



CONTRACT DOCUMENTS

CLEANING AND LINING PHASE V WATER SYSTEM UPGRADES REBID City of East Providence RFP #EP23/24-26R

East Providence, Rhode Island

Prepared for:

City of East Providence Water Utilities Division

60 Commercial Way

East Providence, RI 02914

Prepared by:



Pare Corporation

Rhode Island Office

8 Blackstone Valley Place

Lincoln, RI 02865

September 2024

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING AND LINING PHASE V
WATER SYSTEM UPGRADES REBID**

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**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING AND LINING PHASE V
WATER SYSTEM UPGRADES REBID**

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DIVISION 0

BIDDING AND CONTRACT REQUIREMENTS





**CITY OF EAST PROVIDENCE
CLEANING AND LINING PHASE V WATER SYSTEM UPGRADES REBID
ADVERTISEMENT
REQUEST FOR PROPOSAL
RFP# EP23/24-26R
BID OPENING THURSDAY, OCTOBER 17, 2024 at 2:00 PM**

The City of East Providence seeks sealed bids to furnish all labor, equipment, tools, appliances and materials and performing all operations in connection with providing the cleaning and cement-mortar lining and replacement of lead service lines for all of the water pipelines outlined in the contract documents. Specifications may be downloaded from the City's website <https://eastprovidenceri.gov/rfp>

(1) original, Two (2) copies of proposals and (1) one thumb drive shall be submitted in one (1) sealed envelope to East Providence City Hall, Controllers Office, Room 103, Attn: Jessica Lamprey Procurement Specialist, 145 Taunton Ave., East Providence, RI 02914 no later than **THURSDAY, OCTOBER 17, 2024 at 2:00 PM**. The bids will be publicly recorded. Bids received with a time of 2:01 or later will be rejected. The outside envelope needs to be marked **RFP# EP23/24-26R**.

The City reserves the right to reject any/or all companies, to waive any informality in the proposal statement and to accept the proposal of any company based on what the City deems to be in its best interest.

Any questions regarding the RFP may be directed in writing to Brandon M. Blanchard, P.E. of Pare Corporation at bblanchard@parecorp.com and Jessica Lamprey, Procurement Specialist at jlamprey@eastprovidenceri.gov no later than **THURSDAY, OCTOBER 3, 2024 at 4:00 PM**.

Equal Opportunity/Affirmative Action Employer

Jessica Lamprey
jlamprey@eastprovidenceri.gov



**CITY OF EAST PROVIDENCE
CLEANING AND LINING PHASE V WATER SYSTEM UPGRADES REBID
BID FORM
REQUEST FOR PROPOSAL
RFP# EP23/24-26R
BID OPENING THURSDAY OCTOBER 17, 2024 at 2:00 PM**

The undersigned bidder, being familiar with local conditions affecting the cost of the work, hereby proposes to provide all necessary labor, materials, equipment and incidental items necessary to do all the work called for in the Specifications and in accordance with the Contract Documents.

A mandatory pre-bid conference will be held on **Tuesday, September 24, 2024 at City Hall, 145 Taunton Avenue, East Providence, Conference Room 306 at 10:00 AM**. Questions on the bid are due by **Thursday, October 3, 2024 at 4:00 PM**.

The undersigned further understands that the quantities of work as shown are approximate only and are subject to increase or decrease and offers to do the work whether the quantities are increased or decreased, at the unit prices stated. Davis–Bacon wages apply to this proposal.

All prices must be written in words and figures. In case of discrepancy, the amount shown in words will govern.

Bidder acknowledges receipt of the following addendum:

At the time of the opening of bids, the bidder shall have inspected the sites of the work to familiarize himself with the conditions relating to the work under the contract.

No Bidder may withdraw their Bid within sixty (60) days following the closing time for receipt of Bids.

Bidder hereby agrees to begin work within ten (10) days after the date of the NOTICE TO PROCEED, unless otherwise specified or permitted by the CITY, and shall complete the work under the provisions of the Contract within 60 calendar days.

The undersigned bidder submits herewith Bid Security in the form of a Bid Bond or a Certified Check, in favor of the City of East Providence, in the amount not less than five (5) percent of the total amount bid in dollars, and agrees and consents that, if he is the successful bidder, the Bid Security shall be forfeited to the City of East Providence as liquidated damages, if the required Contract and Surety Bond are not executed within ten (10) days from the date of the NOTICE OF AWARD.

LIQUIDATED DAMAGES will be assessed at the rate of \$500.00 per day for each day beyond the contract length herein stipulated.

The undersigned bidder further agrees to pay the premiums for the Surety Bond (Performance, Labor and Materials Payment Bonds) for which said premiums are to be included in the Bid Price.

BIDDING FIRM: _____

NUMBER & STREET: _____

CITY/STATE/ZIP: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

TELEPHONE NO.: _____

Being a Corporation, incorporated under
the laws of the State of

(Partnership)
(Individual)

Composed of officers, partners
or owner as follows:

(President, Owner, Partner)

(Corporate Seal)

3.00 UNIT PRICES

BID FORM

EAST PROVIDENCE CLEANING AND LINING PROJECT PHASE V REBID (CL-V)

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	Mobilization and Demobilization	1		LS		
2	Test Pits	50		EACH		
3	Rock Removal	50		CY		
4	Crushed Processed Gravel	500		CY		
5	Permanent Timber Sheeting	300		SF		
6	Remove Obstruction	5		EACH		
7	Clean Existing 6" Cast Iron Main	22,000		LF		
8	Clean Existing 8" Cast Iron Main	12,500		LF		
9	Clean Existing 12" Cast Iron Main	4,000		LF		
10	Clean Existing 16" Cast Iron Main	200		LF		
11	Cement Mortar Lining Existing 6" Cast Iron Main	22,000		LF		
12	Cement Mortar Lining Existing 8" Cast Iron Main	12,500		LF		
13	Cement Mortar Lining Existing 12" Cast Iron Main	4,000		LF		
14	Cement Mortar Lining Existing 16" Cast Iron Main	200		LF		
15	CCTV Inspect 6" Cast Iron Main	22,000		LF		
16	CCTV Inspect 8" Cast Iron Main	12,500		LF		
17	CCTV Inspect 12" Cast Iron Main	4,000		LF		
18	CCTV Inspect 16" Cast Iron Main	200		LF		
19	Furnish & Install 4" Ductile Iron Pipe	50		LF		

3.00 UNIT PRICES

BID FORM

EAST PROVIDENCE CLEANING AND LINING PROJECT PHASE V REBID (CL-V)

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.						
20	Furnish & Install 6" Ductile Iron Pipe	4,000		LF		
21	Furnish & Install 8" Ductile Iron Pipe	10,000		LF		
22	Furnish & Install 10" Ductile Iron Pipe	400		LF		
23	Furnish & Install 12" Ductile Iron Pipe	500		LF		
24	Furnish & Install 16" Ductile Iron Pipe	200		LF		
25	Furnish & Install Ductile Iron Fittings with Thrust Restraint	100,000		LBS		
26	Furnish & Install 6" Tapping Sleeve and Valve	1		EACH		
27	Furnish & Install 8" Tapping Sleeve and Valve	1		EACH		
28	Furnish & Install 12" Tapping Sleeve and Valve	1		EACH		
29	Furnish & Install 2" Ball Valve and Valve Box	2		EACH		
30	Furnish & Install 4" Gate Valve and Valve Box	2		EACH		
31	Furnish & Install 6" Gate Valve and Valve Box	180		EACH		
32	Furnish & Install 8" Gate Valve and Valve Box	180		EACH		
33	Furnish & Install 10" Gate Valve and Valve Box	4		EACH		
34	Furnish & Install 12" Gate Valve and Valve Box	35		EACH		
35	Furnish & Install 16" Butterfly Valves	5		EACH		
36	Furnish & Install Fire Hydrant Assembly	65		EACH		
37	Reset Existing Fire Hydrant	20		EACH		
38	Replace Lead Service Lines	15		EACH		

3.00 UNIT PRICES

BID FORM

EAST PROVIDENCE CLEANING AND LINING PROJECT PHASE V REBID (CL-V)

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.						
39	Furnish & Install 3/4" Copper Service	2,000		LF		
40	Furnish & Install 3/4" Corporation Stop	100		EACH		
41	Furnish & Install 3/4" Curb Stop and Box	425		EACH		
42	Furnish & Install 1" Copper Service	1,500		LF		
43	Furnish & Install 1" Corporation Stop	50		EACH		
44	Furnish & Install 1" Curb Stop and Box	60		EACH		
45	Furnish & Install 2" Copper Service	650		LF		
46	Furnish & Install 2" Corporation Stop	15		EACH		
47	Furnish & Install 2" Curb Stop and Box	15		EACH		
48	Furnish & Install 2" Blow-Off Assembly and Road Box	5		EACH		
49	Furnish & Install 2" Bypass Pipe	60,000		LF		
50	Furnish & Install 4" Bypass Pipe	40,000		LF		
51	Furnish & Install 6" Bypass Pipe	5,000		LF		
52	Furnish & Install 2" Bypass Feed	5		EACH		
53	Temporary Fire Service Connection (2" - 4")	5		EACH		
54	Temporary Fire Service Connection (6")	16		EACH		
55	Temporary Fire Service Connection (8" service)	2		EACH		
56	Temporary Pavement, Hot Mix - 2" Thick	14,500		SY		
57	Permanent Pavement / Bituminous Asphalt (>3" to <= 6" Thick)	4,500		TON		

3.00 UNIT PRICES

BID FORM

EAST PROVIDENCE CLEANING AND LINING PROJECT PHASE V REBID (CL-V)

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.						
58	Remove and Replace Existing Concrete Sidewalk	1,000		SY		
59	Concrete Road Base - State Roads	1,200		SY		
60	1-1/2" Mill and Overlay	80,000		SY		
61	Temporary and Permanent Repair of Traffic Control Loops	20		EACH		
62	Mechanical Full Size Street Sweeping	200		HRS		
63	Remove and Dispose Abandoned Road Box	10		EACH		
64	Adjust Castings to Grade	10		EACH		
65	Infrared Pavement Repair	200		SY		
66	Traffic Control - East Providence Police Detail	1	\$ 300,000.00	ALLOW	\$ 300,000.00	Three Hundred Thousand Dollars and Zero Cents
67	Loam and Seed Restoration	500		SY		
68	Support of Existing Utilities Allowance	1	\$ 25,000.00	ALLOW	\$ 25,000.00	Twenty Five Thousand Dollars and Zero Cents
Total Bid Price in Figures:						
Total Bid Price in Words:						

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00100

INSTRUCTIONS TO BIDDERS

The City of East Providence Standard Instructions to Bidders follow as Section 00100 of these Contract Documents.

END OF SECTION



STANDARD INSTRUCTIONS TO BIDDERS (SHORT FORM) REQUEST FOR PROPOSALS

THESE INSTRUCTIONS ARE STANDARD FOR ALL REQUEST FOR PROPOSALS ISSUED BY THE PURCHASING DIVISION AND MAY BE DELETED, OR MODIFIED BY INDICATING SUCH CHANGE/S BY "SPECIAL INSTRUCTIONS TO BIDDERS."

1.0 RECEIPT AND OPENING OF PROPOSALS:

Sealed proposals will be received and date stamped East Providence City Hall, Controllers Office, Room 103, Attn: Procurement Specialist 145 Taunton Avenue, East Providence, Rhode Island 02914, until the time and date indicated on the Request for Proposals. No proposal received after that time will be considered. Mark outside bid envelope with item being proposed, and time and date of proposal due date.

2.0 FORM OF PROPOSAL:

Proposals must be submitted on and in accordance with the proposal forms attached hereto, blank places must be filled in as noted, no change shall be made in the phraseology of the proposal form or in the item or items mentioned therein. Additionally, the proposals must contain the name and proper address of the proposing firm, and must be signed by a responsible member of the firm with his signature and official title. Proposals, which are not complete, or contain erasures or alterations, not initiated by the signer, may be rejected. FAXED proposals will not be accepted.

3.0 SUBMISSION OF PROPOSALS:

3.1 Envelopes containing proposals must be sealed and addressed to the East Providence City Hall, Controllers Office, Room 103, Attn: Procurement Specialist 145 Taunton Avenue, East Providence, Rhode Island 02914 and must be marked with the name and address of the proposer, date and time of proposal due date, and name of item being proposed.

3.2 The Procurement Specialist will decide when the specified time has arrived to collect the proposals, and no proposal received thereafter will be considered.

3.3 Any proposer may withdraw his proposal by written request at any time prior to the advertised time for proposal due date. Telephonic proposals, amendments, or withdrawals will not be accepted. Additionally, FAXED bids will not be accepted.

3.4 No proposal may be withdrawn for a period of ninety (90) calendar days from the date and time of proposal due date. The City reserves the right to waive this requirement in order to best serve the interests of the City.

3.5 Negligence on the part of the proposer in preparing the proposal confers no rights for the withdrawal of the proposal after it has been opened.

3.6 Proposals received prior to the time of the due date will be securely kept unopened. No responsibility will attach to an officer or person of the City for the premature opening of a proposal not properly addressed and identified as a proposal.

4.0 ADDENDA

Copies of all Addenda will be posted to the City's Website. It is the Vendor's responsibility to check and download any and all addenda from the City's Website.

4.1 No Addenda will be posted later than four (4) working days prior to the date for receipt of bids except an Addendum, if necessary, postponing the date for receipt of bids or withdrawing the request for bids. Each bidder shall ascertain prior to submitting their bid that they have received all Addenda issued, and shall acknowledge their receipt in his bid.

5.0 QUALIFICATIONS OF PROPOSER

The City may make such investigations as it deems necessary to determine the ability of the proposer to perform the work, and the proposer shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any proposal if the evidence submitted by, or investigation of such proposer fails to satisfy the City that such proposer is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

6.0 CONTRACT SECURITY

Only when a Contract Security is required in the Request for Proposal, the Contractor shall furnish a Bid Bond in the amount of Five Percent (5%) and a Surety Bond/Performance Bond in an amount equal to at least One Hundred Percent (100%) of the contract price as security for the faithful performance of the contract and for the payment of all persons performing labor on the project under the contract and furnishing materials, equipment and all other incidentals in connection with the contract. The surety on such bonds shall be a duly authorized surety company licensed to bond in the State of Rhode Island, and the cost of same will be paid by the Contractor. Before final acceptance, the bonds must be approved by the City.

The bonding company providing surety must be listed in the Federal Register as issued by the Department of Treasury, Department Circular 570, latest edition, as well as being licensed in the State of Rhode Island to provide surety.

7.0 BID PRICES:

Bidders shall state the proposed price/s in the manner as designated in the Bid Proposal Form. In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall govern. In the event there is a discrepancy between the price written in words and in figures, the price written in words shall govern.

8.0 TERMS:

Cash Discounts offered will be considered in determining awards. However, discounts for a period less than twenty (20) days will not be considered. The discount period shall be computed from date of delivery or from date the correct invoice is received by the City Controller, whichever date is later. The date of delivery shall be construed to mean the date on which the bid item is determined to meet the specifications and is therefore acceptable.

9.0 RHODE ISLAND SALES TAX:

The City of East Providence is exempt from the Rhode Island Sales or Use Tax under the 1956 General Laws of the State of Rhode Island, Section 44-18-30, Para. 1, as amended.

10.0 "OR EQUAL" BIDDING:

When the name of a manufacturer, a brand name, or manufacturer's catalogue number is issued as the bid standard in describing an item followed by "Or Approved Equal", this description is used to indicate quality, performance and other essential characteristics of the item required. If bidding on other than the make, model, brand or sample specified, but equal thereto, bidder must so state by giving the manufacturer's name, catalogue number and any other information necessary to prove that his intended substitution of a commodity is equal in all essential respects to the bid standard. Bidder must prove to the satisfaction of the City Manager, or by person or persons designated by him, that the bidders designated substitute is equal to the bid standard; otherwise, his bid will be rejected.

11.0 AWARD AND CONTRACT:

11.1 Unless otherwise specified, the City reserves the right to make award by item, or items, or by total, as may be in the best interest of the City.

11.2 A written award (or acceptance of bid) mailed (or otherwise furnished) to the successful bidder followed by a City Purchase Order, shall be deemed to result in a binding contract without further action by either party.

11.3 It is the intent of the City to award a contract to the lowest responsible bidder in accordance with City Ordinances, Article V. Purchasing, Sec. 2- 243, and provided that the bid has been submitted in accordance with the requirements of the Bidding Documents, is judged to be reasonable, and does not exceed the funds available.

12.0 CONSIDERATION OF PROPOSALS REJECTION OF PROPOSALS

12.1 The City reserves the right to reject the proposal of any proposer who has previously failed to perform properly or complete on time, contracts of a similar nature, or who is not in a position to perform the contract, or who has habitually and without just cause, neglected the payment of bills or disregarded its obligations to sub-contractors, material, or employees.

12.2 The City reserves the right to reject any or all proposals and in particular to reject a proposal not accompanied by any data required by the Bidding Documents or a proposal in any way incomplete or irregular, and to waive any informality in the proposals received, and to accept the proposal or parts thereof deemed to be most favorable to the best interest of the City.

12.3 The City shall have the right to waive any informality or irregularity in any proposal received

12.4 It is the intent of the City, if it accepts any Alternates, to accept them in the order in which they are listed in the proposal form, but the City shall have the right to accept Alternates in any order or combination and to determine the low bidder on the basis of the sum of the Base Bid and the Alternates accepted.

13.0 DELIVERY:

All prices bid must be on the basis of F.O.B. Delivery Point, East Providence, Rhode Island. Therefore, shipping costs are to be included within the prices quoted. Deliveries must consist only of new merchandise or equipment and shall be made between 8:00 A.M. and 4:00 P.M. Prevailing Time, Monday through Friday.

No delivery shall become due or be acceptable without a written Purchase Order, issued by the Procurement Specialist.

14.0 AFFIRMATIVE ACTION REQUIREMENTS
MBE/WBE PARTICIPATION

Any firm or Contractor providing services to or doing business with the City shall adhere to the City's Affirmative Action Plan for MBE/WBE Participation. Said plan is on file with the City's Affirmative Action Officer.

14.1 All bidders are required to submit the MBE/WBE Participation Affidavit.

15.0 INSURANCE REQUIREMENTS:

The Contractor shall carry the following insurance coverages at his own expense:

(a) General: All insurance for this contract shall be written by a company (or companies) acceptable to the city and all policies or certificates shall be submitted to the City for examination prior to commencement of operations by the contractor. In the event any policy or certificate, the amount of the insurance, or the company writing same are not satisfactory to the City, the contractor shall secure other policies or certificates in form and amount with a company satisfactory to the City. The contractor shall not permit policies to be changed, cancelled, or to lapse and all policies shall include a clause to the effect that the policy shall not be subject to cancellation or a reduction in the limits of liability or amounts of insurance until notice has been sent by mail to the city stating when, (not less than 30 days thereafter) such cancellation or reduction shall be effective. All certificates of insurance shall be delivered to the City and contain true transcripts from the policy or policies authenticated by the proper officer of the insurer evidencing in particular those insured, the extent of the insurance, the location and operations to which the insurance applies, the expiration date and the above mentioned notice as to the location and operations involved.

The Contractor is required to list the City of East Providence not only as Certificate Holder but as an Additional Insured as well, on the "Certificate of Insurance".

If any part of the work is sublet, similar insurance shall be provided by or in behalf of the subcontractors to cover their operations. The contractor shall be charged with the responsibility for insurance protection for all his subcontract operations and should the contractor's policy not cover each and every subcontractor, certificates of insurance acceptable to the City covering each and every subcontractor shall be filed with said City prior to the commencement of subcontract operations.

Statutory Workman's Compensation Insurance: shall be provided by the contractor for all labor employed on the project who may come within the protection of such laws, and Employer's General Liability Insurance shall be provided for the benefit of employees not protected by compensation laws. The contractor will be charged with the responsibility for proper and adequate workman's compensation for all subcontract operations.

Contractors Comprehensive General Liability and Property Damage Insurance INCLUDING Owner's Protective: the contractor shall carry the above insurance for a minimum limit of not less than \$1,000,000.00 for all damages arising out of injury to or death of one person and subject to that limit for each person, a total limit of not less than \$1,000,000.00 for all damages arising out of injury to, or death of two or more persons in any one occurrence and Property Damage Liability Insurance providing for a limit of not less than \$1,000,000.00 for all damages arising out of injury to or destruction of property (including loss of use) in any occurrence and subject to that limit per occurrence total limit of \$1,000,000.00 all damages arising out of injury to or destruction of property during the policy period.

Contractor's Liability Insurance: Shall also include all major divisions of coverage and be on a comprehensive general liability basis including:

Premises - Operations

Independent Contractor's protective

Products and completed operations

Blanket Contractual

Owned, non-owned and hired motor vehicles

Broad form coverage for property damage (including explosion, Collapse and underground).

Comprehensive Automobile Liability and Property Damage Insurance: The Contractor shall carry the above insurance covering all owned, hired or non-owned vehicles in the amount of \$300,000.00 for all damages arising out of bodily injuries to death of one person and subject to that limit for each person, a total of \$500,000.00 for all damages arising out of bodily injuries to or death of two or more persons in any one accident and Property Damage coverage in the amount of \$300,000.00 for all damages arising out of injury to or destruction of property.

16.0 OSHA SAFETY AWARENESS PROGRAM

In accordance with R.I.G.L. 28-20-35, all contractors bidding on construction projects of the City with a total project cost of one hundred thousand dollars (\$100,000.) or more, are required to have an OSHA "ten hour construction safety program", for their on-site employees. The training program shall utilize instructors trained by the Occupational Safety and Health Administration, using an OSHA approved curriculum.



MBE/WBE PARTICIPATION AFFIDAVIT

Item Description (as seen on RFP): _____

Prime Bidder: _____

Prime Bidder (Company) Phone Number: _____

Prime Bidder (Company) Zip Code: _____

Which one of the following describes your business' status in terms of Minority and/or Woman-Owned Business Enterprise certification with the State of Rhode Island? _____ MBE _____ WBE _____ Neither MBE nor WBE

By initialing the following sections and signing the bottom of this document in my capacity as the contractor or an authorized representative of contractor, I make this Affidavit:

It is the policy of the City of East Providence that minority business enterprises (**MBEs**) and women business enterprises (**WBEs**) should have the maximum opportunity to participate in procurements and projects as prime contractors and vendors. Pursuant to Sec. 21-52 of the Providence Code of Ordinances and Chapter 31-14 et seq. of the Rhode Island General Laws (as amended), MBE and WBE participation goals apply to contracts.

- The goal for Minority Business Enterprise (MBE) participation is 10% of the total bid value.
- The goal for Women's Business Enterprise (WBE) participation is 10% of the total bid value.
- The goal for combined MBE/WBE participation is 20% of the total bid value.

I acknowledge the City of East Providence's goals of supporting MBE/WBE certified businesses. Initial _____

Are you subcontracting with other parties on this project: Yes ___ No ___ if yes fill out page 2, **Subcontractor Disclosure Form**.

Are you using any subcontractors on this job and not meeting the 20% MBE/WBE participation goal: Yes ___ No ___ if yes fill out page 3, **MBE/WBE Waiver Request Form**.

If awarded the contract, I understand that my company must submit to the Minority and Women's Business Coordinator at the City of East Providence (MBE/WBE Office), copies of all executed agreements with the subcontractor(s) being utilized to achieve the participation goals and other requirements of the RI General Laws. **I understand that these documents must be submitted prior to the issuance of a notice to proceed.** Initial _____

I understand that, if awarded the contract, my firm must submit to the MBE/WBE Office canceled checks and reports required by the MBE/WBE Office on a quarterly basis verifying payments to the subcontractors(s) utilized on the contract. Initial _____

If I am awarded this contract and find that I am unable to utilize the subcontractor(s) identified in my Statement of Intent, I understand that I must substitute another certified MBE and WBE firm(s) to meet the participation goals. **I understand that I may not make a substitution until I have obtained the written approval of the MBE/WBE Office.** Initial _____

If awarded this contract, I understand that authorized representatives of the City of East Providence may examine the books, records and files of my firm from time to time, to the extent that such material is relevant to a determination of whether my firm is complying with the City's MBE/WBE participation requirements. Initial _____

I do solemnly declare and affirm under the penalty of perjury that the contents of the foregoing Affidavit are true and correct to the best of my knowledge, information and belief.

Signature of Bidder _____ Printed Name _____

Company Name _____ Date _____

SUBCONTRACTOR DISCLOSURE FORM

Fill out this form only if you WILL SUBCONTRACT with other parties. If you will not subcontract any portion of the proposed bid, do not fill out this form.

Prime Bidder: _____ Primary NAICS Code: _____

Item Description (as seen on RFP): _____

Please List all Subcontractors below. Include the total dollar value that you propose to share with each subcontractor and the dollar amount to be subcontracted. Please check off MBE and WBE where applicable. The directory of all state-certified MBE/WBE firms is located at www.mbe.ri.gov. Business NAICS codes can be found at <http://www.naics.como/search/>

Proposed Subcontractor	MBE	WBE	Primary NAICS Code	Date of Mobilization	\$ Value of Subcontract
					\$
					\$
					\$
					\$
					\$
					\$
A. MBE SUBCONTRACTED AMOUNT:					\$
B. WBE SUBCONTRACTED AMOUNT:					\$
C. NON MBE WBE SUBCONTRACTED AMOUNT:					\$
D. DOLLAR AMOUNT OF WORK DONE BY THE PRIME CONTRACTOR:					\$
E. TOTAL AMOUNT OF BID (SUM OF A, B, C & D):					\$
F. PERCENTAGE OF BID SUBCONTRACTED TO MBEs AND WBEs. (Add A and B. Divide by E and multiply by 100).					%

Please read and initial the following statement acknowledging you understand.

If the percentage of the total amount of the bid being awarded to MBE or WBE vendors is less than 20% (Box F) and the prime contractor is NOT a Rhode Island State-certified MBE or WBE, **you must fill out the MBE/WBE WAIVER REQUEST FORM for consideration by City of East Providence MBE/WBE Outreach Director.** Initial _____

Signature of Prime Contractor

Printed Name

Date Signed

MBE/WBE WAIVER REQUEST FORM

Fill out this form only if you are using subcontractors and did not meet the 20% MBE/WBE participation goal. MBE or WBE Prime Bidders that are certified by the State of Rhode Island are NOT REQUIRED to fill out this form.

Submit this form to the City of East Providence MBE/WBE Outreach Director, Elmer Carvalho-Pina at epina@eastprovidenceri.gov and Procurement Specialist, Ralph Mitchell at rmitchell@eastprovidenceri.gov for review prior to bid submission.

This waiver applies only to the current bid which you are submitting to the City of Providence and does not apply to other bids your company may submit for in the future.

Prime Bidder: _____

Company Trade: _____

Item Description (as seen on RFP): _____

To receive a waiver, you must list the certified MBE and/or WBE companies you contacted, the name of the primary individual with whom you interacted and the reason the MBE/WBE company could not participate on the project.

MBE/WBE Company name	Individual's Name	Company Trade	Why did you choose not to work with this company?

I acknowledge the City of East Providence’s goal of a combined MBE/WBE participation is 20% of the total bid value. I am requesting a waiver of _____% MBE/WBE (20% minus the Value of Box F on the Subcontractor Disclosure Form). If an opportunity is identified to subcontract any task associated with the fulfillment of this contract, a good faith effort will be made to select MBE/WBE certified businesses as partners.

Signature of Prime Contractor

Printed Name

Date Signed

Signature of City of East Providence
MBE/WBE Outreach Director

Printed Name of City of East Providence
MBE/WBE Outreach Director

Date Signed



ANTI-COLLUSION DECLARATION

The Bidder, by virtue of issuing a Bid certifies that Bidder has not divulged, discussed or compared the Bid with other Bidders and has not colluded with any other Bidder of parties to a Bid whomsoever. Bidder further certifies and agrees that premiums, rebates or gratuities are prohibited whether with, prior to, or after any delivery of material or services. Any such violation will result in the cancellation of this contract and the removal of offending parties from all Bid lists.

CONFLICT OF INTEREST

The Bidder and all sub-contractors shall disclose in writing as part of their Bid any possible or potential conflicts of interest which are known to, or reasonably should be known to the Bidder or sub-contractors, which may exist between their firms and the City of East Providence.

All Bidders and their subcontractors and business partners must disclose with their Bid, the name of any officer, director, agent or employee who is also an employee or family member of an employee of the City of East Providence.

Further, the Bidder must disclose the name of any City of East Providence employee or family member or any elected official who owns, directly or indirectly, an investment or other proprietary interest, in the firm or any of its parent company, subsidiaries or affiliates.

The Bidder and all sub-contractors and business partners shall disclose in writing as part of their Bid, any familial, personal or business relationships between members of Bidders, sub-contractor's or business partner's firms and members of the City of East Providence, whether or not there is any belief that the relationship might constitute a possible conflict of interests.

BIDDING FIRM:

SIGNATURE:

DATE:

PRINT NAME:

TITLE:



**City of East Providence
Attn: Procurement Specialist**

ELECTRONIC BID DOCUMENT NOTIFICATION OF RECEIPT

In order to compile a complete listing of all recipients of the initial bid package please return this completed form by e-mail [to Controllers@eastprovidenceri.gov](mailto:Controllers@eastprovidenceri.gov)

It is the responsibility of all potential bidders to ensure any and all addenda are downloaded from the City website <https://eastprovidenceri.gov/rfp>

The undersigned hereby acknowledges electronic receipt of the bid documents for the procurement specified below.

From:

Company Name: _____

Contact Name: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

Bid No.: _____

Title of Specification received:

Date: _____

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

Individual/sole proprietor or single-member LLC C Corporation S Corporation Partnership Trust/estate

Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

Other (see instructions) ▶ _____

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

2 Business name/disregarded entity name, if different from above

Requester's name and address (optional)

5 Address (number, street, and apt. or suite no.) See instructions.

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Social security number

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

OR

Employer identification number

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments

other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here

Signature of U.S. person ▶

Date ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer

identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.

5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called “backup withholding.” Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. Individual. Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. Sole proprietor or single-member LLC. Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. Partnership, LLC that is not a single-member LLC, C corporation, or S corporation. Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. Other entities. Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. Disregarded entity. For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.

You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLÉ accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor ⁴
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴ The
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form section 1.671-4(b)(2)(i)(B))	The trust 1099 Filing Method 2 (see Regulations

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes.

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

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SECTION 00200

SPECIAL INSTRUCTIONS FOR BIDDERS

1. WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

- A. Scope: The scope of this project includes, but is not limited to, furnishing all labor, equipment, tools, appliances, and materials and performing all operations in connection with providing the cleaning and cement-mortar lining for all of the water pipelines outlined in the Contract Documents. This includes furnishing and installing new valves, hydrants, and appurtenances as well as replacing existing water mains where specified.
- B. Replacement of lead service lines, where indicated or where directed by Owner, is also required. Lead service replacement shall be performed in full, from the water main to the curb stop (public-side of service) AND from the curb stop to the meter (private-side of service). No partial lead service replacement, in the event access to private property is not authorized, shall be allowed.
- C. Project Location: City of East Providence, Rhode Island.
- D. The Owner hereby reserves the right, at any time, or from time to time, to order additions, deletions, or revisions in the work to be authorized through a written amendment (change order), which shall be subject to the provisions in General Conditions - Article 10.

