic police is required.
  - c. Traffic police required at a site where the Contractor is not working or outside of the Contractor's standard workday as a result of obstructions to traffic that remain in the traveled way.
  - d. All other incidents resulting from the Contractor's operations requiring traffic police that would not normally be encountered during the progress of a well-organized project employing proper construction methods.

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**B. Payment**

1. Payment for this item will be made from the Allowance amount specified on the Bid Form, subject to approval by Owner and Engineer. If the total cost for such charges is greater or less than the allowance amount stated under this Bid Item of the Bid, a debit or credit of the difference in cost shall be to the Owner.

**2.21 TRAFFIC MANAGEMENT ALLOWANCE (BID ITEM NO. 21)**

**A. Measurement**

1. The Work for this section shall be the submitted invoice for any work associated with coordinating, installing, and maintaining detours. This work will also include traffic management labor, equipment, and materials, excluding police detail (see bid item No. 21).

**B. Payment**

2. Payment for this item will be made from the Allowance amount specified on the Bid Form, subject to approval by Owner and Engineer. If the total cost for such charges is greater or less than the allowance amount stated under this Bid Item of the Bid, a debit or credit of the difference in cost shall be to the Owner.

**PART 3 EXECUTION**

**3.1 BID ITEMS**

- A. Appurtenant items of work shown on the Drawings or described in the Specifications are required to complete the work but are not listed separately under the various applicable bid items of work, and no separate payment will be made for such items. It shall be the responsibility of the Contractor to verify any missing or incomplete items.

**3.2 MEASUREMENT**

- A. The measurement of all quantities of items listed in the Bid Form shall be done by the Contractor. The measurement will include proper and complete documentation of all items to the satisfaction of the Owner and Engineer prior to the submission for payment. The measurement submitted shall be in the same unit description listed in the Bid Form.

**3.3 PAYMENT**

- A. Payments shall be made to the Contractor only after proper documentation of the unit quantity provided and in accordance with the contract terms and conditions regarding payment.
- B. Payment for Bid Items shall include full compensation for the complete installation of the complete product.

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END OF SECTION

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**SECTION 02640**

**VALVES, TAPPING SLEEVES, & APPURTENANCES**

**PART 1 GENERAL**

**1.01 DESCRIPTION**

**A. Work Included:**

The work under this Section includes the furnishing, installation and testing of all valves, tapping sleeves, transition couplings, hydrants, and appurtenances as indicated on the Drawings or as may be required by the Owner or the Engineer.

**B. All materials included in this section that are to come into contact with potable water shall be either NSF 61 or NSF 60 approved as applicable.**

**C. Related Work Described Elsewhere:**

02200 – Earthwork

02616 – Ductile Iron Pipe and Fittings

**D. Reference Providence Water – Requirements for Water Mains, Services, and Appurtenances**

**1.02 QUALITY ASSURANCE**

**1. Manufacturer's Recommendations:**

Using Providence Water's Project Management software, The Contractor shall submit for approval of the manufacturer's recommendations for the storage, protection, handling and installation of the valves, hydrants and appurtenances, which shall be strictly adhered to by the Contractor.

**2. Certificate of Compliance:**

Each shipment of valves, tapping sleeves, transition couplings, hydrants and appurtenances shall be accompanied with the manufacturer's notarized certificate certifying conformance with all requirements of the Specifications.

**1.03 MARKING**

**A. Marking of all tapping sleeves shall conform to the requirements of AWWA 110 latest revision, marking of all valves shall conform to the requirements of AWWA 515 latest revision, and marking of all hydrants shall conform to the requirements of AWWA 502 latest revision.**

**1.04 MANUFACTURER'S REPRESENTATIVE**

**A. The Contractor shall furnish at no additional expense to the Owner, the services of the manufacturer's representative for instruction of the Contractor personnel who will be installing the tapping sleeves, transition couplings, valves and hydrants. The instruction shall include proper handling, installation and jointing, and other construction areas and**

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shall be for such lengths of time required to fully familiarize the Contractor's personnel with proper techniques. This information shall be bound and indexed for each type of unit as herein specified.

**PART 2      PRODUCTS**

**2.01      GENERAL**

- A. All materials to be incorporated into the work shall be new and purchased specifically for this Contract. All material shall be made in the United States of America and shall be provided with documentation indicating the location of the foundry and/or place of origin, unless otherwise approved.
- B. All coatings and/or protective oils used on materials that will eventually be in contact with potable water must be ANSI/NSF approved.
- C. All hardware for valves, tapping sleeves, and appurtenances shall be stainless steel for corrosion resistance.