2. CONTRACT PERIOD AND TERM OF AGREEMENT

- A. The overall contract period is Six Hundred Forty (640) calendar days from date set in the Notice to Proceed. Substantial completion shall be 610 days following the Notice to Proceed, and final completion shall be Six Hundred Forty (640) calendar days from the Notice to Proceed.
- B. The Bidder must agree to commence work on or before a date to be specified in a written Notice to Proceed from the City and to fully complete the Project within 640 days of the start date specified in the Notice to Proceed. In the event that the Contractor fails to complete the work by the established end date, he agrees to pay the City all damages, which the City may suffer or incur, such as additional engineering, construction inspection and administrative expenses and any other consequential expenses for damages. The Director of Public Works will certify as to the damages incurred and the Contractor shall pay the City the amount thereof promptly on demand. In addition to the above, the Bidder agrees to pay as liquidated damages, the sum of \$500.00 a day for no fault of City excessive delay of project beyond the date of completion established under the Contract.

3. OBLIGATION OF THE BIDDER

- A. At the time of opening of Bids, each Bidder will be presumed to have inspected the Specifications and Contract Documents (including all Addenda), which have been sent to the address given by such Bidder. The failure or omission of any Bidder to receive or examine any form, instrument, or document or to inspect any item specified as a Trade-in shall in no way relieve any Bidder from any obligation with respect to his Bid.

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- B. Any exceptions or deviations from the provisions contained in this Specification must be explained in detail and attached to the Bid. If such deviations do not depart from the intent of this notice and are in the best interest of the Owner, the Bid will receive careful consideration.

4. TAX EXEMPTION

- A. Rhode Island Sales and Use Tax: Materials and equipment purchased for installation under this Contract are exempt from the Rhode Island Sales Tax. The exemption from the Sales Tax shall be taken into account by the Bidder when preparing and submitting their Bid.
- B. Rhode Island Sales Tax: The City of East Providence is exempt from the payment of Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30 Paragraph 1, as amended.
- C. Federal Excise Taxes: The City of East Providence is exempt from the payment of any excise or federal transportation taxes. Prices submitted must be exclusive of taxes and will be so construed.

5. LABOR REGULATIONS

- A. The following paragraphs regarding labor regulations shall be included and become part of these Contract Documents:
1. Non-resident Contractors are subject to Section 44-1-6 of the Rhode Island General Laws, as amended. (OUT OF STATE CONTRACTORS).
 2. The successful Bidder will be required to comply with the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor Regulations (29 CFR, Part 5).
 3. The successful Bidder will be required to comply with the Safety and Health Regulations (29 CFR, Part 1926 and all subsequent amendments) as promulgated by the Department of Labor.
 4. The successful Bidder will be required to comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352).
- B. Bidders must, if required, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive award of the Contract.
- C. Additional labor requirements, such as prevailing wage requirements and minority and woman-owned business participation, are stipulated in the Contract Documents.

6. ADDENDA AND INTERPRETATIONS

- A. No interpretation on the meaning of the Contract Documents will be made to any Bidder orally. Every request for such interpretations should be in writing and to be given consideration, must be received at least ten business (10) days prior to the date fixed for the opening of the Bids. Requests for interpretation shall be made to the attention of Brandon M. Blanchard, P.E. and sent via email to bblanchard@parecorp.com.
- B. Any and all interpretations, and supplemental instructions, which, if issued, will be mailed

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by regular mail or emailed to all prospective Bidders (at the respective address furnished by the Bidder for such purpose), not later than forty-eight (48) hours prior to the date fixed for the opening of Bids (unless such addenda postpones the opening of Bids). Failure of Bidder to receive any such addendum or interpretations shall not relieve any Bidder from obligation under this Bid as submitted. All addenda so issued shall become part of the Contract Documents.

7. STATE REVOLVING FUND

- A. Requirements of the Rhode Island Infrastructure Bank and the Rhode Island Drinking Water State Revolving Fund Program shall prevail where they conflict with the requirements described herein or in the Standard Instruction to Bidders and General Conditions of the contract.

8. PREVAILING WAGES

- A. In accordance with Rhode Island General Law 37-13-7, contracts in *excess of \$1,000* shall require compensation of all personnel based on *prevailing wages* for craftsmen, teamsters, and laborers engaged in construction, alteration and/or repair, painting and decorating. The rates are available from the Rhode Island Department of Labor at (401) 462-8580, or access on the web: www.access.gpo.gov/davisbacon/allstates.html for the State forms. The selected Contractor shall be required to submit monthly certified payroll reports throughout the project, as required herein.

9. PERFORMANCE BOND

- A. In accordance with Rhode Island General Law 37-13-14, bidders/proposers for public works/public building contracts in *excess of \$5,000 shall furnish a performance bond, upon conditional award of the contract*, at 100% of the contract price, conditioned upon faithful performance of the contract. A Labor and Materials Bond, at full contract value, is required upon conditional award of the contract.

10. PLUMBING SERVICES

- A. Bidder shall have a Rhode Island licensed plumber available for any restorative plumbing work that is to be performed on a case-by-case basis to correct issues caused by the installer performing the work.
- B. Rhode Island General Law (RIGL) allows the City to use their employees or engage the services of licensed plumbers or other contractors/service providers that meet certain requirements as determined by the City, for the purpose of replacing water meters or meter reading devices. RIGL 5-20-35 (d) allows this exemption under Plumbers, Irrigators, and Water System Installation.

END OF SECTION

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00400

SUPPLEMENTS TO BID FORM

To: City of East Providence Controllers Office
Attn: Procurement Specialist
East Providence City Hall, Room 103
145 Taunton Avenue
East Providence, Rhode Island 02914

Project: City of East Providence Water Utilities Division (EPWUD)
Cleaning and Lining Phase V Water System Upgrades Rebid
September 2024
City of East Providence RFP# EP23/24-26R
Pare Project No. 12200.15

Date: _____

Submitted by:
(full name)

(full address)

In accordance with Section 00100 – Standard Instructions to Bidders, Section 00200 – Special Instructions to Bidders, and Bid Form, we include the Supplements to Bid Form appendices listed below. The information provided shall be considered an integral part of the Bid Form. These appendices are as follows:

- Appendix A: Subcontractors: Include the names of all subcontractors, including qualifications and experience and the portions of the work they will perform.
- Appendix B: Qualifications of Bidder
- Appendix C: Debarment & Suspension Certification

END OF SECTION

**CITY OF EAST PROVIDENCE
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APPENDIX A

Herewith is the list of Subcontractors referenced in the Bid submitted by:

(Bidder)

City of East Providence
(Owner)

dated _____ and, which is an integral part of the Bid Form.

The following work will be performed (or provided) by the following Subcontractors, and coordinated by us:

SECTION OF WORK	NAME
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Attach a listing of relevant qualifications and experience on similar projects.

APPENDIX C

DEBARMENT & SUSPENSION

Executive Order 12549--Debarment and Suspension

Source: The provisions of Executive Order 12549 of Feb. 18, 1986, appear at 51 FR 6370, 3 CFR, 1986 Comp., p. 189, unless otherwise noted.

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to curb fraud, waste, and abuse in Federal programs, increase agency accountability, and ensure consistency among agency regulations concerning debarment and suspension of participants in Federal programs, it is hereby ordered that:

Section 1. (a) To the extent permitted by law and subject to the limitations in Section 1(c), Executive departments and agencies shall participate in a system for debarment and suspension from programs and activities involving Federal financial and nonfinancial assistance and benefits. Debarment or suspension of a participant in a program by one agency shall have government-wide effect. (b) Activities covered by this Order include but are not limited to: grants, cooperative agreements, contracts of assistance, loans, and loan guarantees. (c) This Order does not cover procurement programs and activities, direct Federal statutory entitlements or mandatory awards, direct awards to foreign governments or public international organizations, benefits to an individual as a personal entitlement, or Federal employment.

Sec. 2. To the extent permitted by law, Executive departments and agencies shall: (a) Follow government-wide criteria and government-wide minimum due process procedures when they act to debar or suspend participants in affected programs. (b) Send to the agency designated pursuant to Section 5 identifying information concerning debarred and suspended participants in affected programs, participants who have agreed to exclusion from participation, and participants declared ineligible under applicable law, including Executive Orders. This information shall be included in the list to be maintained pursuant to Section 5. (c) Not allow a party to participate in any affected program if any Executive department or agency has debarred, suspended, or otherwise excluded (to the extent specified in the exclusion agreement) that party from participation in an affected program. An agency may grant an exception permitting a debarred, suspended, or excluded party to participate in a particular transaction upon a written determination by the agency head or authorized designee stating the reason(s) for deviating from this Presidential policy. However, I intend that exceptions to this policy should be granted only infrequently.

Sec. 3. Executive departments and agencies shall issue regulations governing their implementation of this Order that shall be consistent with the guidelines issued under Section 6. Proposed regulations shall be submitted to the Office of Management and Budget for review within four months of the date of the guidelines issued under Section 6. The Director of the Office of Management and Budget may return for reconsideration proposed regulations that the Director believes are inconsistent with the guidelines. Final regulations shall be published within twelve months of the date of the guidelines.

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Sec. 4. There is hereby constituted the Interagency Committee on Debarment and Suspension, which shall monitor implementation of this Order. The Committee shall consist of representatives of agencies designated by the Director of the Office of Management and Budget.

Sec. 5. The Director of the Office of Management and Budget shall designate a Federal agency to perform the following functions: maintain a current list of all individuals and organizations excluded from program participation under this Order, periodically distribute the list to Federal agencies, and study the feasibility of automating the list; coordinate with the lead agency responsible for government-wide debarment and suspension of contractors; chair the Interagency Committee established by Section 4; and report periodically to the Director on implementation of this Order, with the first report due within two years of the date of the Order.

Sec. 6. The Director of the Office of Management and Budget is authorized to issue guidelines to Executive departments and agencies that govern which programs and activities are covered by this Order, prescribe government-wide criteria and government-wide minimum due process procedures, and set forth other related details for the effective administration of the guidelines.

Sec. 7. The Director of the Office of Management and Budget shall report to the President within three years of the date of this Order on Federal agency compliance with the Order, including the number of exceptions made under Section 2(c), and shall make recommendations as are appropriate further to curb fraud, waste, and abuse.

Implementation in the SRF Programs

A company or individual who is debarred or suspended cannot participate in primary and lower-tiered covered transactions. These transactions include SRF loans and contracts and subcontracts awarded with SRF loan funds.

Under 40 C.F.R. 32.510, the SRF agency must submit a certification stating that it shall not knowingly enter into any transaction with a person who is proposed for debarment, suspended, declared ineligible, or voluntarily excluded from participation in the SRF program. This certification is reviewed by the EPA regional office before the capitalization grant is awarded.

A recipient of SRF assistance directly made available by capitalization grants must provide a certification that it will not knowingly enter into a contract with anyone who is ineligible under the regulations to participate in the project. Contractors on the project have to provide a similar certification prior to the award of a contract and subcontractors on the project have to provide the general contractor with the certification prior to the award of any subcontract.

In addition to actions taken under 40 C.F.R. Part 32, there are a wide range of other sanctions that can render a party ineligible to participate in the SRF program. Lists of debarred, suspended and otherwise ineligible parties are maintained by the General Services Administration and should be checked by the SRF agency and all recipients of funds directly made available by capitalization grants to ensure the accuracy of certifications.

Additional References

C 40 C.F.R. Part 32: EPA Regulations on Debarment and Suspension.

**CERTIFICATION REGARDING DEBARMENT & SUSPENSION
AND OTHER RESPONSIBILITY MATTERS**

In accordance with the Executive Order 12549, the prospective primary participant certifies to the best of his / her knowledge and belief, that its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification.
- d. Have not within a three-year period preceding this application / proposal had one or more public transactions (federal, state, or local) terminated for cause of default.
- e. Acknowledge that all sub-contractors selected for this project must be in compliance with paragraphs (1) (a – d) of this certification.

Name and Title of Authorized Agent Date

Signature of Authorized Agent

_____ I am unable to certify to the above statements. My explanation is attached.

**CITY OF EAST PROVIDENCE
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SECTION 00500

CONTRACT AGREEMENT

A sample Contract for this project follows.

END OF SECTION



This Contract (the “Contract”) is made and entered into by and between The City of East Providence, (the “City”) and [REDACTED] (the “Contractor”). This Contract shall become effective on the date it is executed by the last party to execute it (“the Effective Date”).

This Contract is for a project identified as City of East Providence Cleaning and Lining Phase V Water System Upgrades Rebid #EP23/24-26R.

For and in consideration of the mutual promises, covenants and agreements set forth herein, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the City and the Contractor agree as follows:

ARTICLE 1
THE WORK OF THIS CONTRACT

The Contractor shall execute the entire work described in the Contract Documents, within 640 calendar days from date of signed contract except to the extent specifically indicated in the Contract Documents to be the responsibility of others, or as follows:

ARTICLE 2
DOCUMENTS INCORPORATED BY REFERENCE

This Contract includes the plans and specifications by Pare Corporation dated September 2024 as identified thereon for the Cleaning and Lining Phase V Water System Upgrades Rebid, City’s Request for Proposal issued September 12, 2024, all of which are hereby incorporated herein by reference and made a part hereof. Change Orders issued hereafter, and any other amendments executed by the City and the Contractor, shall become and be a part of this Contract. Documents not included or expressly contemplated in this Article 2 do not, and shall not, form any part of this Contract.

ARTICLE 3
REPRESENTATIONS OF THE CONTRACTOR

In order to induce the City to execute this Contract and recognizing that the City is relying thereon, the Contractor, by executing this Contract, makes the following express representation to the City.

- (A) The Contractor is fully qualified to act as the contractor for the Project and has, and shall maintain, any and all licenses, permits or other authorizations necessary to act as the contractor for, and to construct, the Project;
- (B) The Contractor has become familiar with the Project site and the local conditions under which the Project is to be constructed and operated;
- (C) The Contractor has received, reviewed and carefully examined all the documents which make up this Contract, including, but not limited to, the plans and specifications, and has found them in all respects to be complete, accurate, adequate, consistent, coordinated and sufficient for construction;
- (D) The Contractor is familiar with all Federal, State, municipal, and department laws, ordinances, orders, and regulations which may in any way affect the work of those employed therein, including, but not limited to, any special acts relating to the work or the Project of which it is a part;
- (E) The Contractor is aware of the hazards involved in the work and the danger to life and property both evident and inherent, and that the Contractor will conduct the work in a careful and safe manner without injury to persons or property.

ARTICLE 4
INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, the City and the Contractor agree as follows:

- (A) This Contract, together with the Contractor's and Surety's performance in the total amount of the project cost and payment bonds for the Project, constitute the entire and exclusive agreements between the parties with reference to the Project, and said Contract supersedes any and all prior discussions, communications, representations, understandings, negotiations, or agreements. This Contract also supersedes any bid documents not incorporated herein pursuant to Article 2.
- (B) Anything that may be required, implied or inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Contract Price;
- (C) Nothing contained in this Contract shall create, nor be interpreted to create, privity or any other relationship whatsoever between the City and any person except the Contractor;
- (D) When a word, term, or phrase is used in this Contract, it shall be interpreted or construed first, as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning

in the construction industry, according to its common and customary usage;

- (E) The Contractor shall have a continuing duty to read, examine, review, compare and contrast each of the documents which make up this Contract, shop drawings, and other submittals and shall give written notice to the City of any conflict, ambiguity, error or omission which the Contractor may find with respect to these documents before proceeding with the affected work. The express or implied approval by the City of any shop drawings or other submittals shall not relieve the Contractor of the continuing duties impose hereby, nor shall any such approval be evidence of the Contractor's compliance with this Contact. **HOWEVER, THE CITY MAKES NO REPRESENTATION OR WARRANTY OF ANY NATURE WHATSOEVER TO THE CONTRACTOR CONCERNING SUCH DOCUMENTS.** The Contractor again hereby acknowledges and represents that it has received, reviewed and carefully examined such documents, has found them to be complete, accurate, adequate, consistent, coordinated and sufficient for construction, and that the Contractor has not, does not, and will not rely upon any representations or warranties by the City concerning such documents, as no such representations or warranties have been or are hereby made;
- (F) In the event of any conflict, discrepancy, or inconsistency among any of the documents which make up this Contract, the following shall control:
 - (1) As between drawings and specifications, the specifications shall govern;
 - (2) As between figures given on plans and scaled measurements, the figures shall govern;
 - (3) As between this document and the plans or specifications, this document shall govern.

ARTICLE 5
OWNERSHIP OF DOCUMENTS WHICH MAKE UP THE CONTRACT

The documents which make up this Contract, and each of them, as well as any other documents furnished by the City, shall remain the property of the City. The City shall provide the Contractor with a sufficient number of copies of the complete Contract as the City determines is necessary. The Contractor shall have the right to keep the Contractor's executed set; provided, however, that in no event shall the Contractor use, or permit to be used, any portion or all of such Contract on other projects without the City's prior written authorization. All sets in usable condition, with the exception of the Contractor's executed set, shall be returned to the City at the completion or cessation of the work or termination of the Contract.

ARTICLE 6
CONTRACTOR'S PERFORMANCE

The Contractor shall perform all of the work required, implied or reasonably inferable

from this Contract including, but not limited to, the following:

- (A) Construction of the Project;
- (B) The furnishing of the required 100% Performance Bond and Certificate of General Liability insurance coverage of \$1,000,000, as well as Workers' Compensation Insurance as required by the State of Rhode Island for itself and any of its employees.
- (C) The provision and furnishing, and prompt payment of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, fuel, heat, light, cooling, or other utilities, required for construction and all necessary building permits and other permits required for the construction of the Project;
- (D) The creation and submission to the City of detailed and comprehensive as-built drawings depicting all as-built construction. Said as-built drawings shall be submitted to the City upon final completion of the Project and receipt of same by the City shall be a condition precedent to final payment to the Contractor.

ARTICLE 7
TIME FOR CONTRACTOR'S PERFORMANCE

- (A) The Contractor shall commence the performance of this Contract within ten (10) calendar days after the Notice to Proceed and shall diligently continue its performance to and until final completion of the Project (subject to a winter shutdown period if necessary as provided for in Article 8 Paragraph (L)). The Contractor shall accomplish Substantial Completion of the Project on or before the dated established pursuant to Paragraphs (K) and (L) in Article 8.
- (B) The Contractor shall pay the City the sum of \$500 Dollars per day for each and every calendar day of unexcused delay in achieving Substantial Completion beyond the date set forth herein for Substantial Completion. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the City, estimated at the time of executing this Contract. When the City reasonably believes that Substantial Completion will be unexcusably delayed, the City shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by the City to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving Substantial Completion, or any part thereof, for which the City has withheld payment, the City shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages.
- (C) The term "Substantial Completion", as used herein, shall mean that point as determined by the City at which the Project is at a level of completion in strict compliance with this Contract such that the City or its designee can enjoy beneficial use or occupancy and can

use or operate in all respects, for its intended purpose. Partial use or occupancy of the Project being deemed substantially complete, and such partial use or occupancy shall not be evidence of Substantial Completion.

- (D) All limitations of time set forth herein are material and are of the essence of this Contract.

ARTICLE 8
PAYMENTS TO CONTRACTOR

- (A) The City shall pay, and the Contractor shall accept, as full and complete payment for the Contractor's timely performance of its obligations hereunder, the Contract Sum of [REDACTED] (\$ [REDACTED]) total for the completion of work of the City of East Providence Cleaning and Lining Phase V Water System Upgrades Rebid Project at the price set forth in this Paragraph 8 shall constitute the Contract Price, which shall not be modified except by Change Order as provided in this contract.
- (B) The City shall pay the Contract Price to the Contractor in accordance with the procedures set forth in this Paragraph 8. On or before the 15th day of each month after commencement of performance, but no more frequently than one monthly, the Contractor may submit a Payment Request for the period ending the 31st day of preceding the month. Said Payment Request shall be in such format and include whatever supporting information as may be required by the City. Each Payment Request shall be signed by the Contractor and shall constitute the Contractor's representation that the quantity of work has reached the level for which payment is requested, that the work has been properly installed or performed in strict compliance with this Contract and that the Contractor knows of no reason why payment should not be made as requested. Thereafter, the City shall review the Payment Request and may also review the work at the project site or elsewhere to determine whether the quantity and quality of the work is as represented in the Payment Request and is as required by this Contract. The City shall approve in writing the amount which, in the opinion of the City, is properly owing to the Contractor. The payment of the Contractor's invoice will be made no later than thirty (30) days after the receipt of the invoice subject to the above. The Contractor shall submit progress invoices dated the last day of the month. These invoices will be submitted on G702 and G703 (AIA approved) documents.
- (C) The City will retain a percentage of the progress or monthly payments claimed, including approved change orders. The retainage shall remain at five percent (5%) until seventy-five percent (75%) of the Contract is complete, as determined by the City. At that time if the City decides the Contractor is making adequate progress, the City may reduce retainage to two and one half percent (2.5%) of the dollar value of all work satisfactorily complete to date, including change orders. Any further reduction in the retainage amount shall be at the City's discretion. The retainage shall be paid by the City to the Contractor within ninety (90) days of the date the work is accepted by the City unless a dispute exists with respect to the work.

- (D) Upon Substantial Completion, the City may reduce the amount of retainage to the final retainage of 2.5% of the dollar value of all work satisfactorily completed to date, including approved change orders plus an additional retainage based on the City's estimate of the fair value of any punch list items and the cost of completing and/or correcting such incomplete or defective items or work. As these items are completed or corrected, they shall be paid for out of the retainage until Final Completion and Acceptance of Work is declared by the City. The final (2.5%) retainage shall be paid to the Contractor by the City within ninety (90) days of the date the work is accepted by the City unless a dispute exists with respect to the work.
- (E) Upon Final Completion and Acceptance of the Work, City shall issue a certificate attached to the final payment request stating that the Work has been accepted by the City under the conditions of the Contract Documents. The entire balance to be due the Contractor shall be paid to the Contractor within ninety (90) days of Final Completion and Acceptance of Work.
- (F) When payment is received from the City, the Contractor shall immediately pay all subcontractor, materialmen, laborers and suppliers the amounts they are due for the work covered by such payment. In the event the City becomes informed that the Contractor has not paid a subcontractor, materialman, laborer, or supplier as provided herein, the City shall have the right, but not the duty, to issue future checks and payment to the Contractor of amounts otherwise due hereunder naming the Contractor and any such subcontractor, materialman, laborer, or supplier as joint payees. Such joint check procedure, if employed by the City, shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit the City to repeat the procedure in the future.
- (G) Neither payment to the Contractor, utilization of the Project for any purpose by the City, nor any other act or omission by the City shall be interpreted or construed as an acceptance of any work of the Contractor not strictly in compliance with this Contract.
- (H) The City shall have the right to refuse to make payment and, if necessary, may demand the return of a portion or all of the amount previously paid to the Contractor due to:
- (1) The quality of a portion, or all, of the Contractor's work not being in accordance with the requirements of this Contract;
 - (2) The quantity of the Contractor's work not being as represented in the Contractor's Payment Request, or otherwise;
 - (3) The Contractor's rate of progress being such that, in the City's opinion, substantial or final completion, or both, may be inexcusably delayed;
 - (4) The Contractor's failure to use Contract funds, previously paid the Contractor by the City, to pay Contractor's Project-related obligations including,

but not limited to, subcontractors, laborers and material and equipment suppliers;

(5) Claims made, or likely to be made, against the City or its property;

(6) Loss caused by the Contractor;

(7) The Contractor's failure or refusal to perform any of its obligations to the City.

In the event that the City makes a written demand upon the Contractor for amounts previously paid by the City as contemplated in this paragraph, the Contractor shall promptly comply with such demand.

- (I) When Substantial Completion has been achieved, the Contractor shall notify the City in writing and shall furnish to the City a listing of those matters yet to be finished. The City will thereupon conduct an inspection to confirm that the work is in fact substantially complete. Upon its confirmation that the Contractor's work is substantially complete, the City will so notify the Contractor in writing and will therein set forth the date of Substantial Completion. If the City, through its inspection, fails to find that the Contractor's work is substantially complete, and is required to repeat all, or any portion, of its Substantial Completion inspection, the Contractor shall bear the cost of such repeat inspection(s) which cost may be deducted by the City from any payment then or thereafter due to the Contractor.
- (J) When the Project is finally complete and the Contractor is ready for final inspection, it shall notify the City thereof in writing. Thereupon, the City will perform a final inspection of the project. If the City confirms that the project is complete in full accordance with this Contract and the Contractor has performed all of its obligations to the City hereunder, the City will furnish a final Approval for Payment certifying that the project is complete and the Contractor is entitled to the remainder of the unpaid Contract Price, less any amount withheld pursuant to this Contract. If the City is unable to issue its final Approval for Payment and is required to repeat its final inspection of the Project, the Contractor shall bear the cost of such repeat inspection(s), which costs may be deducted by the City from the Contractor's final payment.
- (K) The Contractor is to begin work within ten (10) days after the date of the Notice to Proceed and shall complete the work within 640 consecutive days of notification of each assignment. If the Contractor fails to complete the work as set forth in this paragraph 8(L), the Contractor shall pay the City the sum of [REDACTED] (\$ [REDACTED]) per day for each and every calendar day of unexcused delay in completing the work. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the City, estimated at or before the time of executing this Contract. When the City reasonably believes that the date of completion will be un-excusable delayed, the City shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an

amount then believed by the City to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving completion of the work, or any part thereof, for which the City has withheld payment, the City shall promptly release the Contractor those funds withheld, but no longer applicable, as liquidated damages.

- (L) The time for completion noted above has been developed upon the assumption that the work may be suspended during winter shutdown if necessary. Winter shutdown shall be determined by the Director of Public Works for the City of East Providence. The time period specified for completion of the work in Paragraph (K) above shall be suspended during such winter shutdown. The contractor shall plan on winter shutdown period based upon these dates unless otherwise directed by the City. The winter shutdown dates are subject to change depending upon weather conditions. The City shall notify the Contractor in writing if there is a change in the winter shutdown period due to weather, environmental or other conditions which preclude the work from being executed in accordance with these documents.
- (M) Prior to being entitled to receive final payment, and as a condition precedent thereto, the Contract shall furnish to the City, in the form and manner required by the City:
 - (1) An affidavit that all of the Contractor's obligations to subcontractors, laborers, equipment or material suppliers, or other third parties in connection with the Project, have been paid or otherwise satisfied;
 - (2) If required by the City, separate releases of lien or lien waivers from each subcontractor, lower tier subcontractor, laborer, supplier or other person or entity who has, or might have a claim against the City or the City's property;
 - (3) If applicable, consent(s) of surety to final payment;
 - (4) All product warranties, operating manuals, instruction manuals and other record documents, drawings and things customarily required of the Contractor, or expressly required herein, as a part of or prior to Project closeout.

ARTICLE 9
MUNICIPAL POLICE TRAFFIC CONTROL

The cost of municipal police traffic control shall be paid in accordance with RIGL §37-12-10. The Contractor shall be responsible for scheduling municipal police officers for traffic control purposes through the police department. If traffic control assignments are cancelled without twenty-four (24) hours notice, the Contractor is responsible to pay the City of East Providence for the hours police officers would have worked it if had not been for the untimely cancellation of the assignment. The City at its sole discretion may require such scheduling to be pre-approved by the Public Works Department. The

Contractor is responsible for all highway safety equipment for traffic control purposes including but not limited to proper signage and traffic cones.

ARTICLE 10
CEASE AND DESIST ORDER

In the event the Contractor fails or refuses to perform the work as required herein, the City may instruct the Contractor to cease and desist from performing further work in whole or in part. Upon receipt of such instruction, the Contractor shall immediately cease and desist as instructed by the City and shall not proceed further until the cause for the City's instruction has been corrected, no longer exists, or the City instructs that the work resume. In the event the City issues instructions to cease and desist, and in the further event that the Contractor fails and refuses within seven (7) calendar days of receipt of same to provide adequate assurance to the City that the cause of such instructions will be eliminated or corrected, then the City shall have the right, but not the obligation, to carry out the work with its own forces, or with the forces of another contractor, and the Contractor shall be fully responsible and liable for the costs of performing such work by the City. The rights set forth herein are in addition to, and without prejudice to, any other rights or remedies the City may have against the Contractor.

ARTICLE 11
DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations and responsibilities of the Contractor set forth in this Contract, the Contractor shall have and perform the following duties, obligations and responsibilities to the City:

- (A) The Contractor is again reminded of its continuing duties set forth in Subparagraph 4(E) which are by reference hereby incorporated in this Subparagraph 10(A). The Contractor shall not perform work without adequate plans and specifications, or, as appropriate, approved shop drawings, or other submittals. If the Contractor performs work knowing or believing it involves an error, inconsistency or omission in the Contract without first providing written notice to the City and the Architect, the Contractor shall be responsible for such work and pay the cost of correcting same;
- (B) All work shall strictly conform to the requirements of this Contract;
- (C) The work shall be strictly supervised, the Contractor bearing full responsibility for any and all acts or omissions of those engaged in the work on behalf of the Contractor;
- (D) The Contractor hereby warrants that all labor furnished under this Contract shall be competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results, that all materials and equipment provided shall be new and of high quality, that the completed work will be complete, of high quality, without defects, and that all work strictly complies with the requirements of this Contract. Any work not strictly complying with the requirements of this Subparagraph shall constitute a breach of

the Contractor's warranty.

- (E) The Contractor shall obtain and pay for all required permits, fees and licenses customarily obtained by the Contractor. The Contractor shall comply with all legal requirements applicable to the work;
- (F) The Contractor shall employ and maintain at the Project site only competent supervisory personnel.
- (G) The Contractor shall keep an updated copy of this Contract at the Project site. Additionally, the Contractor shall keep a copy of approved shop drawings and other submittals. All of these items shall be available to the City at all regular business hours. Upon final completion of the work, all of these items shall be finally updated and provided to the City and shall become the property of the City.
- (H) The Contractor shall maintain the Project site in a reasonably clean condition during performance of the work. Upon final completion, the Contractor shall thoroughly clean the Project site of all debris, trash and excess materials or equipment.
- (I) At all times relevant to this Contract, the Contractor shall permit the City to enter upon the Project site and to review or inspect the work without formality or other procedure.

ARTICLE 12

DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CITY

- (A) Except for permit fees which are the responsibility of the Contractor, the City shall secure and pay for necessary approvals, easements, assessments and charges required for the construction, and services performed pursuant to the Contract.
- (B) If the Contractor fails to correct work which is not in accordance with the requirements of the contract, and persistently fails to carry out the work in accordance with the Contract, the City, by a written letter, may order the contractor to stop all work, or any portion thereof, until the cause of such order has been eliminated; however, the right of the City to stop the work shall not give rise to a duty on the part of the city to exercise this right for the benefit of the Contractor or any other person or entity.
- (C) Upon completion and acceptance of the work, the City shall issue a certificate attached to the final payment request that the work has been accepted by the City under the conditions of the Contract.

ARTICLE 13

“OR EQUAL” CLAUSE

- (A) Whenever a material or article required is specified or shown on the drawings by using the name of the proprietary product of a particular manufacturer or vendor, any material

or article which will perform adequately the duties imposed by the general design may be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the City's opinion. It shall not be purchased or installed without the City's written approval. In all cases new material shall be used in the project.

- (B) If more than one brand, make of material, device, or piece of equipment is shown or specified, each should be regarded as the equal of the other. Any other brand, make of material, device, or equipment, which in the opinion of the City or its Authorized Representative, is the recognized equal of that specified (considering quality, workmanship and economy of operation), and is suitable for the purpose intended, may be accepted.

ARTICLE 14 **INDEMNITY**

The Contractor shall indemnify and hold the City harmless from any and all claims, liability, damages, loss, cost and expense of every type whatsoever including, without limitation, attorney's fees and expenses, in connection with the Contractor's performance of this Contract, provided that such claims, liability, damage, loss, cost or expense is due to sickness, personal injury, disease or death, or loss or destruction of tangible property (other than the work itself), including loss of use resulting therefrom, to the extent caused by the Contractor, or anyone for whose acts the Contractor may be liable, regardless of whether such liability, claim, damage, loss, cost or expense is caused in part by the City.