**2.02      TAPPING SLEEVES AND TAPPING VALVES**

- A. All tapping sleeves shall comply in all respects to AWWA Standard C-110 and the following design standards:
  - 1. Tapping sleeve shall be installed at the locations shown on the plans and details.
  - 2. The tapping sleeve shall be a mechanical type joint to provide pressure-tight installation and be suitable for use with the existing pressurized pipe material. Outlet flange shall be Class 125C, ANSI B16.1.
  - 3. Mechanical joint tapping sleeves shall have totally confined end gaskets and be designed to withstand a minimum of 200 psi working pressure. Nuts and bolts shall be Type 304 stainless steel. Nuts shall be coated per manufacturer's recommendations to prevent galling.
  - 4. The test plug shall be ¾" NPT, type 304 stainless steel.
  - 5. Mechanical joint tapping sleeve body and outlet shall be thick gauge ASTM A240 type 304/304L stainless steel.
  - 6. Tapping valves shall comply with Section 2.3 - Gate Valves except one end shall be flanged and the other end shall be mechanical.
  - 7. Tapping valves shall be provided with an oversized opening to allow the use of full size cutters.
  - 8. Mechanical tapping sleeves shall be ROMAC Industries, Inc. Model STS420, or approved equivalent.

**2.03      BURIED GATE VALVES**

- A. Resilient seated gate valves shall meet AWWA C-515 and be UL listed and FM approved. Valves shall be ductile iron-body, stainless steel mounted, non-rising stem, 3-inch through 16-inch in diameter as shown on plans. All valves shall OPEN RIGHT. All valves shall be mechanical joint.
- B. Sizes 3-inch through 16-inch shall be suitable for 250 psig maximum working pressure and 400 psig test pressure.

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- C. Manganese bronze stem material shall have a minimum tensile strength of 70,000 psi, yield strength of 35,000 psi and maximum elongation of 15 percent. Valve shall have a minimum of two O-ring stem seals.
- D. Operating nuts shall be 2-inch square at the base, tapering to 1-15/16 inches square at the top and shall be manufactured of cast or ductile iron and attached to the stem with a nut or pin at the factory. Nuts shall be painted red and marked with an “arrow” to indicate direction of opening.
- E. All hardware shall be Corten as manufactured by Romac Industries.
- F. Rubber seats shall be new and of a compound natural or synthetic – designated for water service application. Reclaimed rubber is not acceptable. Seats shall be either bonded or mechanically attached to the gate. When mechanically attached, all exposed hardware shall be 18-8 Type 304 stainless steel.
- G. The interior and exterior of valves shall be fully epoxy coated 8 mils thick. Epoxy shall be certified NSF approved for use in potable water systems. Field touch-up of the bonded epoxy within the body of the valve will be allowed; however, touch-up kit must be provided by the manufacturer of the valve and must meet the same NSF approval as the original bonded epoxy.
- H. Valves sized 3-inch to 12-inch shall be by Mueller or approved equivalent.
- I. Valves sized 16-inch shall be by American Flow Control and shall have a gear actuator with a minimum 2:1 gear ratio.

**2.04 STRAIGHT AND TRANSITION PIPE COUPLINGS**

- A. Straight and Transition Couplings shall be restrained, couplings to be Romac Alpha or approved equal.

**2.05 FLANGED COUPLING ADAPTERS**

- A. Flanged coupling adapters shall be Romac Restrained Flanged Coupling Adapter or approved equivalent. All nuts, washers and bolts shall be stainless steel.
- B. Mechanical restraint shall be an integral part of the follower gland utilizing multiple single tooth wedges. Each follower gland shall incorporate cam action, independent wedge engagement and meet applicable requirements of ANSI/AWWA C111/A21.11.

**2.06 VALVE BOXES AND COVERS**

- A. A gate valve box shall consist of three pieces – over, upper section, and lower section – all of which are manufactured of cast iron. The lower section shall have an inside diameter of not less than 5 1/4 – inches and a length of at least 36-inches. It shall be designed to telescope into the upper section. Upper section length shall be 26-inches. Covers shall have the word “WATER” cast upon them.
- B. An approved operating Key shall be provided.