ARTICLE 15 **CLAIMS BY THE CONTRACTOR**

Claims by the Contractor against the City are subject to the following terms and conditions:

- (A) All Contractor claims against the City shall be initiated by a written claim submitted to the City. Such claim shall be received by the City no later than seven (7) calendar days after the event, or the first appearance of the circumstances, causing the claim, and the same shall set forth in detail all known facts and circumstances supporting the claim;
- (B) The Contractor and City shall continue their performance hereunder regardless of the existence of any claims submitted by the Contractor.
- (C) In the event the Contractor discovers previously concealed and unknown site conditions which are materially at variance from those typically and ordinarily encountered in the general geographical location of the Project, the Contract Price shall be modified, either upward or downward, upon the written claim made by either party within seven (7) calendar days after the first appearance to such party of the circumstances. As a condition precedent to the City having any liability to the Contractor due to concealed and unknown conditions, the Contractor must give the City written notice of, and an opportunity to observe, such condition prior to disturbing it. The failure by the

Contractor to give written notice and make the claim as provided by this Subparagraph 15(c) shall constitute a waiver by the Contractor of any rights arising out of or relating to such concealed and unknown condition.

- (D) In the event the Contractor seeks to make a claim for an increase in the Contract Price, as a condition precedent to any liability of the City therefor, the Contractor shall strictly comply with the requirements of Subparagraph 15(A) above and such claim shall be made by the Contractor before proceeding to execute any additional or change work. Failure of the condition precedent to occur shall constitute a waiver by the Contractor of any claim for additional compensation.
- (E) In connection with any claim by the Contractor against the City for compensation in excess of the Contract Price, any liability of the City for the Contractor's cost shall be strictly limited to direct cost incurred by the Contractor and shall in no event include indirect cost or consequential damages of the Contractor. The City shall not be liable to the Contractor for claims of third-parties including subcontractors, unless and until liability of the Contractor has been established therefor in a court of competent jurisdiction.
- (F) In the event the Contractor shall be delayed in performing any task which at the time of the delay is then critical, or which during the delay becomes critical, as the sole result of any act or omission by the City or someone acting in the City's behalf, or by City-authorized Change Orders, unusually bad weather not reasonably anticipatable, fire or other Acts of God, the date for achieving Substantial Completion, or, as applicable, final completion, shall be appropriately adjusted by the City upon the written claim of the Contractor to the City. A task is critical within the meaning of this Subparagraph 15(A) if, and only if, said task is on the critical path of the Project schedule so that delay in performing such task will delay the ultimate completion of the Project. Any claim for an extension of time by the Contractor shall strictly comply with the requirements of Subparagraph 15(A) above. If the Contractor fails to make such claim as required in this Subparagraph 15(F), any claim for an extension of time shall be waived.

ARTICLE 16 **SUBCONTRACTORS**

Upon execution of this Contract, the Contractor shall identify to the City, in writing, those parties intended as subcontractors on the Project. The City shall, in writing, state any objections the City may have to one or more of such subcontractors. The Contractor shall not enter into a subcontract with an intended subcontractor with reference to whom the City objects. The Contractor shall not award work to a subcontractor(s) in excess of fifty (50) percent of the Contract Price, without prior written approval of the City. All subcontracts shall afford the Contractor rights against the subcontractor which correspond to those rights afforded to the City against the Contractor herein. Nothing contained in this Contract shall create any contractual relation between any subcontractor and the City.

ARTICLE 17
WAGE RATES

- (A) There shall be paid to each laborer or mechanic of the Contractor or subcontractor engaged in the work on the Project under this Contract in the trade or occupation, an hourly wage rate pursuant to §37-13-7 of the General Laws of the State of Rhode Island regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics.
- (B) If, after the award of the Contract, it becomes necessary to employ any person in a trade or occupation not classified in the Contract, such person shall be paid at not less than a rate to be determined by the same authority which established the other wage rates for this Contract. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. The Contractor shall notify the City of his intention to employ persons in trades or occupations not classified in sufficient time for the City to obtain approved rates for such trades or occupations.
- (C) The foregoing specified wage rates are minimum rates only, and the City will not consider any claims for additional compensation made by the Contractor because of payment by the Contractor of any wage rate in excess of the applicable rate contained in this Contract. All disputes in regard to the payment of wages in excess of those specified in this Contract, shall be adjusted by the Contractor.
- (D) Except as may otherwise be required by law, all claims and disputes pertaining to the classification of labor employed on the Project under this Contract, shall be decided by the City's governing body or other duly designated official.

ARTICLE 18
CHANGE ORDERS

One or more changes to the work within the general scope of this Contract, may be ordered by Change Order. The Contractor shall proceed with any such changes, and the same shall be accomplished in strict accordance with the following terms and conditions:

- (A) Change Order shall mean a written order to the Contractor executed by the City after execution of this Contract, directing a change in the work and may include a change in the Contract Price or the time for the Contractor's performance, or any combination thereof. Said change orders must be approved by the City Manager on behalf of the City;
- (B) Any change in the Contract Price resulting from a Change Order shall be determined as follows:
 - (1) By mutual agreement between the City and the Contractor as evidenced by (a) the change in the Contract Price being set forth in the Change Order, (b) such change in the Contract Price, together with any conditions or requirements relating

thereto, being initialed by both parties and (c) the Contractor's execution of the Change Order; or,

- (2) If no mutual agreement occurs between the City and the Contractor, the change in the Contract Price, if any, shall be derived by determining the reasonable actual costs incurred or savings achieved, resulting from revisions in the work. Any such costs or savings shall be documented in the format, and with such content and detail as the City requires.
- (C) The execution of a Change Order by the Contractor shall constitute conclusive evidence of the Contractor's agreement to the ordered changes in the work, this Contract as thus amended, the Contract Price and the time for performance by the Contractor. The Contractor, by executing the Change Order, waives and forever releases any claim against the City for additional time or compensation for matters relating to or arising out of or resulting from the work included within or affected by the executed Change Order.
- (D) The Contractor shall notify and obtain the consent and approval of the Contractor's surety with reference to all Change Orders if such notice, consent or approval are required by the City, the Contractor's surety or law. The Contractor's execution of the Change Order shall constitute the Contractor's warranty to the City that the surety has been notified of, and consents to, such Change Order and the surety shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto.

ARTICLE 19

DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

- (A) In the event that the Contractor covers, conceals or obscures its work in violation of this Contract or in violation of a directive from the City, such work shall be uncovered and displayed for the City's inspection upon request, and shall be reworked at no cost in time or money to the City;
- (B) If any of the work is covered, concealed or obscured in a manner not covered by Subparagraph 19(A) above, it shall, if directed by the City, be uncovered and displayed for the City's inspection. If the uncovered work conforms strictly with this Contract, the costs incurred by the Contractor to uncover and subsequently, replace such work shall be borne by the City. Otherwise, such costs shall be borne by the Contractor;
- (C) The Contractor shall, at no cost in time or money to the City, correct work rejected by the City as defective or failing to conform to this Contract. Additionally, the Contractor shall reimburse the City for all testing, inspections and other expenses incurred as a result thereof;
- (D) In addition to its warranty obligations set forth elsewhere herein, the Contractor shall be specifically obligated to correct any and all defective or nonconforming work for a period

of twelve (12) months following final completion upon written direction from the City.

- (E) The City may, but in no event be required to, choose to accept defective or nonconforming work. In such event, the Contract Price shall be reduced by the greater of (1) the reasonable costs of removing and correcting the defective or nonconforming work, and (2) the difference between the fair market value of the Project as constructed and the fair market value of the project had it not been constructed in a manner as to include defective or nonconforming work. If the remaining portion of the unpaid Contract Price, if any, is insufficient to compensate the City for the acceptance of defective or nonconforming work, the Contractor shall, upon written demand from the City, pay the City such remaining compensation for accepting defective or nonconforming work.

ARTICLE 20
TERMINATION BY THE CONTRACTOR

If the City repeatedly fails to perform its material obligations to the Contractor for a period of thirty (30) days after receiving written notice from the Contractor of its intent to terminate hereunder, the Contractor may terminate performance of this Contract by written notice to the City. In such event, the Contractor shall be entitled to recover from the City as though the City had terminated the Contractor's performance under this Contract for convenience pursuant to Subparagraph 22(A) hereunder.

ARTICLE 21
CITY'S RIGHT TO SUSPEND CONTRACTOR'S PERFORMANCE

- (A) The City shall have the right at any time to direct the Contractor to suspend its performance, or any designated part thereof, for any reason whatsoever, or without reason, for a cumulative period of up to thirty (30) calendar days. If any such suspension is directed by the City, the Contractor shall immediately comply with same;
- (B) In the event the City directs a suspension of performance under this Paragraph 21, through no fault of the Contractor, the City shall pay the Contractor as full compensation for such suspension the Contractor's reasonable costs, actually incurred and paid, of:
 - (1) demobilization and remobilization, including such costs paid to subcontractors;
 - (2) preserving and protecting work in place;
 - (3) storage of materials or equipment purchased for the Project, including insurance thereon;
 - (4) performing in a later, or during a longer, time frame than that contemplated by this Contract.

ARTICLE 22
TERMINATION BY THE CITY

The City may terminate this Contract in accordance with the following terms and conditions:

- (A) The City may, for any reason whatsoever, terminate performance under this Contract by the Contractor for convenience. The City shall give written notice of such termination to the Contractor specifying when termination becomes effective. The Contractor shall incur no further obligations in connection with the work and the Contractor shall stop work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Contractor to assign the Contractor's right, title and interest under termination orders or subcontracts to the City or designee. The Contractor shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has. When terminated for convenience, the contractor shall be compensated as follows:
- (1) The Contractor shall submit a termination claim to the City specifying the amounts due because of termination for convenience together with costs, pricing or other data required by the City. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Contractor, an amount derived in accordance with Subparagraph (3) below;
 - (2) The City and the Contractor may agree to the compensation, if any, due to the Contractor hereunder;
 - (3) Absent agreement to the amount due to the Contractor, the City shall pay the Contractor the following amounts:
 - a) Contract prices for labor, materials, equipment and other services accepted under this contract;
 - b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for jobsite overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would not have profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;
 - c) Reasonable costs of settling and paying claims arising out

of the termination of subcontracts or orders pursuant to Subparagraph 18(A) of this Paragraph. These costs shall not include amounts paid in accordance with other provisions hereof.

The total sum to be paid the Contractor under this Subparagraph 18(A) shall not exceed the total Contract Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- (B) If the Contractor does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment, and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Contract, then the City, in addition to any rights it may have against the Contractor or others, may terminate the performance of the Contractor and assume possession of the Project site and of all materials and equipment at the site and may complete the work. In such case, the Contractor shall not be paid further until the work is complete. After final completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Contractor. Otherwise, the Contractor shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Contract. In the event the employment of the Contractor is terminated by the City for cause pursuant to this Subparagraph 22(B) and is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under Subparagraph 2(A) and the provision of Subparagraph 22(A) shall apply.

ARTICLE 23 **INSURANCE**

The Contractor shall carry and maintain the following insurance coverage at his own expense and add the City of East Providence as an additionally insured

- (A) All insurance for this Contract shall be written by a company (or companies) acceptable to the City and all policies or certificates shall be submitted to the City for examination prior to commencement of operations by the Contractor. In the event any policy or certificate, the amount of the insurance, or the company writing same are not satisfactory to the City, the Contractor shall secure other policies or certificates in form and amount with a company satisfactory to the City. The Contractor shall not permit policies to be changed, cancelled, or to lapse and all policies shall include a clause to the effect that the policy shall not be subject to cancellation or a reduction in the limits of liability or amounts of insurance until notice has been sent by mail to the City stating when, (not less than thirty days thereafter) such cancellation or reduction shall be effective. All certificates of insurance shall be delivered to the City and contain true transcripts from the policy or policies authenticated by the proper officer of the insurer evidencing in

particular those insured, the extent of the insurance, the location and operations to which the insurance applies, the expiration date and the above mentioned notice as to the location and operations involved.

If any part of the work is sublet, similar insurance shall be provided by or in behalf of the subcontractors to cover their operations. The Contractor shall be charged with the responsibility for insurance protection for all his subcontract operations and should the Contractor's policy not cover each and every subcontractor, certificates of insurance acceptable to the City covering each and every subcontractor shall be filed with said City prior to the commencement of subcontract operations.

(B) Contractor's Liability Insurance.

Liability insurance shall include all major divisions of coverage and be on a comprehensive general liability basis including:

Premises - Operations (including X-C-U)

Independent Contractor's protective

Products & completed operations

Blanket Contractual

Owned, non-owned and hired motor vehicles

Broad form coverage for property damage (including explosion, collapse and underground).

(C) The insurance required by this Subparagraph (b) shall be written for not less than the following, or greater if required by Law:

(1) Workers' Compensation:

a. State of Rhode Island - Statutory

b. Employer's Liability

(2) Comprehensive General Liability (including Premises Operations; Independent Contractor's Protective; Products & Completed Operations; Broad Form Property Damage):

(a) Bodily Injury:

\$1,000,000 - Each Occurrence

\$1,000,000 - Annual Aggregate

(b) Property Damage:

\$1,000,000 - Each Occurrence

\$1,000,000 - Annual Aggregate

(c) Products & Completed Operations to be maintained for one (1) year after final payment.

(d) Property Damage Liability Insurance will provide X, C, or U coverage as

applicable.

(3) Contractor's Liability:

(a) Bodily Injury:
\$1,000,000 - Each Occurrence

(b) Property Damage:
\$1,000,000 - Each Occurrence
\$1,000,000 - Annual Aggregate

(4) Personal injury, with Employment Exclusion deleted:
\$1,000,000 Annual Aggregate

(5) Comprehensive Automobile Liability:

(a) Bodily Injury:
\$ 500,000 - Each Person
\$1,000,000 - Each Occurrence

(b) Property Damage:
\$1,000,000 - Each Occurrence

(6) Property Insurance:

The Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the City, the Contractor, Subcontractors and Subcontractors in the Work shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief.

(D) Insurance Covering Special Hazards:

Special hazards shall be covered by rider or riders to the Public Liability and Property Damage Insurance policy or policies herein above required to be furnished by the Contractor or by separate policies of insurance in the amounts stated in Paragraph 5(C).

- (1) Property Damage Liability arising out of the collapse of or injury to any building or structure due to excavation (including burrowing, filling or backfilling in connection therewith), tunneling, pile driving, cofferdam work, or caisson work; or moving, shoring, underpinning, razing or demolition of any building or structure, or removal or rebuilding of any structural support thereof.
- (2) Property Damage Liability for injury to or destruction of property arising directly or indirectly from blasting or explosions, however caused, other than explosions

of air or steam vessels, piping under pressure, prime movers, machinery, or power transmitting equipment.

- (3) Property Damage Liability for injury to or destruction of wires, conduits, pipes, mains, sewers, or other similar property, or any apparatus in connection therewith below the surface of the ground arising from and during the use of mechanical equipment for the purpose of excavating or drilling within project limits; injury to or destruction of property at any time resulting there from.
- (4) The Contractor shall require similar insurance in such amounts to be taken out and maintained by each subcontractor.

(E) “ALL RISK” Insurance:

The Contractor shall acquire and maintain “All Risk” type Builder’s Insurance. This insurance shall be in an amount equal to 100% of the insurable portion of the Project, and shall be for the benefit of the City, the Contractor, and each subcontractor as their interest may respectively appear.

ARTICLE 24
SURETY BONDS

The Contractor shall be licensed to do business in the State of Rhode Island and shall furnish separate performance and payment bonds to the City. Each bond shall set forth a penal sum in an amount of not less than the Contract Price. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Price is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount. The performance and payment bonds furnished by the Contractor shall be in form suitable to the City and shall be executed by a surety, or sureties, reasonably acceptable to the City.

ARTICLE 25
PATENTS

The Contractor shall pay all applicable royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights, and save the City harmless from loss on account thereof, except that the City shall be responsible for any such loss on when a particular process, design, or product of a manufacturer(s) is specified. However, if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, the Contractor shall be responsible for such loss unless the Contractor promptly gives such information to the City.

ARTICLE 26
APPRENTICES

Apprentices shall be permitted to work only under a bona fide apprenticeship program registered with a State Apprenticeship Council which is recognized by the Federal Committee of Apprenticeship, United States Department of Labor; or if no such Council exists in a State, under a program registered with the Bureau of Apprenticeship, United States Department of Labor.

ARTICLE 27
ASSIGNMENTS

The Contractor shall not assign the whole or any part of this Contract, or any monies due or to become due hereunder, without the written consent of the City. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms or corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

ARTICLE 28
APPLICABLE LAW

The law is hereby agreed to be the law of the State of Rhode Island.

ARTICLE 29
SUCCESSORS AND ASSIGNS

Each party binds itself, its successors, assigns, executors, administrators or other representatives to the other party hereto and to successors, assigns, executors, administrators or other representatives of such party in connection with all terms and conditions of this Contract.

CITY

The City of East Providence
East Providence, RI 02914

CONTRACTOR

By:

(Signature)

ROBERTO L. DASILVA, Mayor
(Printed Name and Title)

(Date of Execution)

By:

(Signature)

(Printed Name and Title)

(Date of Execution)

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00620

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as
Principal, and _____, as
Surety, are held and firmly bound unto the State of Rhode Island, as Oblige, in the sum of
_____ Dollars (\$ _____), well and
truly to paid, and for the payment of which we and each of us hereby bind our self, our heirs, executors,
administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the Principal has submitted a Bid for the City of East Providence's Cleaning and Lining
Phase V Water System Upgrades Rebid.

NOW, THEREFORE, if the City of East Providence shall accept the Bid of the Principal and the
Principal shall enter into a Contract with the City of East Providence in accordance with the terms of such
Bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good
and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor
and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter
such Contract and give such bond or bonds, if the Principal shall pay to the City of East Providence the
difference not to exceed the penalty hereof between the amount specified in said Bid and such larger
amount for which the City may in good faith contract with another party to perform the Work covered by
said Bid, then this obligation shall be null and void, otherwise to remain in full force.

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

BID BOND

IN WITNESS WHEREOF, the parties hereto have signed, sealed and delivered this instrument at the City of East Providence, Rhode Island, this _____ day of _____ 20____.

WITNESS:

(Principal)

By: _____
Name & Title
(Affix Corporate Seal)

(Surety)

By: _____
Attorney-in-fact
(Affix Corporate Seal Here)

FEIN No.

(Attach Power of Attorney to this Bond)

END OF SECTION

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00630

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal,
and _____, as Surety, are held
and firmly bound unto the City of East Providence, as Oblige, in the sum of _____
Dollars (\$ _____), well and truly to paid, and for the payment of which we
and each of us hereby bind our self, our heirs, executors, administrators, successors and assigns, jointly
and severally, firmly by these presents.

THIS OBLIGATION IS UPON THE CONDITION that if the person or persons designated in the
contract annexed hereto as the Contractor, shall faithfully furnish and perform everything required to be
furnished and performed by them under the provisions of said Contract then this obligation shall be void;
otherwise, it shall remain in full force and effect.

In the event that the said contract is abandoned by the Contractor, or the work of the Contractor is
discontinued by the City of East Providence under the provisions of the GENERAL CONDITIONS, said
surety hereby further agrees that it shall, if requested in writing by the City of East Providence, take such
action as is necessary to complete said contract.

FOR VALUE RECEIVED, said surety company hereby stipulates and agrees that no change, extension of
time, alteration or addition to the terms of said contract or to the work to be performed thereunder or the
Contract Documents accompanying the same shall in any wise affect its obligation on this bond, and does
hereby waive notice of any such change, extension of time, alteration or addition to the terms of said
contract or to the work or to the specifications.

Said surety hereby certifies and affirms under the penalties of perjury that said surety is licensed by the
State of Rhode Island.

Any legal action commenced by Principal or Surety must be commenced within two (2) years from the
date of final payment.

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

PERFORMANCE BOND

IN WITNESS WHEREOF, the parties hereto have signed, sealed and delivered this instrument at the City of East Providence, Rhode Island, this _____ day of _____ 20____.

WITNESS:

(Principal)

By: _____
Name & Title
(Affix Corporate Seal)

(Surety)

By: _____
Attorney-in-fact
(Affix Corporate Seal Here)

FEIN No.

(Attach Power of Attorney to this Bond)

END OF SECTION

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00700

GENERAL CONDITIONS

- A. This Contract is governed by the enclosed General Conditions, except where modified by Section 00800- Supplemental Conditions.

END OF SECTION

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

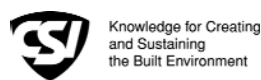
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The Associated General Contractors of America



Construction Specifications Institute

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American Society of Civil Engineers
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times

but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement

or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or

responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work

(unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's

sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice*: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will

promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to

entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified

in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection

from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any

deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or

received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual

or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Draw-

ings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and
2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and

properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep

Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall

promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK;
ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and

Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have

resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall

be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted

by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent

inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial

Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations

under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance

with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be

governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00733 STATE REVOLVING FUND (SRF) LOAN PROGRAM REQUIREMENTS

SECTION 00733 INDEX

- A. Drinking Water State Revolving Fund Program - Contract Specifications Package (45 pages)
- B. EPA Disadvantaged Business Enterprise (DBE) Program – DBE Forms (6 pages)
- C. Good Faith Efforts to achieve DBE participation (2 pages)
- D. State of Rhode Island Minority Business Enterprise Utilization Plan (1 page)
- E. Office of Diversity, Equity and Opportunity Minority Business Enterprise Project Reporting Form (1 page)
- F. State Revolving Fund Sign (3 pages)
- G. Davis Bacon Wage Rates/Questionnaire (9 pages)
- H. Debarment & Suspension (Executive Order 12549) and Certification (3 pages)
- I. EPA American Iron and Steel Memorandum (20 pages)
- J. Rhode Island Certified Prevailing Wage Daily Log (1 page)
- K. EPA Memorandum “Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment in the SRF Programs” (2 pages)
- L. Build America Buy America Act Implementation Procedures for EPA Office of Water Federal Financial Assistance Programs (23 pages)
- M. Davis Bacon Wage Rates

Attachment A

Drinking Water State Revolving Fund Program – Contract Specifications



Rhode Island Department of Health Center for Drinking Water Quality

Drinking Water State Revolving Fund Program Relevant Federal and State Laws

A. Federal

- 1) Equal Employment Opportunity and Affirmative Action (Executive Order 11246)
 - i) OFCCP fact sheet.
 - ii) Equal Opportunity Clause and the Standard Federal Equal Employment Specifications.
 - iii) Notice of Non-Discrimination in Employment.
- 2) Non-discrimination in employment notice.
- 3) Assurance of compliance with Title VI of the Civil Rights Act of 1964 and Section 13 of the FWPCA Amendments of 1972 (EPA form 4700-1).
- 4) Affirmative steps for soliciting MBE/WBE (40 CFR 31.36(e))

Applicable cross-cutting Federal authorities for projects funded through SRF programs are made available at http://water.epa.gov/grants_funding/dwsrf/xcuts.cfm. Additional information is provided in the United States Environmental Protection Agency's cross-cutting handbook available at <https://www.epa.gov/sites/production/files/2015-08/documents/crosscutterhandbook.pdf>.

B. State of Rhode Island

- 1) RIGL 37-2.1, Domestic Steel
- 2) RIGL 37-12, Contractors Bonds
- 3) RIGL 37-12.1, Substitution of Security for Retained Earnings of Architects and Engineers.
- 4) RIGL 37-13, Labor and Payment of Debts by Contractors
 - i) Prevailing Wage Rates
- 5) RIGL 37-14.1, Minority Business Enterprise
 - i) Regulations Governing Participation by Minority Business Enterprises in State Funded and Directed Public Construction Projects, Construction Contracts and Procurement Contracts Goods and Services.
- 6) RIGL 37-16, Public Works Arbitration
- 7) RIGL 45-55, Award of Municipal Contracts

NOTE: This package is prepared by DOH as a service of the DWSRF program. While every attempt at accuracy has been made, these are not certified true copies of the laws presented. **The responsibility for compliance with all applicable provisions of Federal and State laws and regulations relating to the bidding, award, and performance of contracts is the applicant's and the bidder's.** Certified true and complete copies of any Rhode Island laws and regulations may be obtained from the Office of the Secretary of State.

Employment Standards Administration Office of Federal Contract Compliance Programs

Fact Sheet EXECUTIVE ORDER 11246

EEO and Affirmative Action Guidelines for Federal Contractors Regarding Race, Color, Gender, Religion, and National Origin.

BASIC PROVISIONS

Since 1965, the U.S. Department of Labor's Office of Federal Contract Compliance Programs (OFCCP) has been committed to ensuring that Government contractors comply with the equal employment opportunity (EEO) and the affirmative action provisions of their contracts.

OFCCP administers and enforces Executive Order 11246, as amended, which prohibits federal contractors and federally-assisted construction contractors and subcontractors, who do over \$10,000 in Government business in one year from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin.

The Executive Order also requires Government contractors to take affirmative action to insure that equal opportunity is provided in all aspects of their employment.

AFFIRMATIVE ACTION REQUIREMENTS

Each Government contractor with 50 or more employees and \$50,000 or more in government contracts is required to develop a written affirmative action program (AAP) for each of its establishments.

A written affirmative action program helps the contractor identify and analyze potential problems in the participation and utilization of women and minorities in the contractor's workforce.

If there are problems, the contractor will specify in its AAP the specific procedures it will follow and the good faith efforts it will make to provide equal employment opportunity.

Expanded efforts in outreach, recruitment, training and other areas are some of the affirmative steps contractors can take to help members of the protected groups compete for jobs on equal footing with other applicants and employees.

Affirmative action is not preferential treatment. It does not mean that unqualified persons should be hired or promoted over other people. What affirmative action does mean is that positive steps must be taken to ensure equal employment opportunity for traditionally disadvantaged groups.

ENFORCEMENT AND COMPLIANCE

Compliance Reviews

OFCCP conducts compliance reviews to investigate the employment practices of Government contractors. During a compliance review, a compliance officer examines the contractor's affirmative action program; checks personnel, payroll, and other employment records; interviews employees and company officials; and investigates virtually all aspects of employment in the company.

The investigator also checks to see whether the contractor is making special efforts to achieve equal opportunity through affirmative action. If problems are discovered, OFCCP will recommend corrective action and suggest ways to achieve equal employment opportunity.

Complaint Investigations

Individuals may file complaints if they believe they have been discriminated against by federal contractors or subcontractors. Complaints also may be filed by organizations on behalf of the person or persons affected.

Complaints must be filed within 180 days from the date of the alleged discrimination, although filing time can be extended for a good reason.

If a complaint filed under Executive Order 11246 involves discrimination against only one person, OFCCP will normally refer it to the EEOC. Cases involving groups of people or indicating patterns of discrimination are generally investigated and resolved by OFCCP. Complaints may be filed directly with any of OFCCP's regional or district offices throughout the country, or with OFCCP in Washington, D.C.

Compliance Assistance

To help contractors understand their contractual obligations for EEO and affirmative action, OFCCP provides technical assistance. District office staff offers guidance to contractors on how to develop an affirmative program through company seminars, training programs held in conjunction with industry liaison groups, and one-on-one consultations on affirmative action practices and procedures.

Enforcing Contract Compliance

When a compliance review discloses problems, OFCCP attempts to work with the contractor, often entering into a conciliation agreement. A conciliation agreement may include back pay, job offers, seniority credit, promotions or other forms of relief for victims of discrimination. It may also involve new training programs, special recruitment efforts, or other affirmative action measures.

When conciliation efforts are unsuccessful, OFCCP refers the case to the Office of the Solicitor for enforcement through administrative enforcement proceedings. A contractor cited for violating EEO and affirmative action requirements may have a formal hearing before an administrative law judge.

If conciliation is not reached before or after the hearing, sanctions may be imposed. For example, a contractor could lose its government contracts or subcontracts or be debarred, i.e., declared ineligible for any future government contracts.

Further Information

For more information about contract compliance, filing complaints, or compliance assistance, contact any of OFCCP's regional or district offices. All offices are listed in telephone directories under U.S. Department of Labor, Employment Standards Administration, Office of Federal Contract Compliance Programs.

EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION

Executive Order 11246
(Excerpts from 41 CFR 60 Parts 1 and 4)

41 CFR 60-1.4 - Equal opportunity clause

(b) Federally assisted construction contracts. Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause:

The applicant hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following *equal opportunity clause*:

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause. Such action shall include but not be limited to the following:
- (2) Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will

permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

(c) *Subcontracts.* Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.

(d) *Incorporation of the equal opportunity clause by reference.* The equal opportunity clause may be incorporated by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Director may designate.

(e) *Incorporation by operation of the order.* By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.

(f) Adaptation of language. Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings.

41 CFR 60-4.3 - Equal opportunity clauses

(a) The equal opportunity clause published at 41 CFR 60-1.4(a) of this chapter is required to be included in, and is part of, all nonexempt Federal contracts and subcontracts, including construction contracts and subcontracts. The equal opportunity clause published at 41 CFR 60-1.4(b) is required to be included in, and is a part of, all nonexempt federally assisted construction contracts and subcontracts. In addition to the clauses described above, all Federal contracting officers, all applicants and all non-construction contractors, as applicable, shall include the specifications set forth in this section in all Federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of non-construction Federal contracts and subcontracts covered under the Executive order.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations

- serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to

comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(b) The notice set forth in 41 CFR 60-4.2 and the specifications set forth in 41 CFR 60-4.3 replace the New Form for Federal Equal Employment Opportunity Bid Conditions for Federal and Federally Assisted Construction published at 41 FR 32482 and commonly known as the Model Federal EEO Bid Conditions, and the New Form shall not be used after the regulations in 41 CFR Part 60-4 become effective.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65978, Oct. 3, 1980]

NOTICE TO LABOR UNIONS OR OTHER ORGANIZATIONS OF WORKERS

NON-DISCRIMINATION IN EMPLOYMENT

TO: _____
(Name of Union or Organization of Workers)

The undersigned currently holds contract(s) with _____
(Name of Applicant)

involving funds or credit of the U.S. Government of (a) subcontract(s) with a prime contractor holding such contract(s).

You are advised that under the provisions of the above contract(s) or subcontract(s) and in accordance with Executive Order 11246, dated September 24, 1965, the undersigned is obliged not to discriminate against any employee or applicant for employment because of race, age, handicap, veteran status, color, creed, or national origin. This obligation not to discriminate in employment includes, but is not limited to, the following:

**HIRING, PLACEMENT, UPGRADING, TRANSFER, OR DEMOTION,
RECRUITMENT, ADVERTISING, OR SOLICITATION FOR
EMPLOYMENT TRAINING DURING EMPLOYMENT, RATES OF PAY
OR OTHER FORMS OF COMPENSATION, SELECTION FOR TRAINING
INCLUDING APPRENTICESHIP, LAYOFF, OR TERMINATION.**

This notice is furnished you pursuant to the provisions of the above contract(s) or subcontract(s) and Executive Order 11246.

COPIES OF THIS NOTICE WILL BE POSTED BY THE UNDERSIGNED IN CONSPICUOUS PLACES AVAILABLE TO EMPLOYEES OR APPLICANTS FOR EMPLOYMENT.

(Contractor or Subcontractor)

(Date)

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY**

**ASSURANCE OF COMPLIANCE
FOR
TITLE VI OF THE CIVIL RIGHTS ACT OF 1964
AND
SECTION 13 OF THE FWPCA AMENDMENTS OF 1972**

NAME AND ADDRESS OF APPLICANT/RECIPIENT (<i>Hereinafter called ASSUROR</i>)	GRANT IDENTIFICATION NUMBER <i>(To be completed by EPA)</i>	GRANT AMOUNT REQUESTED \$
	TYPE OF GRANT <input type="checkbox"/> DEMONSTRATION <input type="checkbox"/> RESEARCH <input type="checkbox"/> TRAINING <input type="checkbox"/> OTHER (<i>Specify</i>):	
	CHECK ONE: <input type="checkbox"/> NEW <input type="checkbox"/> CONTINUATION	

HEREBY AGREES THAT IT will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements of the U.S. Environmental Protection Agency (*hereinafter called "EPA"*) issued pursuant to that title, to the end that in accordance with Title VI of that Act, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Assuror receives financial assistance from EPA and hereby gives assurance that it will now and hereafter take all necessary measures to effectuate this agreement.

HEREBY AGREES THAT IT will comply with all applicable requirements of Section 13 of the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500) and all requirements of EPA issued pursuant to that section, to the end that in accordance with that section of that Act, no person in the United States shall, on the ground of sex be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity under the said Federal Water Pollution Control Act Amendments for which the Assuror receives assistance from EPA and hereby gives assurance that it will now and hereafter take all necessary measures to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of financial assistance extended to the Assuror by EPA, this Assurance obligates the Assuror, or, in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provisions of similar services or benefits. If any personal property is so provided, this Assurance obligates the Assuror for the period during which it retains ownership or possession of the property. In all other cases, this Assurance obligates the Assuror for the period during which the financial assistance is extended to it by EPA.

THE ASSURANCE is given in consideration of and for the purpose of obtained any and all Federal grants, loans, contracts, property discounts or other financial assistance extended after the date hereof to the Assuror by EPA including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Assuror recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this Assurance and that the United States shall reserve the right to seek judicial enforcement of this Assurance. The Assurance is binding on the Assuror, its successors, transferees, and assignees, and the person or persons whose signature appear below are authorized to sign this Assurance on behalf of the Assuror.

The obligations assumed by the Assuror hereunder are in addition to any obligations which may be imposed to the Assuror by any applicable regulation now outstanding or which may hereafter be adopted by EPA to effectuate any provision or goal of the said Title VI and all applicable requirements of the said Section 13, and no part of this Assurance shall be read so as to in any way detract from or modify any obligation which may be imposed on the Assuror by any such regulation standing alone.

SIGNATURE OF ASSUROR BY PRESIDENT, CHAIRMAN OF BOARD OR COMPARABLE AUTHORIZED OFFICIAL	DATE
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CONTRACTING WITH SMALL AND MINORITY FIRMS, WOMEN'S BUSINESS ENTERPRISE

40 CFR 31.36(e)

40 CFR 31.36(e) – Contracting with small and minority firms, women's business enterprise and labor surplus area firms.

(1) The grantee and sub-grantee will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

(2) Affirmative steps shall include:

- (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (ii) Assuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;
- (iii) Dividing the total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
- (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
- (vi) Requiring the prime contractor, if subcontracts are to be let, to take affirmative steps listed in paragraphs (e)(2)(i) through (v) of this section.

TITLE 37

CHAPTER 2.1 DOMESTIC STEEL

Section

37-2.1-1.	Short Title
37-2.1-2.	Purpose
37-2.1-3.	Purchase of steel and steel products
37-2.1-4.	Payment
37-2.1-5.	Definitions

37-2.1-1. Short title.

This chapter shall be known and may be cited as the "Steel Products Procurement Act".

37-2.1-2. Purpose.

- (a) This chapter shall be deemed to be an exercise of the police powers of the state for the protection of the health, safety, and general welfare of the people of the state.
- (b) It is hereby determined by the general assembly of Rhode Island and declared as a matter of legislative findings that:
 - (1) The United States is one of the leading countries in the production and use of steel and its allied products;
 - (2) The use of steel products constitutes a major industry of the United States and, as such, provides the jobs and family incomes of millions of persons in the United States;
 - (3) The taxes paid to Rhode Island and the United States by employers and employees engaged in the production and sale of steel products are one of the largest single sources of public revenues in this country;
 - (4) It has, for many years, been the policy of the state to aid and support the development and expansion of industry in the United States in order to foster the economic well-being of the state and its people; and
 - (5) The economy, general welfare, and national security of the United States, are inseparably related to the preservation and development of the steel industry in the United States.
- (c) The general assembly therefore declares it to be the policy of the state that all public officers and agencies should, at all times, aid and promote the development of the steel industry of the United States in order to stimulate and improve the economic well-being of the state and its people.

37-2.1-3. Purchase of steel and steel products.

- (a) Every public agency shall require that every contract document for the construction, reconstruction, alteration, repair, improvement, or maintenance of public works contain a provision that, if any steel products are to be used or supplied in the performance of the contract, only steel products as herein defined shall be used or supplied in the performance of the contract or any subcontracts thereunder.
- (b) This section shall not apply in any case where the head of the public agency, in writing, determines that steel products as herein defined are not produced in, or readily available in the United States or that such steel products shall not exceed fifteen percent (15%) of the costs of any other steel products obtainable nationally or internationally.

37-2.1-4. Payment.

No public agency shall authorize, provide for, or make any payments to any person under any contract containing the provision required by 37-2.1-3 unless the public agency is satisfied that such person has fully complied with that provision. Any such payments made to any person by any public agency which should not have been made, as a result of this section, shall be recoverable directly from the contractor or subcontractor who did not comply with 37-2.1-3 by either such public agency or the attorney general upon suit filed in the court of any county.

37-2.1-5. Definitions.

The following words and phrases when used in this chapter shall have, unless the context clearly indicates otherwise, the meanings given to them in this section:

- (a) "Person" means natural persons as well as corporations, partnerships, business units, and associations;
- (b) "Public agency" means (1) the state and its departments, boards, commissions and agencies, (2) cities, towns, school districts, and any other governmental unit or district, (3) any and all other public bodies, authorities, officers, agencies, or instrumentalities, whether exercising a governmental or proprietary function;
- (c) "Public works" means steel to construct, frame or reinforce any public structure, building, highway, waterway, street, bridge, transit system, airport, or other betterment, work or improvement, whether of a permanent or temporary nature, and whether for governmental or proprietary use;
- (d) "Steel products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, or otherwise similarly processed, or processed by a combination of two or more of such operations, from steel made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or other steel making process;
- (e) "United States" means the United States of America and includes all territory, continental or insular, subject to the jurisdiction of the United States.

TITLE 37

CHAPTER 12 CONTRACTORS' BONDS

Sections

- 37-12-1. Contractors required to give bond – Terms and conditions.
- 37-12-2. Rights of persons furnishing labor and materials.
- 37-12-3. Remedies of creditors and state – Priority of claims.
- 37-12-4. Intervention by creditor in suit brought by state.
- 37-12-5. Time limitation on creditors' actions.
- 37-12-6. Intervention in suit brought by creditor – Consolidation of suits.
- 37-12-7. Notice of Pendency of Suit
- 37-12-8. Certified copies of documents.
- 37-12-9. Payment into court by surety – Discharge.
- 37-12-10. Retainers relating to contracts for public works or sewer or water main construction.
- 37-12-11. Substitution of securities for retained earnings.

§ 37-12-1. Contractors required to give bond – Terms and conditions. – Every person (which word for the purposes of this chapter shall include a co-partnership, a number of persons engaged in a joint enterprise, or a corporation), before being awarded a contract by the department of transportation or by the department of administration, as the case may be, and every person awarded such a contract as a general contractor or construction or project manager for the construction, improvement, completion, or repair of any public road or portion thereof or of any bridge in which the contract price shall be in excess of fifty thousand dollars (\$ 50,000), or for a contract for the construction, improvement, completion, or repair of any public building, or portion thereof, shall be required to furnish to the respective department a bond of that person to the state, with good and sufficient surety or sureties (hereafter in this chapter referred to as surety), acceptable to the respective department, in a sum not less than fifty percent (50%) and not more than one hundred percent (100%) of the contract price, conditioned that the contractor, principal in the bond, the person's executors, administrators, or successors, shall in all things, well and truly keep and perform the covenants, conditions, and agreements in the contract, and in any alterations thereof made as therein provided, on the person's part to be kept and performed, at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the state, the respective department, and all of its officers, agents, and employees, as therein stipulated, and shall also promptly pay for all such labor performed or furnished and for all such materials and equipment furnished, (which as to equipment shall mean payment of the reasonable rental value, as determined by the respective department, of its use during the period of its use), as shall be used in the carrying on of the work covered by the contract, or shall see that they are promptly paid for, whether or not the labor is directly performed for or furnished to the contractor or is even directly performed upon the work covered by the contract, and whether or not the materials are furnished to the contractor or become component parts of the work, and whether or not the equipment is furnished to the contractor or even directly used upon the work. The bond shall contain the provisions that it is subject to all such rights and powers of the respective department and such other provisions as are set forth in the contract and the plans, specifications, and proposal incorporated by reference in the contract, and that no extension of the time of performance of the contract or delay in the completion of the work thereunder or any alterations thereof, made as therein provided, shall invalidate the bond or release the liability of the surety thereunder. Waiver of the bonding requirements of this section is expressly prohibited.

37-12-2. Rights of persons furnishing labor and materials.

Every person who shall have performed labor and every person who shall have furnished or supplied labor, material, or equipment in the prosecution of the work provided for in the contract, in respect of which a payment bond is furnished under § 37-12-1, and who has not been paid in full therefor before the expiration of a period of ninety (90) days after the day on which the last of the labor was performed or furnished by him or her, or material or equipment furnished or supplied by him or her for which a claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of the suit and to prosecute the action to final execution and judgment for the sum or sums justly due him or her; provided, however, that any person having direct contractual relationship with a subcontractor but no contractual relationship express or implied with the contractor

furnishing the payment bond shall have a right of action upon the payment bond upon giving written notice to the contractor within ninety (90) days from the date on which the person furnished or performed the last of the labor, or furnished or supplied the last of the material or equipment for which the claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the labor was furnished or performed or the material or equipment was furnished or supplied. The notice shall be served by mailing the same by certified mail, postage prepaid, in an envelope addressed to the contractor at any place he or she maintains an office, conducts his or her business, or his or her residence.

37-12-3. Remedies of creditors and state - Priority of claims.

The remedy on the bond shall be by a civil action brought in the superior court for the counties of Providence and Bristol and in any suit brought on the bond the rights of the state shall be prior to those of all creditors. The rights of persons who shall have performed labor as aforesaid shall be prior to the rights of all other creditors, and there shall be no priorities among laborers or among other creditors under the bond. The state, either after having recovered a judgment against the contractor on the contract or without having recovered a judgment, may bring a suit on the bond against the contractor and surety on the bond, and may join as parties defendant in the suit any persons claiming to have rights under the bond as creditors; and, if it has not brought such a suit, it may at any time before a final and conclusive decree, intervene and become a party in any suit brought, as hereafter provided in this chapter, by any person claiming to be a creditor under the bond.

37-12-4. Intervention by creditor in suit brought by state.

Any person claiming to be a creditor under the bond may at any time intervene and become a party in any pending suit brought as aforesaid by the state on the bond, and by so intervening may have the rights to the person adjudicated in the suit.

37-12-5. Time limitation on creditors' actions.

No suit instituted under § 37-12-2 shall be commenced after the expiration of two (2) years, or under the maximum time limit as contained within any labor or material payment bond required under § 37-12-1, whichever period is longer, after the day on which the last of the labor was furnished or performed or material or equipment was furnished or supplied by any person claiming under the section.

37-12-6. Intervention in suit brought by creditor - Consolidation of suits.

When a suit has been so brought on the bond by a person claiming to be a creditor under the bond and is pending, any other person claiming to be a creditor under the bond may intervene and become a party in the first suit thus brought and pending and by so intervening may have the rights of the other person adjudicated in the suit. If two (2) or more of the suits be filed in the court on the same day, the one in which the larger sum shall be claimed shall be regarded as the earlier suit. All suits brought upon the bond as provided in this chapter shall be consolidated together by the court and heard as one suit.

37-12-7. Notice of pendency of suit.

In any suit brought under the provisions of this chapter such personal notice of the pendency of the suit as the court may order shall be given to all such known creditors and persons claiming to be creditors under the bond as shall not have entered their appearances in the suit and, in addition to the notice, notice of the pendency of the suit shall be given by publication in some newspaper published in this state of general circulation in the city or town or every city or town in which the work covered by the contract was carried on, once a week for three (3) successive weeks, in such form as the court may order. The court, however, may dispense with the notices if satisfied that sufficient notices shall have been given in some other suit brought under the provisions of this chapter.

37-12-8. Certified copies of documents.

Any person claiming to be a creditor under the bond and having filed a claim with the respective department, in accordance with the requirements of § 37-12-2, shall have the right, at any time when the person could under this chapter file a suit or intervene in a pending suit, to require the respective department to furnish to the person certified copies of the contract, proposal, plans specifications, and bond.

37-12-9. Payment into court by surety - Discharge.

The surety on the bond may pay into the registry of the court, for distribution among those who may be or become entitled thereto under the decree of the court, the penal sum named in the bond less any amount which the surety

may have paid to the state in satisfaction of the liability of the surety to the state under the bond, and then shall be entitled to be discharged from all further liability under the bond.

37-12-10. Retainers relating to contracts for public works or sewer or water main construction.

(a) Upon substantial completion of the work required by a contract aggregating in amount less than five hundred thousand dollars (\$ 500,000) with any municipality, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair, or improvement of sewers and water mains, or any public works project defined in, the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the contract price unless otherwise agreed to by the parties. Upon substantial completion of the work required by a contract aggregating in an amount of five hundred thousand dollars (\$ 500,000) or greater with any municipality, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair, or improvement of sewers and water mains, or any public works project defined in § 37-13-1, the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the contract price. In the case of periodic payments with respect to contracts less than the aggregate amount of five hundred thousand dollars (\$ 500,000), the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the approved amount of any periodic payment unless otherwise agreed to by the parties. In the case of periodic payments with respect to contracts in the aggregate amount of five hundred thousand dollars (\$ 500,000) or greater, the awarding authority may deduct from its payment a retention to secure satisfactory performance of the contractual work not exceeding five percent (5%) of the approved amount of any periodic payment.

(b) The retainage shall be paid to any contractor or subcontractor within ninety (90) days of the date the work is accepted by the awarding authority unless a dispute exists with respect to the work. If payment is not made within ninety (90) days for any reason other than a dispute, which, if resolved and it is not the fault of the contractor, interest shall be assessed at the rate of ten percent (10%) per annum on all money which is to be paid to the contractor or subcontractor.

(c) The retainage shall be paid to any contractor or subcontractor within ninety (90) days of the date his or her work is completed and accepted by the awarding authority. If payment is not made, interest shall be assessed at the rate of ten percent (10%) per annum.

(d) There shall also be deducted and retained from the contract price an additional sum sufficient to pay the estimated cost of municipal police traffic control on any public works project. Municipalities shall directly pay the officers working traffic details and shall bill and be reimbursed by the withholding authority for which the contract is being performed every thirty (30) days until the project is complete.

(e) Notwithstanding the foregoing, with respect to projects located within the town of Warren, the withholding authority shall hold an amount from the contract price which shall be reasonably sufficient to pay the estimated cost of municipal police traffic control. The withholding authority shall pay to the town of Warren within seventy-two (72) hours of written demand the actual costs of police traffic control associated with said project on an ongoing basis.

37-12-11. Substitution of securities for retained earnings.

(a) Where any public works contract as defined by § 37-13-1 provides for the retention of earned estimates by the state of Rhode Island, the contractor may, from time to time, withdraw the whole or any portion of the amount retained for payments to the contractor pursuant to the terms of the contract, upon depositing with the general treasurer either; (1) United States treasury bonds, United States treasury notes, United States treasury certificates of indebtedness, or United States treasury bills; (2) Bonds or notes of the state of Rhode Island ; or (3) Bonds of any political subdivision in the state of Rhode Island.

(b) No amount shall be withdrawn in excess of the market value of the securities at the time of deposit or of the par value of the securities, whichever is lower. The general treasurer shall, on a regular basis, collect all interest or income on the obligations so deposited and shall pay the interest or income, when and as collected, to the contractor who deposited the obligations. If the deposit is in the form of coupon bonds, the general treasurer shall deliver each coupon as it matures to the contractor. Any amount deducted by the state, or by any public department or official thereof, pursuant to the terms of the contract, from the retained payments otherwise due the contractor, shall be

deducted, first from that portion of the retained payments for which no security has been substituted, then from the proceeds of any deposited security. In the latter case, the contractor shall be entitled to receive interest, coupons, or income only from those securities which remain after the amount has been deducted. The securities so deposited shall be properly endorsed by the contractor in such manner so as to enable the general treasurer to carry out the provisions of this section.

TITLE 37

CHAPTER 12.1 SUBSTITUTION OF SECURITY FOR RETAINED EARNINGS OF ARCHITECTS AND ENGINEERS

Sections

- 37-12.1-1. Definition of Terms.
- 37-12.1-2. Substitution of security for retained earnings by designers.
- 37-12.1-3. Deduction from retained earnings.
- 37-12.1-4. Endorsement on securities.
- 37-12.1-5. Applicability.

37-12.1-1. Definition of terms.

Terms used in this chapter shall be construed as follows:

- (a) "Designers", means any person, firm or corporation duly authorized pursuant to the laws of this state to engage in the practice of architecture and/or engineering within this state.
- (b) "Public works contract" means a contract to perform design or planning services by a designer with the state or any agency or governmental subdivisions thereof.
- (c) "Retained earnings" means any moneys or earned estimates withheld from a designer pursuant to the terms of a public works contract.

37-12.1-2. Substitution of security for retained earnings by designers.

(a) Where any public works contract provides for the holding of retained earnings from a designer, the designer may from time to time withdraw the whole or any portion of the amount retained upon either depositing with the general treasurer:

- (1) United States treasury bonds, United States treasury notes, United States treasury certificates of indebtedness, or United States treasury bills;
- (2) Bonds or notes of the state of Rhode Island; or
- (3) Bonds of any political subdivision of the state of Rhode Island.

(b) With respect to the deposit of securities, the general treasurer shall, on a regular basis, collect all interest or income on the securities so deposited and shall pay the interest or income when and as collected to the designer depositing the securities. If the security is in the form of coupon bonds, the general treasurer shall deliver each coupon as it matures to the designer.

37-12.1-3. Deduction from retained earnings.

In the event that pursuant to the terms of the public works contract it is necessary to deduct any sum from retained earnings, the state or governmental unit or agency thereof shall first apply such deduction against sums not withdrawn and thereafter from the proceeds of the sale of any securities deposited or from the income earned on such securities, whichever is applicable.

37-12.1-4. Endorsement on securities.

All securities deposited with the general treasurer pursuant to this chapter shall be properly endorsed by the designer in such manner as to enable the general treasurer to carry out the provisions of this chapter.

37-12.1-5. Applicability.

This chapter shall apply to all retained earnings held pursuant to any public works contract as of [June 16, 1991].

TITLE 37

CHAPTER 13 LABOR AND PAYMENT OF DEBTS BY CONTRACTORS

Sections

- 37-13-1. "Public Works" defined
- 37-13-2. "Contractor" defined – information required.
- 37-13-3. Contractors subject to provisions – Weekly payment of employees.
- 37-13-3.1 State public works contract apprenticeship requirements
- 37-13-4. Provisions applicable to public works contracts – List of Subcontractors.
- 37-13-5. Payment for trucking or materials furnished – Withholding of sums due.
- 37-12-6. Ascertainment of prevailing rate of wages and other payments – Specification of rate in call for bids and in contract.
- 37-13-7. Specification in contract of amount and frequency of payment and wages.
- 37-13-8. Investigation and determination of prevailing wages – Filing of schedule.
- 37-13-9. Statutory provisions included in contracts.
- 37-13-10. Overtime compensation.
- 37-13-11. Posting of prevailing wage rates.
- 37-13-12. Wage records of contractors.
- 37-13-12.1. Obstruction of enforcement.
- 37-13-12.2. Subpoena powers.
- 37-13-12.3. Compelling obedience to subpoenas.
- 37-13-12.4. Penalty for violations.
- 37-13-13. Furnishing payroll record to director of labor.
- 37-13-13.1. Audits of wage records of out of state contractors and subcontractors.
- 37-13-14. Contractor's bond.
- 37-13-14.1. Enforcement – Hearings.
- 37-13-15. Review.
- 37-13-16. Termination of work on failure to pay agreed wages – Completion of work.
- 37-13-17. Private right of action to collect wages or benefits

37-13-1. "Public works" defined.

"Public works" as used in this chapter shall mean any public work consisting of grading, clearing, demolition, improvement, completion, repair, alteration, or construction of any public road or any bridge, or portion thereof, or any public building or portion thereof, or any heavy construction, or any public works projects of any nature or kind whatsoever.

37-13-2. "Contractor" defined - Information required.

The term "contractor" as used in this chapter shall mean the bidder whose bid has been accepted by an authorized agency or awarding authority as the bidder possessing the skills, ability, and integrity necessary to the faithful performance of the contract or work, and who shall certify that he or she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the contract or work. Essential information in regard to qualifications shall be submitted in such form to the awarding authority and the director of labor and training as the director of labor and training shall require. The authorized agency or awarding authority shall reserve the right to reject all bids, if it be in the public interest to do so.

37-13-3. Contractors subject to provisions - Weekly payment of employees.

All contractors, who have been awarded contracts for public works by an awarding agency or authority of the state or of any city, town, committee, or by any person or persons therein, in which state or municipal funds are used and of which the contract price shall be in excess of one thousand dollars (\$1,000) whether payable at the time of the signing of the contract or at a later date, and their subcontractors, on such public works shall pay their employees at weekly intervals and shall comply with the provisions set forth in 37-13-4 - 37-13-14, inclusive, and 37-13-16.

37-13-3.1. State public works contract apprenticeship requirements.

Notwithstanding any laws to the contrary, all general contractors and subcontractors who perform work on any public works contract awarded by the state after passage of this act and valued at one million dollars (\$ 1,000,000) or more shall employ apprentices required for the performance of the awarded contract. The number of apprentices shall comply with the apprentice to journeyman ratio for each trade approved by the apprenticeship council of the department of labor and training. To the extent that any of the provisions contained in this section conflict with the requirements for federal aid contracts, federal laws and regulations shall control.

37-13-4. Provisions applicable to public works contracts - Lists of subcontractors.

All public works shall be done by contract, subject to the same provisions of law relating thereto and to the letting thereof, which are applicable to similar contracts of the awarding authority or authorized agency, hereinafter called the "proper authority," in the general location where the work is to be performed and which are not contrary to the provisions of 37-13-1 - 37-13-14, and 37-13-16. Each contractor after the award of a contract for public works shall submit to the proper authority a list of his or her subcontractors of any part or all of the work. The list shall be submitted in such manner or form as the proper authority shall uniformly require from contractors in all public works.

37-13-5. Payment for trucking or materials furnished - Withholding of sums due.

A contractor or subcontractor on public works authorized by a proper authority shall pay any obligation or charge for trucking and material which have been furnished for the use of the contractor or subcontractor, in connection with the public works being performed by him or her, within ninety (90) days after the obligation or charge is incurred or the trucking service has been performed or the material has been delivered to the site of the work, whichever is later. When it is brought to the notice of the proper authority in a city or town, or the proper authority in the state having supervision of the contract, that the obligation or charge has not been paid by the contractor or subcontractor, the proper authority may deduct and hold for a period not exceeding sixty (60) days, from sums of money due to the contractor or subcontractor, the equivalent amount of such sums certified by a trucker or material man creditor as due him or her, as provided in this section, and which the proper authority determines is reasonable for trucking performed or materials furnished for the public works.

37-13-6. Ascertainment of prevailing rate of wages and other payments - Specification of rate in call for bids and in contract.

Before awarding any contract for public works to be done, the proper authority shall ascertain from the director of labor and training the general prevailing rate of the regular, holiday, and overtime wages paid and the general prevailing payments on behalf of employees only, to lawful welfare, pension, vacation, apprentice training, and educational funds (payments to the funds must constitute an ordinary business expense deduction for federal income tax purposes by contractors) in the city, town, village, or other appropriate political subdivision of the state in which the work is to be performed, for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract for the public works. The proper authority shall, also, specify in the call for bids for the contract and in the contract itself the general prevailing rate of the regular, holiday, and overtime wages paid and the payments on behalf of employees only, to the welfare, pension, vacation, apprentice training, and education funds existing in the locality for each craft, mechanic, teamster, laborer, or type of worker needed to execute the contract or work.

37-13-7. Specification in contract of amount and frequency of payment of wages.

Every call for bids for every contract in excess of one thousand dollars (\$ 1,000), to which the state of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the state of Rhode Island or any political subdivision thereof, or any public agency or quasi-public agency and which requires or involves the employment of employees, shall contain a provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the state of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages" , "scale of wages" , "wage rates" , "minimum wages" , and "prevailing wages" shall include:

(1) The basic hourly rate of pay; and

(2) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits ; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions, and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(c) The term "employees" , as used in this section, shall include employees of contractors or subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsections (a) and (b) .

(d) The terms "public agency" and "quasi-public agency" shall include, but not be limited to, the Rhode Island industrial recreational building authority, the Rhode Island economic development corporation, the Rhode Island airport corporation, the Rhode Island industrial facilities corporation, the Rhode Island refunding bond authority, the Rhode Island housing and mortgage finance corporation, the Rhode Island resource recovery corporation, the Rhode Island public transit authority, the Rhode Island student loan authority, the water resources board corporate, the Rhode Island health and education building corporation, the Rhode Island turnpike and bridge authority, the Narragansett Bay water quality management district commission, Rhode Island telecommunications authority, the

convention center authority, the board of governors for higher education, the board of regents for elementary and secondary education, the capital center commission, the housing resources commission, the Quonset Point-Davisville management corporation, the Rhode Island children's crusade for higher education, the Rhode Island depositors economic protection corporation, the Rhode Island lottery commission, the Rhode Island partnership for science and technology, the Rhode Island public building authority, and the Rhode Island underground storage tank board.

37-13-8. Investigation and determination of prevailing wages - Filing of schedule.

The director of labor and training shall investigate and determine the prevailing wages and payments made to or on behalf of employees, as set forth in § 37-13-7, paid in the trade or occupation in the city, town, village, or other appropriate political subdivision of the state and keep a schedule on file in his or her office of the customary prevailing rate of wages and payments made to or on behalf of the employees which shall be open to public inspection. In making a determination, the director of labor may adopt and use such appropriate and applicable prevailing wage rate determinations as have been made by the secretary of labor of the United States of America in accordance with the Davis-Bacon Act, as amended, 40 U.S.C. § 276a; provided, however, that each contractor awarded a public works contract after July 1, 2007 shall contact the department of labor and training on or before July first of each year, for the duration of such contract to ascertain the prevailing wage rate of wages on a hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done each year and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee every July first.

37-13-9. Statutory provisions included in contracts.

A copy of 37-13-5, 37-13-6, and 37-13-7 shall be inserted in all contracts for public works awarded by the state or any city or town, committee, an authorized agency or awarding authority thereof, or any person or persons in their behalf in which state or municipal funds are used if the contract price be in excess of one thousand dollars (\$1,000).

37-13-10. Overtime compensation.

Labor performed under the provisions of 37-13-1 - 37-13-16, inclusive, during the period of forty (40) hours in any one week and during the period of eight (8) hours in any one day, shall be considered a legal week's work or a legal day's work, as the case may be, and any number of hours of employment in any one week greater than the number of forty (40) hours or in any one day greater than the number of eight (8) hours shall be compensated at the prevailing rate of wages for overtime employment; provided, however, when the director of labor and training has determined in the investigation provided for in 37-13-7 and 37-13-8 that there is a prevailing practice in a city, town, or other appropriate political subdivision to pay an overtime rate of wages for work of any craft, mechanic, teamster, laborer, or type of worker needed to execute the work other than hours worked in any one week greater than the number of forty (40) or in hours worked in any one day greater than the number of eight (8), then the prevailing practice shall determine the legal workday and the legal workweek in the city or town for the work and the prevailing rate of overtime wages shall be paid for such work in excess of that legal workday or week, as the case may be.

37-13-11. Posting of prevailing wage rates.

Each contractor awarded a contract for public works with a contract price in excess of one thousand dollars (\$ 1,000), and each subcontractor who performs work on those public works, shall post in conspicuous places on the project, where covered workers are employed, posters which contain the current, prevailing rate of wages and the current, prevailing rate of payments to the funds required to be paid for each craft or type of worker employed to execute the contract as set forth in §§ 37-13-6 and 37-13- 7, and the rights and remedies of any employee described in § 37-13-17 for nonpayment of any wages earned pursuant to this chapter. Posters shall be furnished to contractors and subcontractors by the director of labor and training, who shall determine the size and context thereof from time to time, at the time a contract is awarded. A contractor or subcontractor who fails to comply with the provisions of this section shall be deemed guilty of a misdemeanor and shall pay to the director of labor and training one hundred dollars (\$ 100) for each calendar day of noncompliance as determined by him or her. Contracts set forth in this section shall not be awarded by the state, any city, town, or any agency thereof until the director of labor and training has prepared and delivered the posters to the division of purchases, if the state or any agency thereof is the proper authority, or to the city, town, or an agency thereof, if it is the proper authority, and the contractor to whom the contract is to be awarded.

37-13-12. Wage records of contractors.

Each contractor awarded a contract with a contract price in excess of one thousand dollars (\$1,000) for public works, and each subcontractor who performs work on those public works, shall keep an accurate record showing the name, occupation, and actual wages paid to each worker employed by him or her and the payments to all the employee funds specified in sections 37-13-6 and 37-13-7 by him or her in connection with the contract or work. The director and his or her authorized representatives shall have the right to enter any place of employment at all reasonable hours for the purpose of inspecting the wage records and seeing that all provisions of this chapter are complied with.

37-13-12.1. Obstruction of enforcement.

Any effort of any employer to obstruct the director and his or her authorized representatives in the performance of their duties shall be deemed a violation of this chapter and punishable as such.

37-13-12.2. Subpoena powers.

The director and his or her authorized representatives shall have power to administer oaths and examine witnesses under oath, issue subpoenas, subpoenas duces tecum, compel the attendance of witnesses, and the production of papers, books, accounts, records, payrolls, documents, and testimony, and to take depositions and affidavits in any proceeding before the director.

37-13-12.3. Compelling obedience to subpoenas.

In case of failure of any person to comply with any subpoena lawfully issued, or subpoena duces tecum, or on the refusal of any witness to testify to any matter regarding which he may be lawfully interrogated, it shall be the duty of the superior court, or any judge thereof, on application by the director, to compel obedience by proceedings in the nature of those for contempt.

37-13-12.4. Penalty for violations.

Except as otherwise provided in this chapter, any employer who shall violate or fail to comply with any of the provisions of this chapter shall be guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars (\$500) nor more than one thousand dollars (\$1,000) for each separate offense, or by imprisonment of up to one year, or by both fine and imprisonment. Each day of failure to pay wages due an employee at the time specified in this chapter shall constitute a separate and distinct violation.

37-13-13. Furnishing payroll record to director of labor.

(a) Every contractor and subcontractor awarded a contract for public works as defined by this chapter shall furnish a certified copy of his or her payroll records of his or her employees employed on the project to the awarding authority on a monthly basis for all work completed in the preceding month on a uniform form prescribed by the director of labor and training. Notwithstanding the foregoing, certified payrolls for department of transportation public works may be submitted on the federal payroll form, provided that, when a complaint is being investigated, the director or his or her designee may require that a contractor resubmit the certified payroll on the uniform department form.

(b) Awarding authorities, contractors and subcontractors shall provide any and all payroll records to the director of labor and training within ten (10) days of their request by the director or his or her designee.