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**2.07 THRUST RESTRAINTS**

- A. Restraining devices shall be utilized on all mains under the following conditions:
  - 1. Pipeline direction changes (tees, bends)
  - 2. Dead end lines (caps or plugs)
  - 3. Transition pieces (reducers)
  - 4. Couplings
  - 5. All mechanical joints
- B. Thrust blocks shall be designed to withstand the force imparted by the main with a minimum 1½ times the anticipated working pressure but not less than 150 p.s.i. Maximum lateral bearing capacity shall be 1,500 lb/sf. Sizing guidelines for thrust blocks are detailed on the project Drawings.
- C. Thrust restraint shall also be provided via restrained joint, ductile iron pipe meeting AWWA C151/A21.512 and AWWA C111/A21.11. Restrained joint pipe lengths (restrained length) shall be sufficient to restrain thrust imparted by 1½ times the anticipated working pressure but not less than 150 psi. Pipe restrained joints shall be manufactured by EBAA Iron Sales, Inc. Series 1100 Megalug restraining system.
- D. Thrust restraint utilizing tie-rods shall not be utilized unless approved by the Engineer or specifically indicated. Tie-rod diameters shall be 2 times the diameter required to restrain the main. All rods, nuts and other appurtenances shall be stainless steel.

**2.09 HYDRANTS**

- A. All fire hydrants shall comply in all respects to AWWA C-502 and the following design standards:
  - 1. Hydrants shall be dry-barrel, post-type. The main hydrant valve shall be of the compression type that opens against pressure in the main and be constructed of solid rubber that may be reinforced with steel. The connecting line or hydrant lateral shall be 6 inches in diameter, as per AWWA Standard M17.
  - 2. The depths of bury shall have a typical bury of 5 feet, but at all times be installed to meet manufacturer's specifications for proper operation of the traffic breakaway feature. Hydrant extensions, which may be required, shall be manufactured by the same manufacturer of the hydrants being installed. Contractor shall field verify exact bury depths of all proposed hydrants prior to ordering. Should extensions be necessary on new hydrants, the contractor shall not be entitled to additional compensation or time.
  - 3. Hydrant shall be furnished with a sealed reservoir located in the bonnet so that all threaded and bearing surfaces are lubricated each time the hydrant is operated.
  - 4. The bottom nut is to be bronze or fusion-bonded epoxy coated ductile or cast iron. An O-ring seal shall be provided in the main valve assembly to insure that water cannot leak from the hydrant shoe, or elbow, into the hydrant barrel or drain way. O-ring seals in the main valve area shall seat against bronze or fusion-bonded epoxy coated cast iron. Hydrants shall have a bronze seat ring threaded to a bronze sub-set.
  - 6. Hydrant shall be equipped with 5-¼ inch main valve opening.
  - 7. Hydrants shall have a 150 PSI working pressure. Each hydrant shall be able to deliver

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- 500 gallons per minute through its two hose nozzles when opened together with a loss of not more than 2 psi through hydrant.
8. Hydrant shall have at least two (2) bronze or copper lined drain outlets with a minimum net diameter of ¼-inch. The shoe of the hydrant shall be 6 inch mechanical joint D-150, suitable for use either with centrifugally cast pipe or Class D Pit Cast Pipe. Lugs will be case on either side shoe, securely anchoring the hydrant. Hydrants shall be furnished with a breakable feature that will break cleanly upon impact. This shall consist of a 2-part breakable safety flange with a breakable stem coupling. Hydrant nozzles must be able to be rotated to any position without disassembly of ground-line flange.
  9. Hydrants shall open to the RIGHT (clockwise) and shall have a direction-to open arrow with the word "OPEN" imprinted on the hydrant and utilize a breakaway design. Each hydrant shall have two 2 ½ inch nozzles, 180-degrees apart, and one 4 ½ - inch steamer port nozzle. All nozzle threads are to be National Standard Threat. Lead shall not be used to secure nozzles to the hydrant barrel. Nozzle caps shall be cast iron and shall be secured to the hydrant barrel with rustproof steel chains.
  10. The above grade stem shall be factory-coated with "Caution" yellow enamel.
  11. Hydrant exteriors, above the ground line, shall be painted with on coat of primer and two finish coats of "Ivy Green" paint that will produce a surface to which subsequent coats of paint, having a linseed oil base, will readily adhere. Bonnets shall be painted, in the same manner, to match existing colors ("Safety Yellow")
  12. Hydrants shall be so arranged that the direction of outlets may be turned 90 degrees without interference with the drip mechanism or obstructing the discharge from any outlet.
  13. Hydrants shall be furnished with caps, double galvanized steel hose cap chain, galvanized steel pumper hose cap chain, a galvanized steel chain holder and any other hooks and/or appurtenances required for proper use.
  14. All hydrants shall be equipped with a 6" gate valve, or 8" gate valves and 8" lateral when tee to hydrant distances are greater than 10 feet, in accordance with Section 2.3 above, and be fully restrained as shown on the drawings. Restrained joints shall be by Megalug Thrust Restraint Wedge manufactured and sold by EBAA Iron Sales Inc. In the event a bell and spigot joint is located between the tee and hydrant, the bell and spigot joint shall be restrained with a Field Lok gasket or approved equivalent (from Providence Water's approved manufacturer's list)
  15. Hydrants shall be Mueller A423 or Kennedy K81D. No substitutions will be allowed.
  16. Hydrants shall be installed with sufficient height that when installed a 15-inch hydrant wrench will not contact the ground when making a full 360-degree turn on any nozzle cap.
  17. A drainage pit with a volume of 10 cubic feet shall be provided at the base of the fire hydrant barrel. The pit shall be filled with gravel or crushed stone to a depth of 6 inches above the hydrant drain opening and covered with filter fabric prior to backfilling. The gravel or crushed stone aggregate shall provide void space greater than the volume of the hydrant barrel.