(c) In addition, every contractor and subcontractor shall maintain on the site where public works are being constructed and the general or primary contract is one million dollars (\$1,000,000) or more, a daily log of employees employed each day on the public works project. The log shall include, at a minimum, for each employee his or her name, primary job title, and employer and shall be kept on a uniform form prescribed by the director of labor and training. Such log shall be available for inspection on the site at all times by the awarding authority and/or the director of the department of labor and training and his or her designee. This subsection shall not apply to road, highway, or bridge public works projects.

(d) The director of labor and training may promulgate reasonable rules and regulations to enforce the provisions of this section.

(e) The awarding authority of any public works project shall withhold the next scheduled payment to any contractor or subcontractor who fails to comply with the provisions of subsections (a) or (b) above and shall also

notify the director of labor and training. The awarding authority shall withhold any further payments until such time as the contractor or subcontractor has fully complied. If it is a subcontractor who has failed to comply, the amount withheld shall be proportionate to the amount attributed or due to the offending subcontractor as determined by the awarding authority. The department may also impose a penalty of up to five hundred dollars (\$500) for each calendar day of noncompliance with this section, as determined by the director of labor and training. Mere errors and/or omissions in the daily logs maintained under subsection (c) shall not be grounds for imposing a penalty under this subsection.

37-13-13.1. Audits of wage records of out of state contractors and subcontractors.

Out of state contractors or subcontractors who perform work on public works in this state authorize the director of labor and training to conduct wage and hour audits of their payroll records pursuant to the provisions of chapter 14 of title 28.

37-13-14. Contractor's bond.

The state or any city, town, agency, or committee therein awarding contracts for public works shall require the contractor awarded a contract with a contract price in excess of fifty thousand dollars (\$ 50,000) for public works to file with the proper authority good and sufficient bond with surety furnished by any surety company authorized to do business in the state, conditioned upon the faithful performance of the contract and upon the payment for labor performed and material furnished in connection therewith, a bond to contain the terms and conditions set forth in chapter 12 of this title, and to be subject to the provisions of that chapter. Waiver of the bonding requirements of this section is expressly prohibited.

37-13-14.1. Enforcement - Hearing

(a) Before issuing an order or determination, the director of labor and training shall order a hearing thereon at a time and place to be specified, and shall give notice thereof, together with a copy of the complaint or the purpose thereof, or a statement of the facts disclosed upon investigation, which notice shall be served personally or by mail on any person, firm, or corporation affected thereby. The person, firm, or corporation shall have an opportunity to be heard in respect to the matters complained of at the time and place specified in the notice, which time shall be not less than five (5) days from the service of the notice personally or by mail. The hearing shall be held within ten (10) days from the order of hearing. The hearing shall be conducted by the director of labor and training or his or her designee. The hearing officer in the hearing shall be deemed to be acting in a judicial capacity and shall have the right to issue subpoenas, administer oaths, and examine witnesses. The enforcement of a subpoena issued under this section shall be regulated by Rhode Island civil practice law and rules. The hearing shall be expeditiously conducted, and upon such hearing, the hearing officer shall determine the issues raised thereon and shall make a determination and enter an order within ten (10) days of the close of the hearing, and forthwith serve a copy of the order, with a notice of the filing thereof, upon the parties to the proceeding, personally or by mail. The order shall dismiss the charges or direct payment of wages or supplements found to be due, including interest at the rate of twelve percent (12%) per annum from the date of the underpayment to the date of payment, and may direct payment of reasonable attorney's fees and costs to the complaining party.

(b) In addition to directing payment of wages or supplements including interest found to be due, the order shall also require payment of a further sum as a civil penalty in an amount up to three times the total amount found to be due. Further, if the amount of salary owed to an employee pursuant to this chapter but not paid to the employee in violation of thereof exceeds five thousand dollars (\$5,000), it shall constitute a misdemeanor and shall be referred to the office of the attorney general. The misdemeanor shall be punishable for a period of not more than one year in prison and/or fined not more than one thousand dollars (\$1,000). In assessing the amount of the penalty, due consideration shall be given to the size of the employer's business, the good faith of the employer, the gravity of the violation, the history of previous violations, and the failure to comply with recordkeeping or other nonwage requirements. The surety of the person, firm, or corporation found to be in violation of the provisions of this chapter shall be bound to pay any penalties assessed on such person, firm, or corporation. The penalty shall be paid to the department of labor and training for deposit in the state treasury; provided, however, it is hereby provided that the general treasurer shall establish a dedicated "prevailing wages enforcement fund" for the purpose of depositing the penalties paid as provided herein. There is hereby appropriated to the annual budget of the department of labor and training the amount of the fund collected annually under this section, to be used at the direction of the director of labor and training for the sole purpose of enforcing prevailing wage rates as provided in this chapter.

(c) For the purposes of this chapter, each day or part thereof of violation of any provision of this chapter by a person, firm, or corporation, whether the violation is continuous or intermittent, shall constitute a separate and succeeding violation.

(d) In addition to the above, any person, firm, or corporation found in violation of any of the provisions of this chapter by the director of labor and training, an awarding authority, or the hearing officer, shall be ineligible to bid on, or be awarded work by, an awarding authority or perform any such work for a period of no less than eighteen (18) months and no more than thirty-six (36) months from the date of the order entered by the hearing officer. Once a person, firm, or corporation is found to be in violation of this chapter, all pending bids with any awarding authority shall be revoked, and any bid awarded by an awarding authority prior to the commencement of the work shall also be revoked.

(e) In addition to the above, any person, firm, or corporation found to have committed two (2) or more willful violations in any period of eighteen (18) months of any of the provisions of this chapter by the hearing officer, which violations are not arising from the same incident, shall be ineligible to bid on, or be awarded work by, an awarding authority or perform any work for a period of sixty (60) months from the date of the second violation.

(f) The order of the hearing officer shall remain in full force and effect unless stayed by order of the superior court.

(g) The director of labor and training, awarding authority, or hearing officer shall notify the bonding company of any person, firm, or corporation suspected of violating any section of this chapter. The notice shall be mailed certified mail and shall enumerate the alleged violations being investigated.

(h) In addition to the above, any person, firm, or corporation found to have willfully made a false or fraudulent representation on certified payroll records shall be referred to the office of the attorney general. A first violation of this section shall be considered a misdemeanor and shall be punishable for a period of not more than one year in prison and/or fined one thousand dollars (\$1,000). A second or subsequent violation of this section shall be considered a felony and shall be punishable for a period of not more than three (3) years imprisonment, a fine of three thousand dollars (\$3,000), or both. Further, any person, firm, or corporation found to have willfully made a false or fraudulent representation on certified payroll records shall be required to pay a civil penalty to the department of labor and training in an amount of no less than two thousand dollars (\$2,000) and not greater than fifteen thousand dollars (\$15,000) per representation.

37-13-15. Review.

(a) There is hereby created an appeals board which shall be comprised of three (3) members who shall be appointed by the governor; provided, however, that each member of the appeals board shall have at least five (5) years experience with prevailing wage rates as they apply to the construction industry. The members of such appeals board shall serve without compensation. The members of the appeals board shall be appointed for terms of three (3) years except that of the three (3) members originally appointed by each of the appointing authorities; one (1) shall be appointed for a term of one (1) year, one (1) shall be appointed for a term of two (2) years and one (1) for a term of three (3) years.

(b) Any person aggrieved by any action taken by the director of labor and training or his or her designated hearing officer under the authority of this chapter, or by the failure or refusal of the director of labor and training to take any action authorized by this chapter, may obtain a review thereof for the purpose of obtaining relief from the action or lack of action by filing a petition for administrative review and relief, to the appeals board as provided herein. The petition for administrative review shall be filed within twenty (20) days of the action taken by the director of labor and training or designated hearing officer: The petition for administrative review shall be heard within ten (10) days of the date of filing. An aggrieved person under this section shall include:

- (1) Any person who is required to pay wages to his or her employees or make payments to a fund on behalf of his or her employees, as provided in this chapter;
- (2) Any person who is required to be paid wages for his or her labor or on whose behalf payments are required to be paid to funds, as provided by this chapter;
- (3) The lawful collective bargaining representative of a person defined in subdivision (2) above;
- (4) A trade association of which a person defined in subdivision (1) above is a member;
- (5) A proper authority as defined in this chapter;

- (6) A contractor who submitted a bid for work to be or which has been awarded under the provisions of this chapter or a trade association of which he or her is a member, and
 - (7) A labor organization which has one or more written collective bargaining agreements with one or more employers or a trade association which sets forth the hours, wages, and working conditions of a craft, mechanic, teamster, or type of worker needed to execute the work, as provided in this chapter to the extent that it would be affected by the action or the failure to act of the director of labor and training or the hearing officer.
- (c) Any aggrieved person as defined herein may obtain a review of a decision of the appeals board by filing a petition in the superior court in Providence county pursuant to the provisions of the administrative procedures act, praying for review and relief and the petition shall follow the course of and be subject to the procedures for causes filed in the court.
- (d) The director is hereby empowered to enforce his or her decision and/or the decision of the appeals board in the superior court for the county of Providence.

37-13-16. Termination of work on failure to pay agreed wages - Completion of work.

Every contract within the scope of this chapter shall contain the further provision that in the event it is found by the director of labor and training that any employee employed by the contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the awarding party may, by written notice to the contractor or subcontractor, terminate his or her right as the case may be, to proceed with the work, or such part of the work as to which there has been a failure to pay the required wages, and shall prosecute the work to completion by contract or otherwise, and the contractor and his or her sureties shall be liable to the awarding party for any excess costs occasioned the awarding authority thereby.

37-13-17. Private right of action to collect wages or benefits

(a) An employee or former employee, or any organization representing such an employee or former employee, of a contractor or subcontractor may bring a civil action for a violation of § 37-13-7 for appropriate injunctive relief, or actual damages, or both within three (3) years after the occurrence of the alleged violation. An action commenced pursuant to this section, may be brought in the superior court for the county where the alleged violation occurred, the county where the complainant resides, or the county where the person against whom in the civil complaint is filed resides or has their principal place of business. Any contractor or subcontractor who violates the provisions of § 37-13-7 shall be liable to the affected employee or employees in the amount of unpaid wages or benefits, plus interest. A civil action filed in court under this section may be instituted instead of, but not in addition to the director of labor and training enforcement procedures authorized by § 37-13-14.1, provided the civil action is filed prior to the date the director of labor and training issues notice of an administrative hearing.

(b) An employer's responsibility and liability is solely for its own employees.

(c) An action instituted pursuant to this section may be brought by one or more employees or former employees on behalf of himself/herself or themselves and other employees similarly situated, except that no employee shall be a party plaintiff to any such action unless he/she gives his/her consent in writing to become such a party and such consent is filed in the court in which such action is brought.

(d) In an action filed under this section in which the plaintiff prevails, the court shall, in addition to any judgment awarded to the plaintiff, require reasonable attorneys' fees and the costs of the action to be paid by the defendant.

(e) The court in an action filed under this section shall award affected employees or former employees liquidated damages in an amount equal to two (2) times the amount of unpaid wages or benefits owed. Unpaid fringe benefit contributions owed pursuant to this section in any form shall be paid to the appropriate benefit fund, however, in the absence of an appropriate fund the benefit shall be paid directly to the individual.

(f) The filing of a civil action under this section shall not preclude the director of labor and training from referring a matter to the attorney general as provided in § 37-13-14.1(b), from prohibiting a contractor or subcontractor from bidding on or otherwise participating in contracts as provided in § 37-13-14.1(d), (e) and (h), or from prohibiting termination of work on failure to pay agreed wages pursuant to § 37-13-16.

(g) Any person, firm, or corporation found to have willfully made a false or fraudulent representation in connection with wage obligations owed on a contract shall be required to pay a civil penalty to the department of labor and training in an amount of no less than one thousand dollars (\$ 1,000) and not greater than three thousand dollars (\$ 3,000) per representation. Such penalties shall be recoverable in civil actions filed pursuant to this section. For purposes of this subsection "willfully" shall mean representations that are known to be false, or representations made with deliberate ignorance or reckless disregard for their truth or falsity.

(h) An employer shall not discharge, threaten, or otherwise discriminate against an employee, or former employee, regarding compensation terms, conditions, locations or privileges of employment because the employee or former employee, or a person or organization acting on his or her behalf: (1) Reports or makes a complaint under this section; or otherwise asserts his or her rights under this section; and/or (2) Participates in any investigation, hearing or inquiry held by the director of labor and training under § 37-13-14.1. In the event a contractor or subcontractor retaliates or discriminates against an employee in violation of this section, the affected employee may file an action in any court of competent jurisdiction and the court shall order reinstatement and/or restitution of the affected employee, as appropriate, with back pay to the date of the violation, and an additional amount in liquidated damages equal to two (2) times the amount of back pay and reasonable attorneys' fees and costs.

(i) If any one or more subsections of this section shall for any reason be adjudged unconstitutional or otherwise invalid, the judgment shall not affect, impair, or invalidate the remaining subsections.

PREVAILING WAGE RATES

(Appropriate wage rate to be inserted by bidder in specifications)

For a copy of the appropriate wage rate, contact:

**R.I. Department of Labor and Training
Center General Complex
1511 Pontiac Avenue
Cranston, RI 02920**

TITLE 37

CHAPTER 14.1 MINORITY BUSINESS ENTERPRISE

Sections

37-14.1-1.	Purpose.
37-14.1-2.	Applicability.
37-14.1-3.	Definitions.
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37-14.1-5.	Discrimination prohibited.
37-14.1-6.	Minority business enterprise guidelines.
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37-14.1-8.	Sanctions.

37-14.1-1. Purpose.

The purpose of this chapter is to carry out the state's policy of supporting the fullest possible participation of firms owned and controlled by minorities and women (MBE's), in state funded and state directed public construction programs and projects and in state purchases of goods and services. This includes assisting MBE's throughout the life of contracts in which they participate.

37-14.1-2. Applicability.

This chapter shall apply to any and all state purchasing, including, but not limited to the procurement of goods, services, construction projects, or contracts funded in whole or in part by state funds, or funds which, in accordance with a federal grant or otherwise, the state expends or administers or in which the state is a signatory to the construction contract.

37-14.1-3. Definitions.

- (a) "Affirmative action" means taking specific steps to eliminate discrimination and its effects, to ensure nondiscriminatory results and practices in the future, and to involve minority business enterprises fully in contracts and programs funded by the state.
- (b) "Compliance" means the condition existing when a contractor has met and implemented the requirements of this chapter.
- (c) "Contract" means a mutually binding legal relationship or any modification thereof obligating the seller to furnish supplies or services, including construction, and the buyer to pay for them. For purposes of this chapter, a lease is a contract.
- (d) "Contractor" means one who participates, through a contract or subcontract, in any procurement or program covered by this chapter, and includes lessees and material suppliers.
- (e) "Minority" means a person who is a citizen or lawful permanent resident of the United States and who is:
 - (1) Black (a person having origins in any of the black racial groups of Africa);
 - (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
 - (3) Portuguese (a person of Portuguese, Brazilian, or other Portuguese culture or origin, regardless of race);
 - (4) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands);
 - (5) American Indian and Alaskan Native (a person having origins in any of the original peoples of North America.); or
 - (6) Members of other groups, or other individuals, found to be economically and socially disadvantaged by the Small Business Administration under section 8(a) of the Small Business Act, as amended [15 U.S.C. 637(a)].
- (f) "Minority business enterprise" or "MBE" means a small business concern, as defined pursuant to section 3 of the federal Small Business Act [15 U.S.C. 632] and implementing regulations, which is owned and controlled by one or more minorities or women. For the purposes of this chapter, owned and controlled means a business.

- (1) Which is at least fifty-one percent (51%) owned by one or more minorities or women or, in the case of a publicly owned business, at least fifty-one percent (51%) of the stock of which is owned by one or more minorities or women; and
- (2) Whose management and daily business operations are controlled by one or more such individuals.

(g) "MBE coordinator" means the official designated to have overall responsibility for promotion of minority business enterprise in his or her departmental element.

(h) "Noncompliance" means the condition existing when a recipient or contractor has failed to implement the requirements of this chapter.

37-14.1-4. Policy.

It is the policy of the state of Rhode Island that minority business enterprises (MBE's) shall have the maximum opportunity to participate in the performance of procurements and projects outlined in 37-14.1-2.

37-14.1-5. Discrimination prohibited.

No person shall be excluded from participation in, denied the benefits of, or otherwise discriminated against in connection with the award and performance of any project covered by this chapter, on the grounds of race, color, national origin, or sex.

37-14.1-6. Minority business enterprise participation.

Minority business enterprises shall be included in all procurements and construction projects under this chapter and shall be awarded a minimum of ten percent (10%) of the dollar value of the entire procurement or project. The director of the department of administration is further authorized to establish by rules and regulation formulas for giving minority business enterprises a preference in contract and subcontract awards.

37-14.1-7. Establishment of criteria and guidelines.

The director of the department of administration shall establish, by rule and regulations adopted in accordance with chapter 35 of title 42, standards which shall determine whether a construction project is covered by this chapter, compliance formulas, procedures for implementation, and procedures for enforcement which are not inconsistent with 49 CFR 23 of the federal regulations. As to Rhode Island department of transportation contracts, the director of administration may delegate this authority to the director of transportation.

37-14.1-8. Sanctions.

(a) The director of the department of administration shall have the power to impose sanctions upon contractors not in compliance with this chapter and shall include but not be limited to:

- (1) Suspension of payments;
- (2) Termination of the contract;
- (3) Recovery by the state of ten percent (10%) of the contract award price as liquidated damages; and
- (4) Denial of right to participate in future projects for up to three (3) years.

(b) As to Rhode Island department of transportation contracts, the director of the department of administration may delegate this authority to the director of transportation.

RHODE ISLAND REQUIREMENTS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES
IN STATE FUNDED AND DIRECTED PUBLIC CONSTRUCTION PROJECTS, CONSTRUCTION
CONTRACTS AND PROCUREMENT CONTRACTS

In accordance with RI Gen. Law § 37-14.1-1, it is the policy of the State of Rhode Island to support the fullest possible participation of firms owned and controlled by minorities (MBEs) and women (WBEs). Pursuant to §§ 37-14.1-2 and 37-14.1-6, MBEs and WBEs shall be included in all state purchasing, including, but not limited to, the procurement of goods, services, construction projects, or contracts funded in whole or in part with state funds, or funds which, in accordance with a federal grant or otherwise, the state expends or administers. MBEs and WBEs shall be awarded a minimum of ten percent (10%) of the dollar value of the entire procurement or project. MBE participation credit shall only be granted for firms duly certified as MBEs or WBEs by the State of Rhode Island, Department of Administration, Office of Diversity, Equity and Opportunity, MBE Compliance Office (MBECO). The current directory of firms certified as MBEs or WBEs may be accessed at <http://odeo.ri.gov/offices/mbeco/mbe-wbe.php> or by contacting Elvys Ruiz at the MBECO at (401) 574-8253 or via email at Elvys.Ruiz@doa.ri.gov

TITLE 37

CHAPTER 16 PUBLIC WORKS ARBITRATION

Sections

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37-16-27.	Application of sureties.

37-16-1. Short title.

This chapter shall be known as the "Public Works Arbitration Act".

37-16-2. Contract provision for arbitration.

(a) A provision in a written contract executed on or after January 1, 1962, for the construction, alteration, repair, or painting of any public building, sewer, highway, bridge, water treatment or disposal projects one party to which is the state, a city, a town, or an authority, a board, a public corporation, or any similar body created by statute or ordinance or any committee, agency, or subdivision of any of them, to settle by arbitration any dispute or claim arising out of or concerning the performance or interpretation of the contract shall be valid, irrevocable, and enforceable, save upon grounds existing in law or equity for the revocation of the contract.

(b) (1) Every contract for the construction, alteration, repair, painting, or demolition of any public building, sewer, water treatment or disposal project, highway, or bridge one party to which is the state, a city, a town, or an authority, a board, a public corporation, or any similar body created by statute or ordinance or any committee, agency, or subdivision of any of them which has a contract price of ten thousand dollars (\$ 10,000) or more and which is executed on or after July 1, 1967, shall contain a provision for arbitration of disputes and claims arising out of or concerning the performance or interpretation of the contract as follows:

(2) "All claims, disputes, and other matters in question arising out of or relating to this contract or the performance or interpretation thereof shall be submitted to arbitration. Arbitration shall be commenced by a demand in writing made by one party to the contract upon the other within a reasonable time after the dispute, claim, or other matter in question arose but in no event after payment in full of the contract price has been made and accepted. The written demand shall contain a statement of the question to be arbitrated and a detailed statement of each item or matter in

dispute and the name of the arbitrator appointed by that party. The other party to the contract within ten (10) days of the receipt of the written demand shall appoint an arbitrator and give notice in writing thereof to the party who commenced arbitration. The two (2) arbitrators appointed by the parties shall within ten (10) days of the date of the appointment of the second arbitrator select a third arbitrator who shall be designated as chairperson and who immediately shall give written notice to the parties of his or her appointment. The third arbitrator shall select a time, date, and place for hearing and give each party five (5) days notice in writing thereof. The date for hearing shall not be more than fifteen (15) days after the date of appointment of the third arbitrator. The award shall be made promptly by the arbitrators and, unless otherwise agreed by the parties or specified by law, no later than thirty (30) days from the date of closing the hearing, or, if oral hearings have been waived, from the date of the transmittal of the final statements and proofs to the arbitrators. The award shall be in writing and shall be signed by a majority of the arbitrators. It shall be executed in the manner required by law. The arbitrator shall provide a written explanation of the reasoning for the award. In the event the party of whom arbitration is demanded shall fail to appoint his or her arbitrator within the time specified or the two (2) arbitrators appointed by the parties are unable to agree on an appointment of the third arbitrator within the time specified, either party may petition the presiding justice of the superior court to appoint a single arbitrator who shall hear the parties and make an award as provided herein. The petitioner shall give five (5) days notice in writing to the other party before filing his or her petition."

(c) Any dispute involving claims less than one hundred thousand dollars (\$ 100,000) and associated with construction of a highway or bridge as referred to in subsection (b) shall be submitted to arbitration. Any dispute involving claims of one hundred thousand dollars (\$ 100,000) or more and associated with construction of a highway or bridge as referred to in subsection (b) shall only be arbitrated with the consent of the parties. If the parties fail to consent to arbitration and the state of Rhode Island is a party to the dispute, then the claim will proceed in accordance with § 37-13.1-1.

(d) For the purposes of this section, the term "claims" shall not mean the aggregate amount sought under the contract or in the arbitration, but shall refer specifically to each item or matter in dispute for which additional compensation is sought or for each item for which a credit is sought.

(e) Notwithstanding subsection (a) or (b) of this section, if any contract except for highway and bridge contracts provides for an arbitration procedure, and a method of appointment of an arbitrator or arbitrators, that method shall be followed instead of the method provided in subsection (b) of this section.

(f) This section shall apply to all written contracts executed on or after January 1, 1986.

37-16-3. Application to subcontracts.

When a contract described in 37-16-2 is in effect and any party thereto has entered into a subcontract to perform part of the work and/or furnish any materials in connection with the work described in the contract and the terms of the subcontract provide for arbitration of a dispute or claim concerning the performance or interpretation thereof, or the subcontract, expressly or by reference to the terms of the contract, provides that the parties to the subcontract shall comply with the arbitration provisions of the contract, the following shall apply when a request is made or an order of court is entered for arbitration either under the terms of the contract or subcontract.

(a) When arbitration under the contract may adversely affect the interest of a party thereto because of the effect of an award of the arbitrator or arbitrators upon the performance or interpretation of the terms of a subcontract to which he or she is also a party, he or she may require any other party or all other parties to the subcontract to become a party or parties to the arbitration.

(b) When a party to a subcontract makes a demand or an order of court is entered for arbitration under the terms of the subcontract which comply with the provision of this chapter, any party thereto who is also a party to the contract and whose rights under the contract may be adversely affected by the effect of an award of the arbitrator or arbitrators upon the performance or interpretation of the contract, may require any other party to the contract to become a party to the arbitration.

(c) When a party to a contract or to a subcontract is made a party to arbitration by virtue of the provisions of this section, he or she shall have all the rights of a party to arbitration as provided in this chapter except the appointment of an arbitrator. Provided, however, he or she may object to the arbitrators appointed by the parties in which event a single arbitrator shall be appointed as provided in 37-16-2 in the petition of either of the original parties to arbitration. The award of the arbitrator or arbitrators shall be valid and shall be binding on him or her to

the extent that it affects the performance or interpretation of the contract and/or subcontract to which he or she is a party. The award of the arbitrator or arbitrators may be enforced, modified, or vacated as this chapter provides an award made in an arbitration of a contract described in 37-16-2 may be enforced, modified, or vacated.

37-16-4. Stay of legal proceedings pending arbitration.

If any suit or proceedings be brought upon any issue referable to arbitration under contract in writing providing for arbitration, the court in which the suit is pending upon being satisfied that the issue involved in the suit or proceedings is referable to arbitration under the contract, shall on application of one of the parties, stay the trial of the action until arbitration has been held.

37-16-5. Jurisdiction of superior court to enforce arbitration provision and awards.

The entering into a contract in writing providing for arbitration shall be deemed a consent of all parties, including those enumerated in 37-16-2, thereto to the jurisdiction of the superior court of this state to enforce the arbitration provision and any award made pursuant to that provision. A party aggrieved by the failure, neglect, or refusal of another to perform under a contract providing for arbitration, may petition the superior court, or a judge thereof, for an order directing that arbitration proceed in the manner provided for in the contract. Five (5) days' notice in writing of the application shall be served upon the party in default. Service thereof shall be made in the manner specified in the contract, and if no manner specified therein, then in the manner provided by law for personal service of a summons, within or without the state, or substituted service of a summons, or upon satisfactory proof that the party aggrieved has been or will be unable with due diligence to make service in any of the foregoing manners, then notice shall be served in such manner as the court or judge may direct. A judge of the superior court shall hear the parties and upon being satisfied that there is no substantial issue as to the making of the contract or the failure to comply therewith, the court, or the judge thereof, hearing the application, shall make an order directing the parties to proceed to arbitration in accordance with the terms of the contract.

37-16-6. Trial upon evidence of substantial issue.

If evidentiary facts are set forth raising a substantial issue as to the making of the contract or the failure to comply therewith, the court, or the judge thereof, shall proceed immediately to the trial of the issues. Whenever an immediate trial is ordered, the order therefor shall provide that, if the court finds that a written contract providing for arbitration was made, and that there was a failure to comply therewith, the parties shall proceed with the arbitration in accordance with the terms of the contract and the order shall provide that if the court finds that there was no contract or failure to comply with the contract, then the proceeding shall be dismissed.

37-16-7. Method of appointing arbitrators or umpire.

If in the contract providing for arbitration, provision is made for a method of naming or appointing an arbitrator or arbitrators or an umpire, that method shall be followed, but if no method be provided therein, then the parties to the contract shall agree to the method of naming or appointing an arbitrator or arbitrators or an umpire and if the parties shall fail to agree, then the court or the judge thereof upon application of either of the parties after due notice to the other party shall appoint an arbitrator to hear the dispute.

37-16-8. Scheduling and notice of arbitration hearing - Adjournment.

Subject to the terms of the contract, if any are specified therein, the arbitrators selected as prescribed in this chapter must appoint a time and place for the hearing of the matters submitted to them, and must cause notice thereof to be given to each of the parties. They, or a majority of them, may adjourn the hearing from time to time upon the application of either party for good cause shown or upon their own motion, but not beyond the day fixed if a date in the contract, if any, for rendering their award, unless the time so fixed is extended by the written consent of the parties to the contract or their attorney, or the parties have continued with the arbitration without objection to such adjournment.

37-16-9. Power of court to direct prompt hearing.

The court shall have power to direct the arbitrators to proceed promptly with the hearing and determination of the dispute, claim, or matter in question.

37-16-10. Arbitrator's oath - Waiver.

Before hearing any testimony, arbitrators selected as prescribed in this chapter must be sworn, by an officer authorized by law to administer an oath, faithfully and fairly to hear and examine the claim, dispute, or matter in question and to make a just award according to the best of their understanding, unless the oath is waived by the

written consent of the parties to the contract or their attorneys or the parties have continued with the arbitration without objection to the failure of the arbitrators to take the oath.

37-16-11. Powers of arbitrators.

The arbitrator or arbitrators selected as prescribed in this chapter, may require any person to attend before them as a witness; and he or she and they have, and each of them has, the same powers with respect to all the proceedings before them which are conferred upon a board or a member of a board authorized by law to hear testimony. All the arbitrators selected as prescribed in this chapter must meet together and hear all the allegations and proofs of the parties; but an award by a majority of them is valid.

37-16-12. Fees.

In any proceeding under this chapter, unless the parties agree as to the arbitrator's or arbitrators' fees, such fees shall be fixed by the court or the judges thereof who shall require the payment equally by both parties of the arbitrators' fees.

37-16-13. Validity of awards.

An award shall be valid and enforceable according to its terms and under the provisions of this chapter, without previous adjudication of the existence of a contract to arbitrate, subject, nevertheless, to the provisions of this section:

- (a) A party who has participated in any of the proceedings before the arbitrator or arbitrators may object to the confirmation of the award only on one or more of the grounds hereinafter specified (provided that he did not continue with the arbitration with notice of the facts or defects upon which his objection is based) because of a failure to comply with 37-16-8 or with 37-16-10 or because of the improper manner of the selection of the arbitrators.
- (b) A party who has not participated in any of the proceedings had before the arbitrator or arbitrators and who has not made or been served with an application to compel arbitration under 37-16-5 may also put in issue the making of the contract or the failure to comply therewith, either by a motion for a stay of the arbitration or in opposition to the confirmation of the award. If a notice shall have been personally served upon such party of an intention to conduct the arbitration pursuant to the provisions of a contract specified in the notice, then the issues specified in this subdivision may be raised only by a motion for a stay of the arbitration, notice of which motion must be served within ten (10) days after the service of the notice of intention to arbitrate. The notice must state in substance that unless within ten (10) days after its service, the party served therewith shall serve a notice of motion to stay the arbitration, he or she shall thereafter be barred from putting in issue the making of the contract or the failure to comply therewith. The arbitration hearing shall be adjourned upon service of the notice pending the determination of the motion. Where the opposing party, either on a motion for a stay or in opposition to the confirmation of an award, sets forth evidentiary facts raising a substantial issue as to the making of the contract or the failure to comply therewith, an immediate trial of the same shall be had. In the event that the party is unsuccessful he or she may, nevertheless, participate in the arbitration if the same is still being carried on.

37-16-14. Arbitration under chapter deemed special proceeding - Jurisdiction of superior court.

Arbitration of a claim, dispute, or matter in question under a contract described in this chapter shall be deemed a special proceeding, of which the superior court for Providence County shall have jurisdiction.

37-16-15. Procedure for hearing of application to court.

Any application to the court, or a judge thereof, hereunder shall be made and heard in the manner provided by law for the making and hearing of motions, except as otherwise herein expressly provided.

37-16-16. Form of award.

To entitle the award to be enforced, as prescribed in this chapter, it must be in writing; and, within the time limited in the contract, if any, subscribed by the arbitrator or arbitrators making it and either filed in the office of the clerk of the court having jurisdiction as provided in 37-16-14 or delivered to one of the parties or his or her attorney.

37-16-17. Court order confirming award.

At any time within one year after the award is made, as prescribed in 37-16-16, any party to the contract by the terms of which arbitration was had, may apply to the court having jurisdiction as provided in 37-16-14 for an order confirming the award. Thereupon the court must grant the order unless the award is vacated, modified, or corrected, as prescribed in 37-16-18 and 37-16-19 or unless the award is unenforceable under the provisions of 37-16-13. Notice of the motion must be served upon the adverse party or parties or his or her or their attorneys, as prescribed by law for service of notice of a motion upon an attorney in an action in the same court.

37-16-18. Court order vacating award.

In any of the following cases, the court must make an order vacating the award, upon the application of any party to the controversy which was arbitrated

- (a) When the award was procured by fraud.
- (b) Where the arbitrator or arbitrators exceeded their powers, or so imperfectly executed them, that a mutual, final, and definite award upon the subject matter submitted was not made.
- (c) If there was no valid contract, and the objection has been raised under the conditions set forth in 37-16-13.

37-16-19. Rehearing after vacation of award.

Where an award is vacated, the court, in its discretion may direct a rehearing either before the same arbitrator or arbitrators or before a new arbitrator or arbitrators to be chosen in the manner provided in the contract for the selection of the original arbitrator or arbitrators or as provided for in 37-16-7 and any provision limiting the time in which the arbitrator or arbitrators may make a decision shall be deemed applicable to the new arbitration and to commence from the date of the court's order.

37-16-20. Court order modifying or correcting award.

In any of the following cases, the court must make an order modifying or correcting the award, upon the application of any party to the contract by the terms of which the arbitration was held.

- (a) Where there was an evident miscalculation of figures or an evident mistake in the description of any persons, thing, or property referred to in the award.
- (b) Where the arbitrator or arbitrators have awarded upon a matter not submitted to them, not affecting the merits of the decision upon the matter submitted.
- (c) Where the award is imperfect in a matter of form not affecting the merits of the controversy, and, if it had been a master's report the defect could have been amended or disregarded by the court.

37-16-21. Notice of motion to vacate, modify, or correct an award.

Notice of a motion to vacate, modify, or correct an award must be served upon all adverse parties, or their attorneys, within sixty (60) days after the award is filed or delivered, as prescribed by law for service of notice of a motion upon an attorney in an action; except that in opposition to a motion to confirm an award, any of the grounds specified in 37-16-18 may be set up. For the purpose of the motion, any judge who might make an order, to stay the proceedings in an action brought in the same court may make an order, to be served with the notice of motion, staying the proceedings of an adverse party or parties to enforce the award.

37-16-22. Entry of judgment - Costs.

Upon the granting of an order confirming, modifying, or correcting an award, judgment may be entered in conformity therewith, except as is otherwise prescribed in this chapter. Costs of the application and of the proceedings subsequent thereto, not exceeding twenty-five dollars (\$25.00) and disbursements, may be awarded by the court in its discretion. If awarded, the amount thereof must be included in the judgment.

37-16-23. Filing of papers after judgment.

(a) Immediately after entering judgment, the clerk must attach together and file the following papers:

- (1) The contract, and each written extension of the time, if any, within which to make the award.
- (2) The award.
- (3) Each notice, affidavit or other paper used upon an application to confirm, modify, or correct the award, and a copy of each order of the court upon the application.
- (4) A copy of the judgment.

(b) The judgment may be docketed as if it was rendered in an action.

37-16-24. Effect of judgment.

The judgment so entered has the same force and effect, in all respects as, and is subject to all the provisions of law relating to a judgment in an action. The judgment may be enforced as if it had been rendered in an action in the court in which it is entered.

37-16-25. Appeals.

An appeal may be taken from an order made in a proceeding under this chapter, or from a judgment entered upon an award. The proceedings upon the appeal, including the judgment thereupon and the enforcement of the judgment, are governed by the provisions of statute and rule regulating appeal in actions as far as they are applicable.

37-16-26. Satisfaction of award.

- (a) An award which requires the payment of a sum of money by a city, town, or the state or any body described in 37-16-2 created or organized by or through the authority of any of them, shall be satisfied to the extent of payment of that sum by payment thereof to the party to whom the award was made by the treasurer or officer exercising the duties of a treasurer thereof from its general funds.
- (b) An award which requires the payment of a sum of money to a city, a town, or the state or any body described in 37-16-2 created or organized by or through the authority of any of them shall be satisfied to the extent of payment of that sum by payment thereof to its treasurer or officer exercising the duties of a treasurer thereof who shall deposit the same in its general funds.

37-16-27. Application to sureties.

- (a) If a contractor principal on a bond furnished to guarantee performance or payment on a construction contract and the claimant are parties to a written contract with a provision to submit to arbitration any controversy thereafter arising under the contract, or subject to arbitration as provided in 37-16-2(b), the arbitration provisions shall apply to the surety for all disputes involving questions of the claimant's right of recovery against the surety. Either the claimant, the contractor principal, or surety may demand arbitration in accordance with the written contract or as provided in 37-16-2(b) if applicable in one arbitration proceeding, provided that the provisions of 37-16-3 shall be applicable to any such demand for arbitration. The arbitration award shall decide all controversies subject to arbitration between the claimant, on the one hand, and the contractor principal and surety on the other hand, including all questions involving liability of the contractor principal and surety on the bond, but a claimant must file suit for recovery against the surety within the time limits set forth in 37-12-2 and 37-12-5. The arbitration shall be in accordance with this chapter and the court shall enter judgment thereon as provided therein.
- (b) The arbitrator or arbitrators, if more than one, shall make findings of fact as to the compliance with the requirements for recovery against the surety, and those findings of fact shall be a part of the award binding on all parties to the arbitration.

TITLE 45

CHAPTER 55 AWARD OF MUNICIPAL CONTRACTS

SECTIONS

- 45-55-1 Legislative findings
- 45-55-2. Method of source selection
- 45-55-3. Purchasing agent - Appointment - Duties.
- 45-55-4. Definitions.
- 45-55-5. Competitive sealed bidding.
- 45-55-5.1. Business exempt.
- 45-55-5.2. Town of North Smithfield - Exemption.
- 45-55-6. Competitive negotiation.
- 45-55-7. Negotiations after unsuccessful competitive sealed bidding
- 45-55-8. Sole source procurement and emergency procurements.
- 45-55-8.1 Qualification based selection of architects and engineers.
- 45-55-9. Small purchases.
- 45-55-10. Cancellation of invitation for bids and requests for proposals.
- 45-55-11. Responsibilities of bidders and offerors
- 45-55-12. Prequalification of contractors - General.
- 45-55-13. Exclusion of state mandated costs.
- 45-55-13.1. Exclusion of multi-cities or towns insurance corporations and cooperative risk management programs.
- 45-55-13.2. Exclusion of multi-cities or towns energy aggregation programs.
- 45-55-13.3. Exclusion of multi-school district combined purchasing consortia
- 45-55-14. Staff consultants.
- 45-55-15. Severability.
- 45-55-16 Prohibition against the use of lead based paints.
- 44-55-17 Penalties

45-55-1. Legislative findings.

It is hereby declared that a need exists to establish a uniform system for the award of contracts by municipalities, utilizing open cooperative bids.

45-55-2. Method of source selection.

Except as otherwise authorized by law, all municipal contracts shall be awarded by:

- (1) Competitive sealed bidding, pursuant to 45-55-5;
- (2) Competitive negotiations, pursuant to 45-55-6;
- (3) Non-competitive negotiations, pursuant to 45-55-7 and 45-55-8;
- (4) Small purchase procedures, pursuant to 45-55-9.
- (5) Qualification based selection (QBS) process for architects/engineers pursuant to 45-55-8.1

45-55-3. Purchasing agent - Appointment - Duties.

Within each city or town or quasi public agency there shall be designated a person or persons to act as purchasing officer to exercise the powers and duties as set forth in this chapter.

45-55-4. Definitions.

The words defined in this section have the following meanings whenever they appear in this chapter, unless the context in which they are used clearly requires a different meaning or a different definition is prescribed for a particular section, group of sections or provision.

- (1) "Business" means any corporation, partnership, individual, sole proprietorship, joint stock company, joint venture, or any other legal entity through which business is conducted.
- (2) "Change order" means a written order signed by the purchasing agent, or contractor directing or allowing the contractor to make changes which the changes clause of the contract authorizes the purchasing agent or contractor to order without the consent of the contractor or purchasing agent.
- (3) "Construction" means the process of building, altering, repairing, improving, or demolishing any public structures or building, or other public improvements of any kind to any public real property. It does not include the routine maintenance or repair of existing structures, buildings, or real property performed by salaried employees of the municipality in the usual course of their job.
- (4) "Contract" means all types of agreements, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item. It includes awards; contracts of a fixed-price, cost, cost-plus-a-fixed-fee, or incentive type; contracts providing for the issuance of job or task orders; leases; letter contracts, purchase orders, and construction management contracts. It also includes supplemental agreements with respect to any of the preceding. "Contract" does not include labor contracts with employees of the municipality.
- (5) "Contract modification" means any written alteration in the specifications, delivery point, rate of delivery, contract period, price, quantity, or other contract provisions of any existing contract, whether accomplished by unilateral action in accordance with a contract provision, or by mutual action of the parties to the contract. It includes bilateral actions, as supplemental agreements, and unilateral actions, as change orders, administrative changes, notices of termination, and notices of the exercise of a contract option.
- (6) "Contractor" means any person having a contract with a municipality.
- (8) "Data" means recorded information, regardless of form or characteristic.
- (8) "Designee" means a duly authorized representative of a person holding a superior position.
- (9) "Employee" means an individual drawing a salary from a municipality, whether elected or not, and any non-salaried individual performing personal services for any municipality.
- (10) "May" means permissive.
- (11) "Municipality" means the individual cities and towns of the state of Rhode Island.
- (12) "Negotiation" means contracting by either of the methods described in §§ 45-55-6, 45-55-7, and 45-55-8.
- (13) "Person" means any business, individual, organization, or group of individuals.
- (14) "Procurement" means the purchasing, buying, renting, leasing, or otherwise obtaining of any supplies, services, or construction. It also includes all functions that pertain to the obtaining of any supply, service, or construction item, including description of requirements, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration.
- (15) "Purchasing officer" means the person designated in each municipality or quasi public agency pursuant to section 45-55-3.
- (16) "Regulations" means rules and regulations adopted by the individual cities or towns, concerning the implementation of the provisions of this chapter.

(17) "Services" means the rendering, by a contractor, of its time and effort rather than the furnishing of a specific end product, other than reports which are merely incidental to the required performance of services. "Services" does not include labor contracts with employees of governmental agencies.

(18) "Shall" means imperative.

(19) "Supplemental agreement" means any contract modification which is accomplished by the mutual action of the parties.

(20) "Supplies" means all property, including, but not limited to, leases of real property, printing and insurance, except land or permanent interest in land.

45-55-5. Competitive sealed bidding.

(a) Contracts exceeding the amount provided by 45-55-9 shall be awarded by competitive bidding unless they are professional engineering/architectural services pursuant to 45-55-8.1 and it is determined in writing that this method is not practicable. Factors to be considered in determining whether competitive sealed bidding is practicable shall include whether:

- (1) Specifications can be prepared that permit award on the basis of either the lowest qualified bid price or the lowest qualified evaluated bid price; and
 - (2) The available sources, the time and place of performance, and other relevant circumstances as are appropriate for the use of competitive sealed bidding.
- (b) The invitation for bids shall state whether award shall be made on the basis of the lowest bid price or the lowest evaluated or responsive bid price. If the latter basis is used, the objective measurable criteria to be utilized shall be stated in the invitation for bids, if available.
- (c) Adequate public notice of the invitation for bids shall be given a sufficient time prior to the date stated in the notice for the opening of bids. Notice may include publication in a newspaper of general circulation in the state as determined by the purchasing officer for the municipality not less than seven (7) days nor more than twenty-one (21) days before the date set for opening of the bids. The purchasing officer may make a written determination that the twenty-one (21) day limitation needs to be waived. The written determination shall state the reason why the twenty-one (21) day limitation is being waived and shall state the number of days, giving a minimum and maximum, before the date set for the opening of bids when public notice is to be given.
- (4) Bids shall be opened publicly in full view of the public at the time and place designated in the invitation for bids. Each bid, together with the name of the bidder, shall be recorded and an abstract made available for public inspection. Subsequent to the awarding of the bid, all documents pertinent to the awarding of the bid shall be made available and open to public inspection and retained in the bid file.
- (5) The contract shall be awarded with reasonable promptness by written notice to the responsive and responsible bidder whose bid is either the lowest bid price, or lowest evaluated or responsive bid price.
- (6) Correction or withdrawal of bids may be allowed only to the extent permitted by regulations issued by the purchasing officer.

45-55-5.1. Business exempt.

The North Kingstown Bus Contractors Association and the Scituate School Bus Owners Club shall be exempt from the provisions of this chapter.

45-55-5.2. Town of North Smithfield - Exemption.

The town of North Smithfield is exempt from the provisions of this chapter with regard to the contracting for fire and rescue services with the Primrose Volunteer Fire Department and/or North Smithfield Fire Department and/or their respective successors and assigns.

45-55-6. Competitive negotiation.

- (a) When, under regulations adopted by the city or town council, the purchasing agent determines in writing that the use of competitive sealed bidding is not practicable, and except as provided in 45-55-8, 45-55-9, and 45-55-10 a contract may be awarded by competitive negotiation.
- (b) Adequate public notice of the request for proposals shall be given in the same manner as provided in 45-55-5(c).
- (c) Contracts may be competitively negotiated when it is determined, in writing, by the purchasing agent that the bid prices received by competitive sealed bidding either are unreasonable as to all or part of the requirements, or were not independently reached in open competition, and for which:
 - (1) Each competitive bidder has been notified of the intention to negotiate and is given reasonable opportunity to negotiate; and
 - (2) The negotiated price is lower than the lowest rejected bid by any competitive bidder; and
 - (3) The negotiated price is the lowest negotiated price offered by a competitive offeror.
- (d) The request for proposals shall indicate the relative importance of price and other evaluation factors.
- (e) Award shall be made to the responsible offeror whose proposal is determined in writing to be the most advantageous to the municipality taking into consideration price and the evaluation factors set forth in the request for proposals.
- (f) Written or oral discussions shall be conducted with all responsible offerors who submit proposals determined, in writing, to be reasonably susceptible of being selected for award. Discussions shall not disclose any information derived from proposals submitted by competing offerors. Discussions need not be conducted:
 - (1) With respect to prices, where such prices are fixed by law or regulation, except that consideration shall be given to competitive terms and conditions; or
 - (2) Where time of delivery or performance will not permit discussions; or
 - (3) Where it can be clearly demonstrated and documented from the existence of adequate competition or accurate prior cost experience with the particular supply, service, or construction item, that acceptance of an initial offer without discussion would result in fair and reasonable prices, and the request for proposals notifies all offerors of the possibility that award may be made on the basis of the initial offers.

45-55-7. Negotiations after unsuccessful competitive sealed bidding.

- (a) In the event that all bids submitted pursuant to competitive sealed bidding under 45-55-5 result in bid prices in excess of the funds available for the purchase, and the purchasing officer determines in writing:
 - (1) That there are no additional funds available from any source so as to permit an award to the lowest responsive and responsible bidder, and
 - (2) The best interest of the municipality will not permit the delay attendant to a re-solicitation under revised specifications, or for revised quantities, under competitive sealed bidding as provided in 45-55-5, then a negotiated award may be made as stated in subsection (b) or (c) of this section.
- (b) Where there is more than one bidder, competitive negotiations pursuant to 45-55-6, shall be conducted with the three (3) (two (2) if there are only two (2)) bidders determined in writing, to be the lowest responsive and responsible bidders to the competitive sealed bid invitation. Competitive negotiations shall be conducted under the following restrictions:
 - (1) If discussions pertaining to the revision of the specifications or quantities are held with any potential offeror, all other potential offerors shall be afforded an opportunity to take part in the discussions; or

(2) A request for proposals, based upon revised specifications or quantities, shall be issued as promptly as possible, shall provide for an expeditious response to the revised requirements, and shall be awarded upon the basis of the lowest bid price, or lowest evaluated bid price submitted by any responsive and responsible offeror.

(c) When after competitive sealed bidding, it is determined in writing, that there is only one responsive and responsible bidder, a noncompetitive negotiated award may be made with such bidder in accordance with 45-55-8.

45-55-8. Sole source procurement and emergency procurements.

(a) A contract may be awarded for a supply, service, or construction item without competition when, under published regulations, the purchasing officer determines, in writing, that there is only one source for the required supply, service, or construction item.

(b) Notwithstanding any other provision of this chapter, the purchasing agent may make or authorize others to make emergency procurements when there exists a threat to public health, welfare, or safety under emergency conditions as defined in regulations or where the procurement will be in the best interest of the city as established by properly promulgated rules and regulations; provided, that such emergency procurements shall be made with such competition as is practicable under the circumstances. A written determination of the basis for the emergency, and for the selection of the particular contractor, shall be included in the contract file.

45-55-8.1. Qualification based selection of architects and engineers.

When the purchasing agent determines that the city or town needs the services of a professional architect or engineer, the purchasing agent shall follow the qualification based selection process for the procurement of architectural and engineering consulting services.

45-55-9. Small purchases.

Procurements, not to exceed an aggregate amount of ten thousand dollars (\$10,000) for construction and five thousand dollars (\$5,000) for all other purchases may be made in accordance with small purchase regulations promulgated by the municipality. These amounts shall be increased or decreased annually hereafter at the same rate as the Boston Regional Consumer Price Index. Procurement requirements shall not be artificially divided so as to constitute a small purchase under this section. A municipality may further reduce the aggregate purchase amount, as provided for in this section by ordinance.

45-55-10. Cancellation of invitation for bids and requests for proposals.

An invitation for bids, a request for proposals, or other solicitation may be canceled, or all bids or proposals rejected, if it is determined, in writing, that such action if taken is not in the best interest of the municipality and approved by the chief purchasing officer.

45-55-11. Responsibilities of bidders and offerors.

(1) A written determination of responsibility of a bidder or offeror shall be made and it shall be made in accordance with regulations issued by the municipality.

A reasonable inquiry to determine the responsibility of a bidder or offeror may be conducted. The failure of a bidder or offeror to promptly supply information in connection with a reasonable inquiry may be grounds for a determination of non-responsibility with respect to a bidder or offeror.

(2) Except as otherwise provided, by law, information furnished by a bidder or offeror pursuant to this section may not be disclosed outside of the purchasing department administering the contract without prior written consent of the bidder or offeror.

45-55-12. Prequalification of contractors - General.

The municipality may provide for prequalification of suppliers as responsible prospective contractors for particular types of supplies, services, and construction. Municipalities which choose to provide for prequalification of suppliers shall adopt regulations for prequalification in the same manner provided for in the adoption of ordinances in the manner provided for in the legislative or home rule charter of the municipality. Solicitation mailing lists of

potential contractors of supplies, services, and construction shall include but need not be limited to prequalified contractors. Prequalification shall not foreclose a written determination:

- (1) Between the time of the bid opening or receipt of offers and the making of an award, that a prequalified supplier is not responsible; or
- (2) That a supplier who is not prequalified at the time of bid opening or receipt of offers is responsible.

45-55-13. Exclusion of state mandated costs.

The provisions of 45-13-7 through 45-13-10 do not apply to this section.

45-55-13.1. Exclusion of multi-cities or towns insurance corporations and cooperative risk management programs.

The provisions of this chapter shall not apply to entities organized pursuant to section 45-5-20.1. Those entities are exempt from all of the provisions of this chapter.

45-55-13.2. Exclusion of multi-cities or towns energy aggregation programs.

The provisions of this chapter do not apply to entities organized for the purpose of negotiating the purchase of electric power pursuant to § 39-3-1.1, or energy or energy related services. Those entities are exempt from all provisions of this chapter.

45-55-13.3. Exclusion of multi-school district combined purchasing consortia.

The provisions of this chapter do not apply to purchases and contracts entered into by those consortia established pursuant to § 16-2-9.2, and such entities shall be exempt from all provisions of this chapter.

45-55-14. Staff consultants.

The procurement of the service of an attorney, physician or dentist by a municipality, is exempt from the provisions of this chapter.

45-55-15. Severability.

If any one or more sections, clauses, sentences or parts of this chapter are for any reason be adjudged unconstitutional or otherwise invalid in any court, that judgment shall not affect, impair or invalidate the remaining provisions of this chapter but shall be confined in its operation to the specific provisions so held unconstitutional or invalid and the inapplicability or invalidity of any section, clause or provisions of this chapter in any one or more instances or circumstances shall not be taken to affect or prejudice in any way its applicability or validity in any other instance.

45-55-16. Prohibition against the use of lead based paints.

When purchasing paint products or contracting or subcontracting for painting, construction, improvement, completion, or repair of any public buildings, public road, public bridge, or public construction, all municipalities, as defined by 45-55-4(11), shall be prohibited from the use of lead based paint.

45-55-17. Penalties.

Any person who knowingly and intentionally violates any provision of this chapter shall be subject to a misdemeanor, punishable by a fine of not more than five hundred dollars (\$500), or by imprisonment for not more than one year, or both.

Attachment B

EPA Disadvantaged Business Enterprise (DBE) Program – DBE Forms

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

An EPA Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE¹ subcontractor² the opportunity to describe work received and/or report any concerns regarding the EPA-funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the EPA DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

Please use the space below to report any concerns regarding the above EPA-funded project:

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractors bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____		Meets/ exceeds EPA certification standards? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	__ YES	__ NO	
If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?

_____ Continue on back if needed _____

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Attachment C

Good Faith Efforts to Achieve DBE Participation

Good Faith Efforts

What is the Purpose of the Good Faith Efforts?

The Good Faith Efforts are methods employed by all EPA financial assistance agreement recipients to ensure that disadvantaged business enterprises (DBEs) have the opportunity to compete for procurements funded by EPA financial assistance funds.

What Are the Good Faith Efforts?

- ❖ Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and local government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- ❖ Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- ❖ Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- ❖ Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- ❖ Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- ❖ If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

What are the New Contract Administration Provisions?

When the DBE rule goes into effect, there are a number of new provisions designed to prevent unfair practices that adversely affect DBEs. Those provisions are as follows:

- ❖ A recipient must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient.
- ❖ A recipient must be notified in writing by its prime contractor prior to any

termination of a DBE subcontractor for convenience by the prime contractor.

- ❖ If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the Six Good Faith Efforts if soliciting a replacement subcontractor.
- ❖ A recipient must require its prime contractor to employ the Six Good Faith Efforts even if the prime contractor has achieved its fair share objectives.

What are the New Forms Associated With the New Contract Administration Provisions?

EPA Form 6100-2 - DBE Program Subcontractor Participation Form. This form gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how much the DBE subcontractor was paid and any other concerns the DBE subcontractor might have.

EPA Form 6100-3 - DBE Program Subcontractor Performance Form. This form captures an intended subcontractor's description of work to be performed for the prime contractor and the price of the work submitted to the prime.

EPA Form 6100-4 – DBE Program Subcontractor Utilization Form. This form captures the prime's intended use of an identified DBE subcontractor, and the estimated dollar amount of the subcontract.

Form	Requirement	Provided By	Completed By	Submitted To
EPA Form 6100-2	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	EPA DBE Coordinator
EPA Form 6100-3	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	Recipients as part of bid or proposal package
EPA Form 6100-4	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	Recipients as part of bid or proposal package

Attachment D

State of Rhode Island Minority Business Enterprise Utilization Plan



**State of Rhode Island
 Division of Equity, Diversity, and Inclusion (DEDI)
 Minority Business Enterprise Compliance Office
 Minority Business Enterprise Utilization Plan**

Company Name: _____

Representative's Name who administers MBE Program: _____

Street Address: _____

City, State, Zip: _____ Telephone: _____

Email: _____ Project Location: _____

Bid or Project #: _____ Date Bid Opened: _____

Description of Work: _____

Contract Value: _____ MBE % Assigned: _____

Total # of All Subcontractors/Suppliers used: _____ # of MBE Subcontractors/Suppliers used: _____

List All Subcontractors/Suppliers/Consultants/Independent Contractors – Total Dollar Amounts – Scope of Work:

Subcontractor / Supplier	Dollar Award	Scope/Description of Work	RI Certified M/WBE Yes/No

Please note that all MBE/WBE firms must be certified by the RI MBE Compliance Office, and that MBE/WBE firms must self-perform 100% of the work with their own forces or subcontract to another RI certified MBE/WBE in order to receive participation credit. Vendors may count 60% of expenditures for materials and supplies obtained from an MBE certified as a regular dealer/supplier, and 100% of such expenditures obtained from an MBE/WBE certified as a manufacturer. For firms certified as a broker, you may receive MBE participation credit only for the fees and commissions charged for the procurement of the good and materials, but not the cost of the materials themselves.

The above referenced contract will not be released until this plan has been approved by the Director of the Department of Administration or its designee.

For assistance and advice in identifying MBE/WBE firms, please call the Minority Business Enterprise Compliance Office at (401) 574-8253. The directory of all certified MBE firms is also located at www.mbe.ri.gov.

Signature of Authorized Agent of Business: _____ Date: _____

Send Completed Form to:
Kate Constance Brody, Esq. Administrator – MBE Compliance Office
Division of Equity, Diversity, and Inclusion (DEDI)
Minority Business Enterprise Compliance Office
One Capitol Hill, 3rd Floor
Providence, RI 02908
Phone: (401) 574-8670
Kate.Brody@doa.ri.gov

Attachment E

**Office of Diversity, Equity, and Opportunity
Minority Business Enterprise Project Reporting Form**

Office of Diversity, Equity and Opportunity (ODEO)
MBE Compliance Office
1 Capitol Hill, 3rd Floor
Providence, RI 02908

(401) 574-8670
www.mbe.ri.gov

Pursuant to RIGL 37-14.1 as well as the regulations promulgated thereto, the MBE Compliance Office requires that you complete the following table. Please note that these figures will be verified with the MBEs identified. If there are outstanding issues, such as retainage or a dispute, please indicate and attach supporting documentation for same. Also note that copies of invoice and cancelled checks for payment to all MBE subcontractors and suppliers are required.

Contractor/Vendor Name:

Project Name & Location:

Original Prime Contract Amount: \$ _____ Current Prime Contract Amount: \$ _____ % Complete: _____

MBE/WBE Subcontractor	Original Contract Amount	Change Orders	Revised Contract Value	% Completed To Date	Amount Paid To Date	Amount Due	Retainage %	Retainage Amount	Explanation

I declare, under penalty of perjury, that the information provided in this verification form and supporting documents is true and correct.

Signature

Date

Printed Name

Notary Certificate:

Sworn before me this _____ day of _____, 20____.

Notary Signature

Commission Expires

Attachment F

State Revolving Fund Sign

Black

THIS PROJECT IS FUNDED BY THE



Navy Blue

STATE REVOLVING FUND

JOINTLY ADMINISTERED BY THE

Black

Black

**Rhode Island
Infrastructure Bank**

**State of Rhode Island
Department of Health**

Navy Blue



Vahid Ownjazayeri
Board Chair



Daniel J. McKee
Governor



Navy Blue

William J. Fazioli
Executive Director

Jerome M. Larkin, MD
Director - RI Health

Navy Blue

"Dedicated To Protecting And Preserving Our State's Most Important Resource... Clean Water"

Grade

Navy Blue

Black

8' - 0"

4' - 0"

A A

THIS PROJECT IS FUNDED BY THE



STATE REVOLVING FUND

JOINTLY ADMINISTERED BY THE

**Rhode Island
Infrastructure Bank**



Vahid Ownjazayeri
Board Chair

William J. Fazioli
Executive Director



**State of Rhode Island
Department of Health**

Daniel J. McKee
Governor

Jerome M. Larkin, MD
Director - RI Health



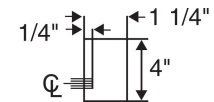
"Dedicated To Protecting And Preserving Our State's Most Important Resource...Clean Water"

5"
2"
4"
5"
4"
2"
3"
4"
2"
3"
2"
3"
4"
2"
3"

Provide adequate supports for sign as site conditions may require & keep sign a proper distance above prevailing grade to permit public viewing.

Grade

Sign to be extension type high density overlaid plywood or other approved material suitable for signs.



Attachment G

Davis Bacon Wage Rates/Questionnaire

DAVIS-BACON PREVAILING WAGE REQUIREMENTS

(a) GENERAL CONTRACT AND SUBCONTRACT PROVISIONS

For any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1 or the FY 2010 appropriation, the following clauses shall be inserted in full:

(1) Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Wage determinations may be obtained from the U.S. Department of Labor's website, www.dol.gov.

(ii)(A) The Owner, on behalf of the EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Owner agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the Owner to the State award official. The State award official will transmit the request to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Owner do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the questions, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding

The Owner, shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this

contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and Basic Records

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Owner, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the Owner shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the owner for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of

compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the Owner.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and Trainees

(i) *Apprentices.* Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of

Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) *Trainees*. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity*. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act Requirements

The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract Termination: Debarment

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act Requirements

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes Concerning Labor Standards

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the Owner, the State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of Eligibility

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

For any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act, the following clauses set forth in paragraphs (b) (1), (2), (3) and (4) of this section shall be inserted in full. These clauses shall be inserted in addition to the clauses required in Section (a), above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime Requirements

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; Liability for Unpaid Wages; Liquidated Damages

In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for Unpaid Wages and Liquidated Damages

The Owner, upon written request of the EPA Award Official or an authorized representative of the Department of Labor shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) MAINTENANCE OF RECORDS

In addition to the clauses contained in Section (a), above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in §5.1 the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Owner, the State, EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

(d) COMPLIANCE VERIFICATION

(1) The Owner shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The Owner must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(2) The Owner shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the Owner should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Owners must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB . Owners shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(3) The Owner shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The Owner shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the Owner should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract . Owners must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the Owner shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(4) The Owner shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees

and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(5) Owners must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/esa/contacts/whd/america2.htm>.

Attachment H

Debarment & Suspension (Executive Order 12549) and Certification

DEBARMENT & SUSPENSION

Executive Order 12549--Debarment and Suspension

Source: The provisions of Executive Order 12549 of Feb. 18, 1986, appear at 51 FR 6370, 3 CFR, 1986 Comp., p. 189, unless otherwise noted.

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to curb fraud, waste, and abuse in Federal programs, increase agency accountability, and ensure consistency among agency regulations concerning debarment and suspension of participants in Federal programs, it is hereby ordered that:

Section 1. (a) To the extent permitted by law and subject to the limitations in Section 1(c), Executive departments and agencies shall participate in a system for debarment and suspension from programs and activities involving Federal financial and nonfinancial assistance and benefits. Debarment or suspension of a participant in a program by one agency shall have government-wide effect.

(b) Activities covered by this Order include but are not limited to: grants, cooperative agreements, contracts of assistance, loans, and loan guarantees.

(c) This Order does not cover procurement programs and activities, direct Federal statutory entitlements or mandatory awards, direct awards to foreign governments or public international organizations, benefits to an individual as a personal entitlement, or Federal employment.

Sec. 2. To the extent permitted by law, Executive departments and agencies shall:

(a) Follow government-wide criteria and government-wide minimum due process procedures when they act to debar or suspend participants in affected programs.

(b) Send to the agency designated pursuant to Section 5 identifying information concerning debarred and suspended participants in affected programs, participants who have agreed to exclusion from participation, and participants declared ineligible under applicable law, including Executive Orders. This information shall be included in the list to be maintained pursuant to Section 5.

(c) Not allow a party to participate in any affected program if any Executive department or agency has debarred, suspended, or otherwise excluded (to the extent specified in the exclusion agreement) that party from participation in an affected program. An agency may grant an exception permitting a debarred, suspended, or excluded party to participate in a particular transaction upon a written determination by the agency head or authorized designee stating the reason(s) for deviating from this Presidential policy. However, I intend that exceptions to this policy should be granted only infrequently.

Sec. 3. Executive departments and agencies shall issue regulations governing their implementation of this Order that shall be consistent with the guidelines issued under Section 6. Proposed regulations shall be submitted to the Office of Management and Budget for review within four months of the date of the guidelines issued under Section 6. The Director of the Office of Management and Budget may return for reconsideration proposed regulations that the Director believes are inconsistent with the guidelines. Final regulations shall be published within twelve months of the date of the guidelines.