**PART 3      EXECUTION**

**3.01      INSTALLATION**

**A.      General:**

1. All tapping sleeves, valves, hydrants, and accessories shall be carefully inspected by



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- the Contractor for defects before installation and all defective, unsound or damaged materials shall be rejected.
2. The Owner or the Engineer will make such additional inspections as deemed necessary and the Contractor shall furnish all necessary assistance for such inspection.
  3. Proper implements, tools and facilities satisfactory to the Owner or the Engineer shall be provided by the Contractor for the proper and satisfactory execution of the work.
- B. Tapping sleeves, valves, couplings and appurtenances shall be new and unused and shall be of the types and materials specified as indicated or as directed.
- C. The interior of tapping sleeves, valves, and fittings shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operation.
- D. Tapping sleeves, valves, and fittings shall be constructed in dry trenches and shall not be laid when the conditions of the trench or the weather are unsuitable for such work.
- E. Tapping sleeves, valves, and couplings shall be laid to the line and grade in such a manner as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets of the flow line.
- F. At times when work is not in progress, open ends of tapping sleeves, valves and fittings shall be securely closed so that no trench water, earth or other substances will enter.
- G. Any tapping sleeves, valves or fittings that have been disturbed after laying shall be taken up and re-laid.
- H. All materials found to be defective during the progress of the work will be rejected by the Engineer and the Contractor shall promptly remove such defective material from the site of the work and replace with new material at no additional expense to the Owner.
- I. The Contractor shall be responsible for the safe storage and proper handling of all materials.
- J. No shims or mounds of earth shall be used to raise the equipment to grade.
- K. No tapping sleeve, valve, or appurtenance shall be covered until the joints have been inspected.
- L. Installed materials shall be protected at all times during construction against flotation; they shall be thoroughly secured, properly supported and bedded to prevent settlement or disturbance. Compaction of bedding and backfill material shall be in accordance with Section 02200, EARTHWORK.
- M. Tapping sleeves shall be installed where indicated or as directed by the Owner or the Engineer and shall be installed according to the manufacturer's recommended procedures.
- N. Valves and joint restraints shall be installed where indicated or as directed by the Owner or the Engineer and shall be installed according to the manufacturer's recommended procedures.

**3.02 SETTING VALVES AND VALVE BOXES**

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- A. Valves shall be set in the pipelines as directed. Blocking or supports of a permanent nature shall be placed under each valve to ensure against settlement.
- B. Each valve shall be tightly closed before being placed in the line and shall remain so until the joints on each side are completely tightened.
- C. Valve boxes shall be set for all valves and shall be locking type. They shall be carefully fitted together and to the valve and securely held during backfilling. They shall be centered over the valve-operating nut. The bedding material around them shall be thoroughly tamped in place and the box cover set to the finished grade.

**3.3 TESTING**

- A. All materials shall be tested for tightness as soon after installation as possible in accordance with Section 02704, PIPELINE PRESSURE, LEAKAGE, AND DISINFECTION.
- B. All materials found to be defective during testing shall be replaced with new and approved material at no additional expense to the Owner.

**3.4 TEST REPORTS AND CERTIFICATES**

- A. In addition to other requirements specified herein, the Contractor shall furnish to the Engineer notarized test reports and methods of test by an approved independent testing laboratory to show compliance of all materials furnished under this section of the Specifications with all the requirements herein.
- A. Each shipment of tapping sleeves, valves, and other appurtenances shall be accompanied by the manufacturer's notarized certificate of conformance certifying that materials to be furnished under these items meet all requirements herein.
- B. All testing of materials furnished under this section of the Specifications shall be provided by the Contractor at no additional expense to the Owner.

END OF SECTION



Providence Water Supply Board – Central Avenue Transmission Main Installation

Non-Mandatory Pre-Bid Meeting Sign-In Sheet

March 10, 2023 – 10:00 AM

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