Sec. 4. There is hereby constituted the Interagency Committee on Debarment and Suspension, which shall monitor implementation of this Order. The Committee shall consist of representatives of agencies designated by the Director of the Office of Management and Budget.

Sec. 5. The Director of the Office of Management and Budget shall designate a Federal agency to perform the following functions: maintain a current list of all individuals and organizations excluded from program participation under this Order, periodically distribute the list to Federal agencies, and study the feasibility of automating the list; coordinate with the lead agency responsible for government-wide debarment and suspension of contractors; chair the Interagency Committee established by Section 4; and report periodically to the Director on implementation of this Order, with the first report due within two years of the date of the Order.

Sec. 6. The Director of the Office of Management and Budget is authorized to issue guidelines to Executive departments and agencies that govern which programs and activities are covered by this Order, prescribe government-wide criteria and government-wide minimum due process procedures, and set forth other related details for the effective administration of the guidelines.

Sec. 7. The Director of the Office of Management and Budget shall report to the President within three years of the date of this Order on Federal agency compliance with the Order, including the number of exceptions made under Section 2(c), and shall make recommendations as are appropriate further to curb fraud, waste, and abuse.

Implementation in the SRF Programs

A company or individual who is debarred or suspended cannot participate in primary and lower-tiered covered transactions. These transactions include SRF loans and contracts and subcontracts awarded with SRF loan funds.

Under 40 C.F.R. 32.510, the SRF agency must submit a certification stating that it shall not knowingly enter into any transaction with a person who is proposed for debarment, suspended, declared ineligible, or voluntarily excluded from participation in the SRF program. This certification is reviewed by the EPA regional office before the capitalization grant is awarded.

A recipient of SRF assistance directly made available by capitalization grants must provide a certification that it will not knowingly enter into a contract with anyone who is ineligible under the regulations to participate in the project. Contractors on the project have to provide a similar certification prior to the award of a contract and subcontractors on the project have to provide the general contractor with the certification prior to the award of any subcontract.

In addition to actions taken under 40 C.F.R. Part 32, there are a wide range of other sanctions that can render a party ineligible to participate in the SRF program. Lists of debarred, suspended and otherwise ineligible parties are maintained by the General Services Administration and should be checked by the SRF agency and all recipients of funds directly made available by capitalization grants to ensure the accuracy of certifications.

Additional References

C 40 C.F.R. Part 32: EPA Regulations on Debarment and Suspension.

**CERTIFICATION REGARDING DEBARMENT & SUSPENSION
AND OTHER RESPONSIBILITY MATTERS**

In accordance with the Executive Order 12549, the prospective primary participant certifies to the best of his / her knowledge and belief, that its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification.

- d. Have not within a three-year period preceding this application / proposal had one or more public transactions (federal, state, or local) terminated for cause of default.

- e. Acknowledge that all sub-contractors selected for this project must be in compliance with paragraphs (1) (a – d) of this certification.

Name and Title of Authorized Agent

Date

Signature of Authorized Agent

_____ I am unable to certify to the above statements. My explanation is attached.

Attachment I

EPA American Iron and Steel Memorandum



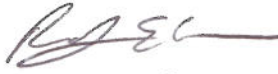
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

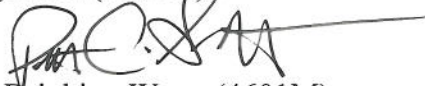
MAR 20 2014

OFFICE OF WATER

MEMORANDUM

SUBJECT: Implementation of American Iron and Steel provisions of P.L. 113-76,
Consolidated Appropriations Act, 2014

FROM: For Andrew D. Sawyers, Director 
Office of Wastewater Management (4201M)

Peter C. Grevatt, Director 
Office of Ground Water and Drinking Water (4601M)

TO: Water Management Division Directors
Regions I - X

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an “American Iron and Steel (AIS)” requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

Section 436 also sets forth certain circumstances under which EPA may waive the AIS requirement. Furthermore, the Act specifically exempts projects where engineering plans and specifications were approved by a State agency prior to January 17, 2014.

The approach described below explains how EPA will implement the AIS requirement. The first section is in the form of questions and answers that address the types of projects that must comply with the AIS requirement, the types of products covered by the AIS requirement, and compliance. The second section is a step-by-step process for requesting waivers and the circumstances under which waivers may be granted.

Implementation

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out

the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following questions and answers provide guidance for implementing and complying with the AIS requirements:

Project Coverage

1) What classes of projects are covered by the AIS requirement?

All treatment works projects funded by a CWSRF assistance agreement, and all public water system projects funded by a DWSRF assistance agreement, from the date of enactment through the end of Federal Fiscal Year 2014, are covered. The AIS requirements apply to the entirety of the project, no matter when construction begins or ends. Additionally, the AIS requirements apply to all parts of the project, no matter the source of funding.

2) Does the AIS requirement apply to nonpoint source projects or national estuary projects?

No. Congress did not include an AIS requirement for nonpoint source and national estuary projects unless the project can also be classified as a 'treatment works' as defined by section 212 of the Clean Water Act.

3) Are any projects for the construction, alteration, maintenance, or repair of a public water system or treatment works excluded from the AIS requirement?

Any project, whether a treatment works project or a public water system project, for which engineering plans and specifications were approved by the responsible state agency prior to January 17, 2014, is excluded from the AIS requirements.

4) What if the project does not have approved engineering plans and specifications but has signed an assistance agreement with a CWSRF or DWSRF program prior to January 17, 2014?

The AIS requirements do not apply to any project for which an assistance agreement was signed prior to January 17, 2014.

5) What if the project does not have approved engineering plans and specifications, but bids were advertised prior to January 17, 2014 and an assistance agreement was signed after January 17, 2014?

If the project does not require approved engineering plans and specifications, the bid advertisement date will count in lieu of the approval date for purposes of the exemption in section 436(f).

6) What if the assistance agreement that was signed prior to January 17, 2014, only funded a part of the overall project, where the remainder of the project will be funded later with another SRF loan?

If the original assistance agreement funded any construction of the project, the date of the original assistance agreement counts for purposes of the exemption. If the original assistance agreement was only for planning and design, the date of that assistance agreement will count for purposes of the exemption only if there is a written commitment or expectation on the part of the assistance recipient to fund the remainder of the project with SRF funds.

7) What if the assistance agreement that was signed prior to January 17, 2014, funded the first phase of a multi-phase project, where the remaining phases will be funded by SRF assistance in the future?

In such a case, the phases of the project will be considered a single project if all construction necessary to complete the building or work, regardless of the number of contracts or assistance agreements involved, are closely related in purpose, time and place. However, there are many situations in which major construction activities are clearly undertaken in phases that are distinct in purpose, time, or place. In the case of distinct phases, projects with engineering plans and specifications approval or assistance agreements signed prior to January 17, 2014 would be excluded from AIS requirements while those approved/signed on January 17, 2014, or later would be covered by the AIS requirements.

8) What if a project has split funding from a non-SRF source?

Many States intend to fund projects with “split” funding, from the SRF program and from State or other programs. Based on the Act language in section 436, which requires that American iron and steel products be used in any project for the construction, alteration, maintenance, or repair of a public water system or treatment works receiving SRF funding between and including January 17, 2014 and September 30, 2014, any project that is funded in whole or in part with such funds must comply with the AIS requirement. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all contracts and assistance agreements awarded are closely related in purpose, time and place. This precludes the intentional splitting of SRF projects into separate and smaller contracts or assistance agreements to avoid AIS coverage on some portion of a larger

project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreement for SRF and State or other funding would carry separate requirements.

9) What about refinancing?

If a project began construction, financed from a non-SRF source, prior to January 17, 2014, but is refinanced through an SRF assistance agreement executed on or after January 17, 2014 and prior to October 1, 2014, AIS requirements will apply to all construction that occurs on or after January 17, 2014, through completion of construction, unless, as is likely, engineering plans and specifications were approved by a responsible state agency prior to January 17, 2014. There is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to January 17, 2014.

10) Do the AIS requirements apply to any other EPA programs, besides the SRF program, such as the Tribal Set-aside grants or grants to the Territories and DC?

No, the AIS requirement only applies to funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

12) What does the term ‘primarily iron or steel’ mean?

‘Primarily iron or steel’ places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does ‘produced in the United States’ mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the

material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of ‘municipal castings’?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

- Access Hatches;
- Ballast Screen;
- Benches (Iron or Steel);
- Bollards;
- Cast Bases;
- Cast Iron Hinged Hatches, Square and Rectangular;
- Cast Iron Riser Rings;
- Catch Basin Inlet;
- Cleanout/Monument Boxes;
- Construction Covers and Frames;
- Curb and Corner Guards;
- Curb Openings;
- Detectable Warning Plates;
- Downspout Shoes (Boot, Inlet);
- Drainage Grates, Frames and Curb Inlets;
- Inlets;
- Junction Boxes;
- Lampposts;
- Manhole Covers, Rings and Frames, Risers;

Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

20) What is ‘structural steel’?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a ‘construction material’ for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”. This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a ‘construction material’ for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and

data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Compliance

25) How should an assistance recipient document compliance with the AIS requirement?

In order to ensure compliance with the AIS requirement, specific AIS contract language must be included in each contract, starting with the assistance agreement, all the way down to the purchase agreements. Sample language for assistance agreements and contracts can be found in Appendix 3 and 4.

EPA recommends the use of a step certification process, similar to one used by the Federal Highway Administration. The step certification process is a method to ensure that producers adhere to the AIS requirement and assistance recipients can verify that products comply with the AIS requirement. The process also establishes accountability and better enables States to take enforcement actions against violators.

Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. A step certification is a process under which each handler (supplier, fabricator, manufacturer,

processor, etc) of the iron and steel products certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. A certification can be quite simple. Typically, it includes the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a manufacturer's responsible party. Attached, as Appendix 5, are sample certifications. These certifications should be collected and maintained by assistance recipients.

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. While this type of certification may be acceptable, it may not provide the same degree of assurance. Additional documentation may be needed if the certification is lacking important information. Step certification is the best practice.

26) How should a State ensure assistance recipients are complying with the AIS requirement?

In order to ensure compliance with the AIS requirement, States SRF programs must include specific AIS contract language in the assistance agreement. Sample language for assistance agreements can be found in Appendix 3.

States should also, as a best practice, conduct site visits of projects during construction and review documentation demonstrating proof of compliance which the assistance recipient has gathered.

27) What happens if a State or EPA finds a non-compliant iron and/or steel product permanently incorporated in the project?

If a potentially non-compliant product is identified, the State should notify the assistance recipient of the apparent unauthorized use of the non-domestic component, including a proposed corrective action, and should be given the opportunity to reply. If unauthorized use is confirmed, the State can take one or more of the following actions: request a waiver where appropriate; require the removal of the non-domestic item; or withhold payment for all or part of the project. Only EPA can issue waivers to authorize the use of a non-domestic item. EPA may use remedies available to it under the Clean Water Act, the Safe Drinking Water Act, and 40 CFR part 31 grant regulations, in the event of a violation of a grant term and condition.

It is recommended that the State work collaboratively with EPA to determine the appropriate corrective action, especially in cases where the State is the one who identifies the item in noncompliance or there is a disagreement with the assistance recipient.

If fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-

888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <http://www.epa.gov/oig/hotline.htm>.

28) How do international trade agreements affect the implementation of the AIS requirements?

The AIS provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to such agreements. In general, SRF assistance recipients are not signatories to such agreements, so these agreements have no impact on this AIS provision. In the few instances where such an agreement applies to a municipality, that municipality is under the obligation to determine its applicability and requirements and document the actions taken to comply for the State.

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow States, on behalf of the assistance recipients, to apply for waivers of the AIS requirement directly to EPA Headquarters. Only waiver requests received from states will be considered. Pursuant to the Act, EPA has the responsibility to make findings as to the issuance of waivers to the AIS requirements.

Definitions

The following terms are critical to the interpretation and implementation of the AIS requirements and apply to the process described in this memorandum:

Reasonably Available Quantity: The quantity of iron or steel products is available or will be available at the time needed and place needed, and in the proper form or specification as specified in the project plans and design.

Satisfactory Quality: The quality of iron or steel products, as specified in the project plans and designs.

Assistance Recipient: A borrower or grantee that receives funding from a State CWSRF or DWSRF program.

Step-By-Step Waiver Process

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 3 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 1.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA’s website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm
2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.
3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest.

EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public's interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact Jordan Dorfman, Attorney-Advisor, State Revolving Fund Branch, Municipal Support Division, at dorfman.jordan@epa.gov or (202) 564-0614 or Kiri Anderer, Environmental Engineer, Infrastructure Branch, Drinking Water Protection Division, at anderer.kirsten@epa.gov or (202) 564-3134.

Attachments

Appendix 1: Information Checklist for Waiver Request

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

Items	✓	Notes
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Time of delivery or availability — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor 		
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

Appendix 2: HQ Review Checklist for Waiver Request

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items	Yes	No	N/A	Comments
Cost Waiver Requests <ul style="list-style-type: none"> • Does the waiver request include the following information? <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market • Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%? 				
Availability Waiver Requests <ul style="list-style-type: none"> • Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? <ul style="list-style-type: none"> — Supplier information or other documentation indicating availability/delivery date for materials — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials • Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers? • Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information) • Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? Examples include: <ul style="list-style-type: none"> — Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State — Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States — Correspondence with construction trade associations indicating the non-availability of the materials • Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits? 				

Appendix 3: Example Loan Agreement Language

ALL ASSISTANCE AGREEMENT MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN SRF ASSISTANCE AGREEMENTS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the Loan (including those imposed by the 2014 Appropriations Act and related SRF Policy Guidelines) which the Participant understands includes, among other, requirements that all of the iron and steel products used in the Project are to be produced in the United States (“American Iron and Steel Requirement”) unless (i) the Participant has requested and obtained a waiver from the Agency pertaining to the Project or (ii) the Finance Authority has otherwise advised the Participant in writing that the American Iron and Steel Requirement is not applicable to the Project.

Comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a Federal agency or the Finance Authority such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and this Agreement may be a default hereunder that results in a repayment of the Loan in advance of the maturity of the Bonds and/or other remedial actions.

Appendix 4: Sample Construction Contract Language

ALL CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN ALL CONTRACTS IN PROJECTS THAT USE SRF FUNDS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the City of _____ (“Purchaser”) and the _____ (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Appendix 5: Sample Certifications

The following information is provided as a sample letter of **step** certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

Attachment J

Rhode Island Certified Prevailing Wage Daily Log



Rhode Island Certified Prevailing Wage Daily Log

Project Name: _____ Contractor: _____

Project Location: _____ Address: _____

Date: _____ City/Town: _____ State _____ Zip _____

Employee Name (Print)	Job Title/ Classification	Time		Employee Signature
		In	Out	

I _____ hereby certify that the information in this form is complete and correct.
 (print name and title)

Any contractor who knowingly maintains a false or fraudulent daily log maybe penalized by the Department of Labor and Training up to \$500 for each calendar day of noncompliance.

 Contractor/Officer's Signature

 Date

*** Each contractor working on this project must complete a Daily Log for their employees only .**

Attachment K

EPA Memorandum “Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment in the SRF Programs”



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF WATER

MEMORANDUM

SUBJECT: Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment in the SRF Programs

FROM: Kiri Anderer, P.E., Acting Associate Branch Chief
Infrastructure Branch, OGWDW

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Michael Deane, Branch Chief
State Revolving Fund Branch, OWM

MICHAEL DEANE

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TO: SRF Branch Chiefs
Regions 1-10

Effective August 13, 2020, recipients and subrecipients of EPA funded assistance agreements, including borrowers under EPA funded revolving loan funds, must comply with regulations at [2 CFR 200.216](#), *Prohibition on certain telecommunication and video surveillance services or equipment*, implementing section 889 of [Public Law 115-232](#). The regulation prohibits the use of Federal funds to procure (enter into, extend, or renew contracts) or obtain equipment, systems, or services that use “covered telecommunications equipment or services” identified in the regulation as a substantial or essential component of any system, or as critical technology as part of any system. Prohibitions extend to the use of Federal funds by recipients and subrecipients to enter into a contract with an entity that “uses any equipment, system, or service that uses covered telecommunications equipment or services” as a substantial or essential component of any system, or as critical technology as part of any system. Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the [System for Award Management](#) exclusion list.

As described in section 889 of Public Law 115-232, covered telecommunications equipment or services includes:

- Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- Telecommunications or video surveillance services provided by such entities or using such equipment.

- Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Applicability in the State Revolving Fund (SRF) Programs

Clean Water and Drinking Water SRF (CWSRF and DWSRF) programs may not expend equivalency funds for these products on or after August 13, 2020. States must ensure that equivalency assistance agreements include the telecommunications prohibition condition [provided by EPA's Office of Grants and Debarment](#) (OGD) in OGD's most recent EPA General Terms and Conditions. The condition must also be in construction contracts associated with equivalency assistance agreements.

There is no exhaustive list of components and services that fall under the prohibition. State SRF managers and local assistance recipients should exercise due diligence and be particularly mindful of project components with internet or cellular connections. For example, recipients should be mindful of automatic meter reading (AMR) technology and advanced metering infrastructure (AMI), instrumentation control systems (e.g. process control systems, distributed control systems and programmable logic controls), and security cameras and other electronic security measures to ensure that those items are procured from a non-excluded entity. Items included in the prohibition are not eligible SRF costs, and the SRF programs cannot reimburse borrowers for these costs.

The prohibition also applies to the CWSRF administrative funds (if states are billing those costs to the federal CWSRF capitalization grant) and the four DWSRF set-asides. States should be mindful of items such as cell phones, computers, and mobile WiFi routers or hotspots funded by those accounts.

If you have questions on the implementation of this grant condition, please contact Michael Deane at Deane.Michael@epa.gov or Kiri Anderer at Anderer.Kirsten@epa.gov.

Attachment L

Build America Buy America Act Requirements



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

November 3, 2022

MEMORANDUM

SUBJECT: Build America, Buy America Act Implementation Procedures for EPA Office of Water
Federal Financial Assistance Programs

FROM: Radhika Fox
Assistant Administrator

A handwritten signature in black ink, appearing to be "R. Fox", written over a horizontal line.

TO: EPA Regional Water Division Directors, Regions I – X
EPA Office of Water Office Directors

OVERVIEW

The Biden-Harris Administration recognized the Nation's critical need for infrastructure investment, championing the Bipartisan Infrastructure Law (BIL), which Congress passed on November 15, 2021 (also known as the Infrastructure Investment and Jobs Act (IIJA)). The BIL will provide an unprecedented level of federal investment in water and wastewater infrastructure in communities across America.

In Title IX of the IIJA, Congress passed the Build America, Buy America (BABA) Act, which establishes strong and permanent domestic sourcing requirements across all Federal financial assistance programs for infrastructure. The U.S. Environmental Protection Agency (EPA) Office of Water is honored to help lead the implementation of these provisions and is proud of its near decade of successful implementation of the American Iron and Steel (AIS) provisions for its flagship water infrastructure programs.

This is a transformational opportunity to build a resilient supply chain and manufacturing base for critical products here in the United States that will spur investment in good-paying American manufacturing jobs and businesses. EPA's efforts to implement BABA will help cultivate the domestic manufacturing base for a wide range of products commonly used across the water sector but not currently made domestically. This will take time, and flexibility will be important to ensure that EPA can leverage critical water investments on time and on budget to protect public health and improve water quality.

IMPLEMENTATION

Recognizing the opportunity and need for BABA implementation guidance, the Made in America Office (MIAO) of the Office of Management and Budget (OMB) published Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure (OMB Guidance M-22-11) on April 18, 2022. The guidance provides government-wide implementation direction for all Federal financial assistance programs for infrastructure. Despite the extensive guidance developed by MIAO, EPA's Office of Water infrastructure investment programs have received many questions that were not addressed in OMB Guidance M-22-11 or that require further clarification for EPA water infrastructure programs. The following questions and answers serve to supplement OMB Guidance M-22-11 with implementation procedures specific to EPA's relevant water infrastructure programs.

Section 70914(a) of the IIJA states when a Buy America preference under BABA applies: "Not later than... [May 14, 2022], the head of each Federal agency shall ensure that none of the funds made available for a Federal financial assistance program for infrastructure... may be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States." Therefore, Federal financial infrastructure investments obligated on or after May 14, 2022, must comply with the BABA requirements. Absent a waiver, all iron, steel, manufactured products, and construction materials permanently incorporated into an infrastructure project subject to the BABA requirements must be produced in the United States. For many of EPA's Office of Water infrastructure investment programs, the vast majority of products permanently incorporated into construction, maintenance, or repair projects must comply with the BABA requirements, with the exception of select construction materials (cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives), which are specifically excepted by the BABA statute.

EPA's Office of Water implements many infrastructure investment programs subject to BABA requirements, including the following:

- Alaska Native Villages and Rural Communities Water Grant Program (ANV) (and any associated Interagency Agreements with the Indian Health Service)
- Clean Water and Drinking Water State Revolving Fund Programs (CW and DWSRF)
- Clean Water and Drinking Water Grants to U.S. Territories and the District of Columbia
- Clean Water Indian and Drinking Water Tribal Infrastructure Grant Set-aside (and any associated Interagency Agreements with the Indian Health Service)
- Coastal Wetlands Planning, Protection and Restoration Act, (CWPPRA) Programs
- Congressionally Directed Spending/Community Project Funding (also known as Community Grants)
- Geographic Programs¹
- Gulf Hypoxia Program
- National Estuaries Program (CWA Section 320)

¹ Geographic Programs include: Great Lakes Restoration Initiative, Chesapeake Bay, San Francisco Bay, Puget Sound, Long Island Sound, Gulf of Mexico, South Florida, Lake Champlain, Lake Pontchartrain, Southern New England Estuaries, Columbia River Basin, Pacific Northwest

- 319 Nonpoint Source Management Program Implementation
- Reducing Lead in Drinking Water Grant Program (SDWA §1459B)
- Assistance for Small and Disadvantaged Communities Grants: Small, Underserved, and Disadvantaged Community Grant Program (SUDC), Emerging Contaminants in Small or Disadvantaged Communities (EC-SDC) and Drinking Water Infrastructure Resilience & Sustainability (SDWA §1459A)
- Sewer Overflow and Stormwater Reuse Municipal Grants (OSG)
- USMCA Implementing Legislation (Section 821 and Title IX, USMCA Supplemental Appropriations, 2020)
- U.S.-Mexico Border Water Infrastructure Program
- Voluntary School and Child Care Program Lead Testing and Remediation Grant Program (SDWA 1464(d))
- Water Infrastructure Finance and Innovation Act (WIFIA)

The questions and answers in this document apply to the implementation of BABA requirements for the Office of Water infrastructure programs listed above unless superseded by regulation, statute, or other applicable guidance. For many of the programs listed above which did not have domestic preference requirements prior to BABA, additional implementation details are pending or may be developed after the issuance of these procedures. In addition, EPA notes that more direction will be helpful to inform the determination and definition of domestic content in manufactured goods. Supplemental guidance on these and other issues, from either OMB or EPA, may be forthcoming. These implementation procedures may also apply to additional, unlisted EPA programs which may be required to apply BABA subsequent to publication of this memorandum (e.g., future funding programs which have been authorized, but not yet appropriated).

For more information on the BABA requirements, visit the EPA Office of Water’s dedicated website – <https://www.epa.gov/cwsrf/build-america-buy-america-baba> – or contact your funding authority (such as your grants officer, portfolio manager, or state contact). For information on approved waivers, visit <https://www.epa.gov/cwsrf/build-america-buy-america-baba-approved-waivers>. You may also email questions to BABA-OW@epa.gov.

This Implementation Procedures document is organized to provide responses to questions in the following topic areas:

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QUESTIONS AND ANSWERS

SECTION 1: GENERAL

- Q1.1: Will EPA provide documentation for BABA for bid solicitations and suggested contract language? Will EPA provide suggested language for Assistance Agreements?
 - A1.1: See Appendix 1, which includes suggested language for construction contracts which addresses the BABA requirements. In addition to the language suggested in Appendix 1, EPA also recommends that assistance recipients prepare contract bid solicitation documents with a statement for the consulting engineers and construction firms as follows: “By signing payment application and recommending payment, Contractor certifies they have reviewed documentation for all products and materials submitted for payment, and the certifications are sufficient to demonstrate compliance with Build America, Buy America Act requirements.” In most cases, the assistance recipient’s representatives assume the responsibility for their clients to conduct due diligence on compliance with applicable domestic preference requirements.

All Federal Financial infrastructure assistance agreements subject to BABA must have a clause requiring compliance with the requirements. See Appendix 2 for example assistance agreement language.

- Q1.2: Would federally-financed infrastructure projects outside of the United States need to comply with the BABA requirements?
 - A1.2: No. According to the OMB Guidance (M-22-11), a “project” is defined as “...any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States.” Therefore, the BABA requirements are not implicated for infrastructure projects occurring outside of the United States, such as projects funded through the United States-Mexico-Canada Agreement with infrastructure activities occurring in Mexico or Canada (that is, outside the United States).
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- Q1.3: If most of the project is BABA compliant, and a small portion is not, can an assistance recipient self-fund (i.e., paying with non-federal dollars) the non-compliant products?
 - A1.3: Any project that is funded in whole or in part with federal assistance must comply with the BABA requirements, unless the requirements are otherwise waived. All iron, steel, manufactured products, and construction materials used in a project must meet the BABA requirements unless waived. Absent a waiver, there is no “small portion” or product that does not need to satisfy the BABA requirements unless the requirements are waived (or specifically excluded as is the case for cement and cementitious materials; aggregates such as stone, sand, or gravel; aggregate binding agents or additives; or non-permanent products). An assistance recipient may request a waiver or inquire as to whether a broad waiver, such as a *de minimis* waiver, might apply.

- Q1.4: How do international trade agreements affect the implementation of the BABA requirements?
 - A1.4: The BABA requirements apply in a manner consistent with United States obligations under international trade agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to these trade agreements. In general, assistance recipients are not signatories to such agreements, so these trade agreements have no impact on BABA implementation. In the few instances where such an agreement applies to a municipality, that municipality is responsible for determining its applicability and requirements and communicating with the funding authority (such as EPA and/or a state) on the actions taken to comply with BABA.

SECTION 2: PRODUCT COVERAGE

- Q2.1: For products made of iron and steel, what is the difference between predominantly and primarily iron and steel?
 - A2.1: EPA considers the terms “predominantly” and “primarily” to be interchangeable, such that a product is considered predominantly (or primarily) iron and steel if it contains greater than 50 percent iron and steel by material cost.
- Q2.2: What is the definition of construction materials (with examples)?
 - A2.2: From OMB Guidance M-22-11: “construction materials” include an article, material, or supply (other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; aggregate binding agents or additives; or non-permanent products) that is or consists primarily of:
 - non-ferrous metals,
 - plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), (including optic glass),
 - lumber, and
 - drywall.

For example, a plate of glass would be a construction material under BABA, but a framed window that incorporates the glass into a frame would be a manufactured product. Another common construction material for water infrastructure projects would be polyvinyl chloride (PVC) pipe and fittings. However, if PVC components are incorporated into a more complex product such as instrumentation and control equipment or a water treatment unit, those items would be manufactured products.

- Q2.3: What are manufactured products (with examples)?
 - A2.3: From OMB Guidance M-22-11: “...all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total

cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation...”

The manufactured products category would cover the majority of potential water infrastructure products, including complex products made up of a variety of material types and components. For water infrastructure projects, common manufactured products would include, but not be limited to, pumps, motors, blowers, aerators, generators, instrumentation and control systems, gauges, meters, measurement equipment, treatment equipment, dewatering equipment, actuators, and many other mechanical and electrical items.

- Q2.4: Which category will valves fall under for BABA? Will it differ from the American Iron and Steel (AIS) requirements?
 - A2.4: For programs that are subject to BABA and AIS (SRF, WIFIA, and Community Project Funding), projects using valves should classify them as iron and steel products under BABA as long as their material cost is made up of more than 50 percent iron and/or steel. Valves with 50 percent or less iron and/or steel by material cost would be considered manufactured products under the BABA requirements.

In accordance with OMB Guidance M-22-11, an article, material, or supply should be classified into only one of the three categories: iron and steel, manufactured products, or construction materials. Under the AIS requirements, all valves made primarily of iron and steel (that is, those with iron and/or steel material cost greater than 50 percent) must comply with the AIS requirements. For BABA, EPA interprets Section IV of OMB Guidance M-22-11 to mean that iron and steel products are those items that are primarily iron and steel, the same as for the AIS requirements.

- Q2.5: Does EPA have a list of products to be classified as “Iron and Steel” under BABA?
 - A2.5: Although this list is not comprehensive, the following products were classified as AIS products if made primarily (more than 50 percent) of iron and/or steel by materials cost (for programs subject to both AIS and BABA, this list would be equivalent for “iron and steel” items or products under either requirement):

Products likely made “primarily” of iron and steel to be classified as <u>Iron and Steel</u> under BABA		
Lined and Unlined Pipe	Lined and Unlined Fittings	Tanks
Flanges	Pipe Clamps and Restraints	Structural Steel
Valves	Hydrants	Pre-Cast, Iron/Steel Reinforced Concrete (of all types, regardless of iron/steel content percentage)
Manhole Covers and other Municipal Castings	Access Hatches	Ballast Screens
Iron or Steel Benches	Bollards	Cast Bases
Cast Iron Hinged Hatches	Cast Iron Riser Rings	Catch Basin Inlets
Cleanout/Monument Boxes	Construction Covers and Frames	Curb and Corner Guards

Products likely made “primarily” of iron and steel to be classified as <u>Iron and Steel</u> under BABA		
Curb Boxes	Curb Openings	Curb Stops
Detectable Warning Plates	Downspout Shoes	Drainage Grates
Drainage Grate Frames and Curb Inlets	Inlets	Junction Boxes
Lampposts	Manhole Rings and Frames	Manhole Risers
Meter Boxes	Service Boxes	Steel Hinged Hatches
Steel Riser Rings	Trash Receptacles	Tree Grates
Tree Guards	Trench Grates	Valve Boxes
Valve Box Covers and Risers	Access Ramps	Aeration Pipes and Fittings (separate from aeration/blowers)
Angles	Backflow Preventers/Double Check Valves	Baffle Curtains
Iron or Steel Bar	Bathroom Stalls	Beam Clamps
Cable Hanging Systems	Clarifier Tanks	Coiled Steel
Column Piping	Concrete Reinforcing Bar, Wire, and Fibers	Condensate Sediment Traps
Corrugated Pipe	Couplings	Decking
Digester Covers	Dome Structures	Door Hardware
Doors	Ductwork	Expansion Joints
Expansion Tanks (diaphragm, surge, and hydropneumatics)	Fasteners	Fencing and Fence Tubing
Fire Escapes	Flanged Pipe	Flap Gates
Framing	Gate Valves	Generic Hanging Brackets
Grafitng	Ground Testing Boxes	Ground Test Wells
Guardrails	HVAC Registers, Diffusers, and Grilles	Joists
Knife Gates	Ladders	Lifting Hooks, J-bar, Connectors within, and Anchors for Concrete
Lockers	Man Baskets and Material Platforms	Manhole Steps
Mud Valves	Municipal Casting Junctions	Non-mechanical (aka stationary) Louvers and Dampers
Overhead Rolling Doors/ Uplifting Doors (manual open, no motor)	Pipe Connectors	Pipe Hangers
Pipe Pilings (any type of steel piling)	Pipe Spool (pipe, flanges, connectors, etc.)	Pipe Supports
Pitless Adaptors	Pre-fab Steel Buildings/Sheds (simple structure, unfurnished)	Pre-stressed Concrete Cylinder Pipe (PCCP)
Railings	Reduced Pressure Zone (RPZ) Valves	Roofing
Service Saddles	Sheet Piling	Sinks (not part of eyewash systems)
Solenoid Valves	Stairs	Static Mixers
Stationary Screens	Surface Drains	Tapping Sleeves
Telescoping Valves	Tipping Buckets	Trusses
Tubing	Valve Stem Extensions	Valve Stems (excluding handwheels and actuators)
Wall Panels	Wall Sleeves/Floor Sleeves	Welding Rods
Well Casing	Well Screens	Wire
Wire Cloth	Wire Rod	Wire Rope and Cables

Q2.6: Does EPA have a list of products that could be made “primarily” of iron and steel but would be classified as “manufactured products” under BABA?

A2.6: Although this list is not comprehensive, the following products would be considered “manufactured products” under the BABA requirements, even if the item might be composed primarily of iron and steel by materials cost (Note: These items are not subject to the AIS requirements.):

Products likely made “primarily” of iron and steel to be classified as <u>Manufactured Products</u> under BABA		
Actuator Superstructures/ Support Structures	Aeration Nozzles and Injectors	Aerators
Analytical Instrumentation	Analyzers (e.g., ozone, oxygen)	Automated Water Fill Stations
Blowers/Aeration Equipment	Boilers, Boiler Systems	Chemical Feed Systems (e.g., polymer, coagulant, treatment chemicals)
Chemical Injection Quills	Chemical Injectors	Clarifier Mechanisms/Arms
Compressors	Controls and Switches	Conveyors
Cranes	Desiccant Air Dryer Tanks	Dewatering Equipment
Dewatering Roll-offs	Disinfection Systems	Drives (e.g., variable frequency drives)
Electric/Pneumatic/Manual Accessories Used to Operate Valves (such as electric valve actuators)	Electrical Cabinetry and Housings (such as electrical boxes/enclosures)	Electrical Conduit
Electrical Junction Boxes	Electronic Door Locks	Elevator Systems (hydraulic, etc.)
Emergency Life Systems (including eyewash stations, emergency safety showers, fire extinguishers, fire suppression systems including sprinklers /piping/valves, first aid, etc.)	Exhaust Fans	Fall Protection Anchor Points
Fiberglass Tank w/Appurtenances	Filters (and appurtenances, including underdrains, backwash systems)	Flocculators
Fluidized Bed Incinerators	Galvanized Anodes/Cathodic Protection	Gear Reducers
Generators	Geothermal Systems	Grinders
Heat Exchangers	HVAC (excluding ductwork)	HVAC Dampers (if appurtenances to aerators/blowers)
HVAC Louvers (mechanical)	Intake and Exhaust Grates (if appurtenances to aerators/blowers)	Instrumentation
Laboratory Equipment	Ladder Fall Prevention Systems	Ladder Safety Posts
Lighting Fixtures	Lightning and Grounding Rods	Mechanical or Actuated Louvers/Dampers
Membrane Bioreactor Systems	Membrane Filtration Systems	Metal Office Furniture (fixed)
Meters (including flow, wholesale, water, and service connection)	Motorized Doors (unit)	Motorized Mixers
Motorized Screens (such as traveling screens)	Motors	Pelton Wheels
Pipeline Flash Reactors (similar to injectors)	Plate Settlers	Precast Concrete without Iron/Steel Reinforcement

Products likely made “primarily” of iron and steel to be classified as <u>Manufactured Products</u> under BABA		
Furnished Pre-fab Buildings (such as furnished with pumps, mechanics inside)	Presses (including belt presses)	Pressure Gauges
Pump Cans/Barrels and Strainers	Pumps	Mechanical Rakes
Safety Climb Cable	Sampling Stations (unless also act as hydrant)	Scrubbers
Sensors	Sequencing Batch Reactors (SBR)	Steel Shelving (fixed)
Slide and Sluice Gates	Spray Header Units	Steel Cabinets (fixed interior/furniture)
Supervisory Control and Data Acquisition (SCADA) Systems	Tracer Wire	Valve Manual Gears, Actuators, Handles
Voltage Transformer	Water Electrostatic Precipitators (WESP)	Water Heaters
Weir Gates		

- Q2.7: Is asphalt paving a covered product under BABA?
 - A2.7: No. EPA interprets Section 70917(c) of the IJIA to exclude asphalt from BABA requirements. Asphalt paving is a type of concrete composed of an aggregate material mixed with a binder (bitumen). EPA considers asphalt concrete to be excluded by section 70917(c) due to its similarities with cement and cementitious materials.

SECTION 3: CO-FUNDING

- Q3.1: If projects are co-funded with funding mechanisms that don’t require BABA, must the entire project comply with BABA?
 - A3.1: Yes. Any project that is funded in whole or in part with federal assistance must comply with the BABA requirements, unless the requirements are otherwise waived. A “project” consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all the contracts and assistance agreements awarded are closely related in purpose, time, and place. This precludes the intentional splitting of projects into separate and smaller contracts or assistance agreements to avoid BABA’s applicability on some portions of a larger project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreements would carry separate requirements.

- Q3.2: How will project requirements be determined for co-funded projects subject to potentially different general applicability/programmatic waiver conditions (such as different adjustment period waivers)?
 - A3.2: OMB Guidance M-22-11 addresses cases with project co-funding from separate programs. EPA would apply the guidance’s “cognizant” program determination to projects that are co-funded with different general applicability/programmatic waivers. For instance, if a project were co-funded between WIFIA and SRF and the majority of the Federal funding for the project is from WIFIA, then WIFIA would be the “cognizant” program for application and determination of waivers. In that case, any conditions from an applicable WIFIA waiver would apply.

SECTION 4: WAIVERS

- Q4.1: Who may apply for a waiver and how do you apply?
 - A4.1: Assistance recipients and their authorized representatives may apply for a project-specific waiver. EPA does not accept waiver requests from suppliers, distributors, or manufacturers unless the assistance recipient endorses and submits the request on its own behalf to the funding authority. In the case where multiple programs are providing federal funds to the project, the assistance recipient should submit the waiver request to the cognizant program, the one providing the greatest amount of federal funds for the project. For information on applying for cost waivers, see questions 4.4 and 4.5. For information on the SRF program roles and responsibilities, see question 7.6.

Project-specific waiver requests should generally include: (1) a brief summary of the project, (2) a description and explanation of the need for the waiver for the product(s) in question, (3) a brief summary of the due diligence conducted in search of domestic alternatives (which could include correspondence between assistance recipient and supplier/distributors), (4) the quantity and materials of the product(s) in question, (5) all engineering specifications and project design considerations relevant to the product(s) in question, (6) the approximate unit cost of items (both foreign and domestic) in addition to an estimated cost of the materials and overall project, (7) the date any products will be needed on site in order to avoid significant project schedule disruptions, and (8) any other pertinent information relevant to EPA’s consideration of the waiver (e.g., if relevant for SRF projects: whether the project is designated as an equivalency project, the date the plans and specifications were submitted to the state, the date of construction initiation, expected date of project completion, any special considerations such as local zoning and building ordinances, seismic requirements, or noise or odor control requirements).

In the case of indirect federal assistance, such as the SRF programs, the state authority reviews and conveys the waiver request to EPA. States should submit waiver requests to the appropriate program waiver request inbox. For SRF projects, please use CWSRFWaiver@epa.gov or DWSRFWaiver@epa.gov.

- Q4.2: Can an assistance recipient request a waiver based on a specification written for a specific brand or model of product (that is, a specification that names a branded item or model)?
 - A4.2: In most cases, performance-based specifications are expected and required for the majority of infrastructure projects funded by EPA’s financial assistance programs. In rare cases where “branded” or product-specific sourcing may be included in project specifications, it is suggested that the specifications include the item in question (that is, not simply a catalog page, but also materials of construction, sizing, quantities, and applicable engineering performance design characteristics for the project, etc.) in addition to the standard phrase “or equal.” For the purposes of product alternative market research, EPA will evaluate the BABA requirements based on performance-based engineering specifications for the product(s) in question. If the project’s specifications do not include performance-based specifications, or at least an “or equal” designation, EPA will base its research on an “or equal” designation using best professional judgment to the extent practicable.

- Q4.3: If a manufactured product is not readily available domestically, will EPA provide short-term “limited availability” product waivers?
 - A4.3: EPA will address the unavailability of domestic products through the waiver process, including potential national short-term waivers for specific products, if appropriate. To the extent practicable and with the intent to maximize domestic market and supply chain development, EPA intends to address issues of broad product unavailability with targeted, time-limited, and conditional waivers, as prescribed in OMB Guidance M-22-11. EPA will follow its robust and thorough product research processes (those put into place for the AIS requirements for the SRF and WIFIA programs and expanded for the new BABA requirements) to identify and determine those products for which proposed national/general applicability waivers may be appropriate.

- Q4.4: What information is needed when applying for a cost waiver under BABA?
 - A4.4: As part of the cost waiver request, the assistance recipient must demonstrate that implementation of the BABA requirements will increase the overall project cost more than 25 percent. Depending on the circumstances of the overall project cost increases, documentation to justify the cost waiver can vary but may include itemized cost estimates or bid tabulations comparing project costs with and without BABA implementation. Assistance recipients should begin assessing the potential cost impacts of the BABA requirements during the design phase of a project.

- Q4.5: Can administrative costs associated with tracking and verification of certifications be considered when determining if the cost of a project increases by 25 percent or more?
 - A4.5: Yes. Section 70914(b)(3) of the IIJA states that a waiver may be provided if the overall cost of the project increases by more than 25 percent due to the “inclusion of iron, steel, manufactured products, or construction materials produced in the United States.” EPA interprets this to mean that the “inclusion” of the BABA-covered products could encompass

reasonable administrative costs associated with complying with the BABA requirements, such as staff, contractor, and technological resources to collect and track BABA compliance documentation.

- Q4.6: How can assistance recipients and construction contractors address product delivery delays?
 - A4.6: Assistance recipients should reasonably plan for material procurement to account for known potential supply chain issues or extended lead times and shall notify the funding authority well in advance of the issues so that prompt attention can be given to explore options. Where extended lead times for compliant products are impacting project schedules and may significantly impact construction progress, timely communication with the funding agency is important. For products that are unavailable within a reasonable timeframe to meet the objectives and schedule of a project, EPA may consider a non-availability waiver with adequate justification. An assistance recipient would need to apply for the waiver and contact its funding authority (such as EPA and/or a state) to initiate the waiver process.

SECTION 5: DOCUMENTING COMPLIANCE

- Q5.1: Who will be responsible for BABA enforcement?
 - A5.1: Responsibility for BABA implementation applies at all levels, from manufacturers to suppliers and distributors, construction contractors, assistance recipients, and funding authorities.

The manufacturers have responsibility to provide adequate and accurate documentation of the products manufactured. If suppliers and distributors are involved, they are responsible for passing along compliance documentation for products supplied to projects that are subject to the BABA requirements.

The assistance recipient and their representatives are primarily responsible for ensuring the documentation collected for products used on the project is sufficient to document compliance with the BABA requirements.

The funding authority is responsible for providing oversight and guidance as needed to ensure the proper implementation of the requirements. The Uniform Grants Guidance (UGG) (Title 2 of the Code of Federal Regulations (CFR) Part 200) applies to many Federal financial assistance agreements that will include BABA requirements. The general provisions of 2 CFR Part 200 determine the responsible party for the grant funding authority.

For information on SRF program roles and responsibilities, see question 7.6.

At all levels, where fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: <http://www.epa.gov/oig/hotline.htm>.

- Q5.2: When will the BABA requirements be assessed for compliance? Do assistance recipients need to have waivers for potential non-domestic products before assistance agreements are in place, at the time products are procured or products are incorporated into the project (i.e., used)?
 - A5.2: Compliance is assessed where the domestic product is used (or installed) at the project site. Proper compliance documentation, whether it is a BABA certification letter or a waiver, should accompany a product prior to its “use”, in accordance with Section 70914(a) of IIJA. This may occur prior to assistance agreements being in place but is not necessary. Additionally, communication of BABA requirements through appropriate Terms and Conditions in financial assistance agreements and in project solicitation and contract documents is key in ensuring all parties involved are informed of the requirements for the project before construction is underway.

- Q5.3: How can product compliance with the BABA requirements be demonstrated?
 - A5.3: Assistance recipients and their representatives should ensure that the products delivered to the construction site are accompanied by proper documentation that demonstrate compliance with the law and be made available to the funding authority upon request. The documentation may be received and maintained in hard copy, electronically, or could be embedded in construction management software. The use of a signed certification letter for the project is the most direct and effective form of compliance documentation for ensuring products used on site are BABA-compliant prior to their installation; however, other forms of documentation are also acceptable as long as collectively, the following can be demonstrated:
 - (1) Documentation linked to the project. For example, this can be in the form of the project name, project location, contract number, or project number.
 - (2) Documentation linked to the product used on the project. For example, description of product(s) (simple explanation sufficient to identify the product(s)), or an attached (or electronic link to) purchase order, invoice, or bill of lading.
 - (3) Documentation includes statement attesting that the products supplied to the assistance recipient are compliant with BABA requirement. Reference to the Infrastructure Investment and Jobs Act (“IIJA”) or the Bipartisan Infrastructure Law (BIL) are also acceptable. For iron and steel items under BABA, references to the American Iron and Steel (AIS) requirements are also acceptable and reciprocal with BABA for such items.
 - (4) Documentation that manufacturing occurred in the United States, which could include, for example, the location(s) of manufacturing for each manufacturing step that is being certified. It is acceptable for manufactured products to note a single point of manufacturing, documenting that the final point of manufacturing is in the United States. Note that each BABA category may require different determinations for compliance.
 - (5) Signature of company representative (on company letterhead and signature can be electronic). The signatory of the certifying statement affirms their knowledge of the manufacturing processes for the referenced product(s) and attests that the product meets the BABA requirements.

In addition to compliance documentation, assistance recipients or their representatives should also conduct a visual inspection of the product when it arrives to the project site, especially for iron and steel products which are often stamped with the country of origin. (Note: A country of origin stamp alone is not sufficient verification of compliance with BABA and assistance receipts should not rely on it to ensure compliance.)

EPA may develop alternative procedures for demonstrating compliance. Additional project- or program-specific instructions may be developed on a case-by-case basis in order to meet individual circumstances.

- Q5.4: Will EPA provide a form or template for tracking and documenting compliance?
 - A5.4: EPA does not require a specified format for tracking or documenting compliance. Assistance recipients are free to develop any system (from simple to complex software) for tracking items used on the project and the accompanying compliance documentation, e.g., certification letters, applicable waivers, if it helps with implementation and compliance. Elements that may help with keeping track of compliance may include: product description, quantity required/used, product category (i.e., iron and steel, manufactured product, or construction material), status of obtaining certification letter, product cost, and whether the item might qualify as *de minimis*, or qualify under another applicable waiver.
- Q5.5: If a manufacturer claims to comply with the Buy American Act, does it also comply with BABA?
 - A5.5: No. With the exception of the AIS requirements – which EPA interprets to be equivalent to the “iron and steel” requirements under BABA – EPA does not have an interpretation about the comparability of other domestic preference requirements relative to BABA. Any products that are to be certified as compliant with BABA should include a specific reference to the BABA requirements and appropriate attestation from a responsible manufacturing company official. See Question 5.3 for EPA’s recommendations for BABA certification letters.
- Q5.6: How will assistance recipients manage certification letters for hundreds, possibly thousands of products?
 - A5.6: EPA recognizes that the new BABA requirements will cover most products used in typical water and wastewater infrastructure projects, and that the number of items which may require certification at large and/or complex projects may reach several hundred. EPA is concerned about the potential administrative burden that this would place on assistance recipients. EPA recommends that projects with a high number of potentially covered products meet with their funding authority about potential compliance strategies to minimize burden and streamline compliance activity. Assistance recipients should prepare contract bid solicitation documents with a statement for the consulting engineers and construction firms as follows: “By signing payment application and recommending payment, Contractor certifies they have reviewed documentation for all products and materials submitted for payment, and the documentation is sufficient to demonstrate compliance with Build America,

Buy America Act requirements.” In most cases, the assistance recipient’s representatives may assume the responsibility for their clients to conduct due diligence on compliance with applicable domestic preference requirements.

- Q5.7: Who is responsible for documenting the 55 percent content requirement for manufactured products under BABA? What if the final manufacturer cannot trace or verify domestic origin for all components?
 - A5.7: The manufacturer who signs a certification letter is responsible for documenting compliance with any of the three categories of products (iron and steel, manufactured products, or construction materials). For manufactured products, BABA requires that greater than 55 percent of the total cost of all components of the manufactured product be from domestic sources. EPA recommends that the certification letter for manufactured products document whether the item passes the content test in the final product along with a statement attesting to compliance with the BABA requirements for manufactured products.
- Q5.8: How do final product fabricators document compliance when the final step of manufacturing may be simply assembling components?
 - A5.8: It is acceptable, in many cases, especially for highly complex manufactured products that utilize many sub-components, for the final point of assembly to certify without using a “step certification” process. Multiple certifications (i.e., step certifications) or a singular certification can be used for a product, as long as the certifying official is willing to attest to the product’s compliance with BABA requirements at all stages of manufacturing.
- Q5.9: Will Material Test Reports be acceptable in lieu of a BABA certification for iron and steel?
 - A5.9: Material Test Reports (MTRs, commonly referred to as “Mill Certifications” or “Mill Certs”) provide the chemical composition of steel and iron from a mill or foundry. If an MTR accompanies the delivery of steel or iron to a project site with an invoice or bill of lading, EPA will consider it sufficient to demonstrate compliance (equivalent to a certification letter) as long as the MTR includes a manufacturer representative’s signature in addition to the location (city and state) of the mill/foundry. It is common for MTRs to be the first letter in a “step certification” if the product is further fabricated or painted, etc., by another manufacturer.
- Q5.10: Can a manufacturer use a fillable certification letter for products?
 - A5.10: EPA recommends that certifications be signed by representatives of the manufacturing entity. EPA does not oppose manufacturers using forms to internally develop letters within their company, thereby providing signed, non-manipulable certification letters to suppliers, distributors, and/or assistance recipients. A fillable form that can be changed by someone outside of the manufacturer after signature does not demonstrate compliance and may create compliance concerns for the manufacturer or assistance recipient.

- Q5.11: Are product certifications from suppliers and distributors allowed?
 - A5.11: EPA recommends that representatives of product manufacturers certify compliance and discourages suppliers and distributors from creating certification letters. EPA does not rule out the possibility that a third-party certification process, such as a certification by a distributor, may be viable. However, EPA is currently not aware of a system or proposed system that meets the EPA’s recommendations for documentation of product certification.
- Q5.12: How long should assistance recipients keep compliance documentation?
 - A5.12: Assistance recipients should apply recordkeeping requirements for the project according to the procedures dictated by the funding authority. For most EPA grant programs, this is prescribed in the UGG at 2 CFR 200.334-200.338; e.g., the SRF programs require a minimum of three years. Other funding programs may require longer documentation retention periods.

SECTION 6: PROGRAMS WITH AMERICAN IRON AND STEEL REQUIREMENTS

- Q6.1: Does BABA supersede the American Iron and Steel (AIS) Requirements?
 - A6.1: The BABA requirements for items considered “iron and steel” are equivalent to those for covered iron and steel products under the AIS requirements in the Clean Water Act and the Safe Drinking Water Act. These requirements apply to the CWSRF, DWSRF, WIFIA, and Water infrastructure Community Grants. BABA includes a “Savings Provision” (Section 70917(b)) that states that BABA does not affect existing domestic content procurement preferences for infrastructure projects funded by Federal financial assistance programs that meet the requirements of section 70914. EPA views the AIS requirements as meeting the “iron and steel” product requirements of BABA Section 70914, as they both include the key requirement that items made of iron and steel be wholly manufactured in the United States from the point of melting and/or pouring the iron or steel components through final manufacturing step. Because of the “Savings Provision” of Section 70917, the AIS requirements satisfy the “iron and steel” requirements of BABA. For the programs that have AIS requirements, EPA intends to implement BABA requirements the same way for iron and steel items as it has done for AIS products.
- Q6.2: For iron and steel products, does a manufacturer need to demonstrate compliance from initial melting through the finished product?
 - A6.2: For iron and steel products, the BABA requirements are the same as the existing AIS requirements, in that all of the iron and steel in a covered product (that is, the product is comprised of more than 50 percent iron and steel by material cost) must be melted and poured in the United States and all subsequent manufacturing processes (such as grinding, rolling, bending, reheating, and casting) must occur in the United States.

Q6.3: Will EPA apply the same manufacturing standards for BABA iron and steel products as for the American Iron and Steel (AIS) requirements?

- A6.3: Yes. For AIS, EPA did not require raw materials used in the production of steel or iron to be domestically sourced. For BABA, EPA interprets the requirements to be the same. Hence, like AIS, raw materials in the production of iron and steel subject to BABA requirements would not need to be domestically sourced. The key step for both AIS and BABA domestic iron and/or steel production is the melting/pouring (that is, the location of the furnace), which must be in the United States.

• Q6.4: Will the certification process be similar to the process established for the American Iron and Steel requirements?

- A6.4: EPA expects the certification process for the BABA requirements to be very similar to that established for the AIS requirements. For iron and steel products, the process should remain the same for AIS and BABA. EPA recommends for manufactured products and for construction materials that certification letters include direct reference to the product/material content requirements under BABA, in addition to an affirmative statement verifying that the product meets the BABA requirements.

• Q6.5: Will duplicate certification letters be required for AIS and BABA for iron/steel products?

- A6.5: No. Compliance with BABA requirements will be sufficient to demonstrate compliance with AIS requirements for iron and steel products. If a project is subject to BABA, the only demonstration of compliance necessary is with the BABA requirements, of which the iron and steel requirements are equivalent to those of the AIS statutory requirements: the iron or steel in a product made primarily or predominantly of iron and steel (comprising more than 50 percent iron and steel by material cost) must be melted and/or poured in the United States and all subsequent manufacturing processes must occur in the United States.

SECTION 7: PROGRAM-SPECIFIC ISSUES

• Q7.1.: How do the BABA requirements apply to Community Grants?

- A7.1: The Community Project Funding/Congressionally Directed Spending grants for the construction of drinking water, wastewater, and stormwater infrastructure and for water quality protection are subject to the requirements specified in the explanatory statement accompanying the Consolidated Appropriations Act (Explanatory Statement for Division G of P.L. 117-13, the Consolidated Appropriations Act of 2022). The explanatory statement asserts: “Applicable Federal requirements that would apply to a Clean Water State Revolving Fund or Drinking Water State Revolving Fund project grant recipient shall apply to a grantee receiving a CPF grant under this section.” Therefore, the federally funded Community Project Funding/Congressionally Directed Spending grants are subject to the same requirements that apply to CWSRF or DWSRF projects, including BABA and AIS requirements. See also A1.2.

- Q7.2: Should SRF projects covered by the BABA SRF Projects Design Planning Adjustment Period Waiver follow the same procedures for demonstrating compliance as outlined for American Iron and Steel requirements?
 - A7.2: Yes. The SRF Design Planning Adjustment Period waiver does not waive the iron and steel requirements under BABA. The SRF programs have existing domestic preference requirements for SRF projects under CWA Section 608 and SDWA Section 1452(a)(4) (AIS requirements) to use iron and steel products that are produced in the United States. Sections 70917(a) and (b) of BIL explain the application of BABA to existing domestic preference requirements. Specifically, the savings provision in Section 70917(b) states that existing domestic preference requirements that meet BABA requirements are not affected by BABA. The statutory AIS requirements were existing at the time BABA became law and satisfy the BABA iron and steel requirements. Therefore, the statutory AIS requirements that have previously applied to SRF-funded projects will continue to do so, and compliance with AIS requirements will satisfy the BABA iron and steel requirements. Demonstration of compliance for iron and steel products will follow the AIS implementation policies for projects subject to the waiver.

- Q7.3: For SRF programs, is BABA considered a federal cross-cutting authority? (i.e., do “equivalency” rules apply?)
 - A7.3: Yes, BABA is considered a federal cross-cutting requirement that applies to SRF assistance equivalent to the federal capitalization grant (i.e., “equivalency” projects). EPA’s SRF regulations at 40 CFR 35.3145 and 35.3575 require states and recipients of SRF funds equivalent to the amount of the federal capitalization grant to comply with federal cross-cutting requirements. Section 70914 of the IIJA, which states when a Buy America preference applies, explains that “none of the funds made available for a Federal financial assistance program for infrastructure...may be obligated for a project unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.” Therefore, BABA only applies to projects funded in an amount equivalent to the federal capitalization grant and not to those projects receiving funds in excess of the capitalization grant (i.e., “non-equivalency” projects). (Note: The AIS requirements continue to apply for all SRF projects, including non-equivalency projects, and all WIFIA and Community Grant projects, because equivalency does not apply.)

- Q7.4: Do the BABA requirements apply to Drinking Water State Revolving Fund set-asides?
 - A7.4: Due to requirements related to the deposit of funds in the DWSRF program, almost all of the funds used to conduct set-aside activities are Federal dollars. Therefore, Federal cross-cutting requirements must be applied to all set-aside activities. However, in the case of most set-aside activities, the cross-cutting requirements will not be implicated because of the nature of the activities conducted under the set-asides. Because the BABA requirements only apply to infrastructure, and infrastructure typically is not an eligible set-aside expenditure (with one potential exception being loans for incentive-based source water protection

measures under the Local Assistance and Other State Programs Set-Aside), the BABA requirements will not apply to most set-aside activities.

- Q7.5: What if an SRF project is refinanced using Federal financial assistance on or after May 14, 2022?
 - A7.5: If an SRF project began construction, financed from another funding source, prior to May 14, 2022, but is refinanced through an assistance agreement executed on or after that date, BABA requirements will apply to all construction that occurs on or after May 14, 2022, through completion of construction, unless a waiver applies. There is no retroactive application of the BABA requirements where a refinancing occurs for an SRF project that has completed construction prior to May 14, 2022. (Note: If SRF funding is used for the refinancing, the AIS requirements may still apply depending on the timing of construction.)
- Q7.6: What are the roles and responsibilities for SRF programs for BABA implementation?
 - A7.6: Implementation of the BABA requirements for the State Revolving Fund programs will continue the roles and responsibilities from the successful AIS implementation process.

As with AIS, it is both the assistance recipient's and the state's responsibility to ensure compliance with the BABA requirements. The state is the recipient of a federal capitalization grant and must comply with all grant conditions, including a condition requiring adherence to BABA requirements.

Consequently, states are strongly advised to conduct site visits of projects during construction and review documentation demonstrating the assistance recipient's proof of compliance. In EPA's experience, most states conduct periodic site visits and arrange timely meetings with funded projects. Observed best practices typically include a meeting early in the process (sometimes before bid and usually prior to commencing construction) and at least one project site visit during the construction process. Assistance recipients must maintain documentation of compliance with the BABA requirements, as explained in question 5.3. The documents must be kept by the assistance recipient and should be reviewed by the state during project reviews.

The state's role in the waiver process is to review any waiver requests submitted to the state to ensure that all necessary information has been provided by the assistance recipient prior to forwarding the request to EPA. If a state finds the request lacking, the state should work with the assistance recipient to help obtain complete information. Question 4.1 explains the information needed by EPA to expediently review a waiver request.

In order to implement the BABA requirements, EPA has developed an approach for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow states, on behalf of the assistance recipients, to apply for waivers of the BABA requirements directly to EPA Headquarters. Only waiver requests received and/or endorsed from states will be considered. Pursuant to BABA, EPA has the responsibility to make findings as to the issuance of waivers to the BABA requirements.

Step-by-step SRF Waiver Process

The waiver process begins with the assistance recipient. To fulfill the BABA requirements, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American-made iron and steel, manufactured goods, and construction materials. It is essential that the assistance recipient include the BABA terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 2 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three statutory conditions is demonstrated to EPA and approved.

To apply for a project-specific waiver, the assistance recipient should email the request in the form of a Word document (.doc) or editable PDF (.pdf) to the funding program. It is strongly recommended that each state identify a person or persons for BABA communications. The state designee(s) will review the application for the waiver and determine whether the necessary information has been included (Note: More information may be provided in the future regarding what information is required to be included in waiver requests). Once the waiver application is complete, the designee will forward the application to CWSRFWaiver@epa.gov or DWSRFWaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the BABA requirements and ensuring sufficient information was provided, EPA will publish the request on its website for 15 days and receive public comment. EPA will then determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the state designee whether a waiver request has been approved or not approved as soon as such a decision has been made. Granting such a waiver is a four-step process:

1. Research – After receiving an application for a waiver, EPA will perform market research to determine whether the iron, steel, manufactured goods, or construction materials are available domestically.
2. Posting – After research, if no domestic product has been identified, EPA is required to publish the application and all material submitted with the application on EPA's website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: <https://www.epa.gov/cwsrf/build-america-buy-america-baba-waivers-open-public-comment>.
3. Evaluation – After receiving an application for waiver of the BABA requirements, EPA will determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver to determine whether or not to grant the waiver.

3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program and post the signed waiver on the Agency’s website. The assistance recipient should keep a copy of the signed waiver in its project files.

(Note: Additional steps may be required in the future regarding the waiver process depending on additional guidance from OMB)

APPENDIX 1

Example Build America, Buy America (BABA) Act Construction Contract Language

ALL CONSTRUCTION CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE BABA REQUIREMENTS. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN A PROJECT'S CONSTRUCTION CONTRACT. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the _____ (“Owner”) and the _____ (the “Funding Authority”) that it understands the goods and services under this Agreement are being funded with federal monies and have statutory requirements commonly known as “Build America, Buy America;” that requires all of the iron and steel, manufactured products, and construction materials used in the project to be produced in the United States (“Build America, Buy America Requirements”) including iron and steel, manufactured products, and construction materials provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner and Funding Authority (a) the Contractor has reviewed and understands the Build America, Buy America Requirements, (b) all of the iron and steel, manufactured products, and construction materials used in the project will be and/or have been produced in the United States in a manner that complies with the Build America, Buy America Requirements, unless a waiver of the requirements is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the Build America, Buy America Requirements, as may be requested by the Owner or the Funding Authority. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner or Funding Authority to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Owner or Funding Authority resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the Funding Authority or any damages owed to the Funding Authority by the Owner). If the Contractor has no direct contractual privity with the Funding Authority, as a lender or awardee to the Owner for the funding of its project, the Owner and the Contractor agree that the Funding Authority is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the Funding Authority.

APPENDIX 2

Example Build America, Buy America (BABA) Act Assistance Agreement Language

ALL FEDERAL FINANCIAL INFRASTRUCTURE ASSISTANCE AGREEMENTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE BABA REQUIREMENTS. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN AN ASSISTANCE AGREEMENT (E.G., SRF LOAN AGREEMENT). EPA MAKES NO CLAIMS REGARDING THE LEGAL SUFFICIENCY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the assistance received (including those imposed by the Infrastructure Investment and Jobs Act (“IIJA”), Public Law No. 117-58) which the Participant understands includes, but is not limited to, the following requirements: that all of the iron and steel, manufactured products, and construction materials used in the Project are to be produced in the United States (“Build America, Buy America Requirements”) unless (i) the Participant has requested and obtained a waiver from the cognizant Agency^[1] pertaining to the Project or the Project is otherwise covered by a general applicability waiver; or (ii) all of the contributing Agencies have otherwise advised the Participant in writing that the Build America, Buy America Requirements are not applicable to the Project.

Comply with all record keeping and reporting requirements under all applicable legal authorities, including any reports required by the funding authority (such as EPA and/or a state), such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the applicable legal requirements and this Agreement may result in a default hereunder that results in a repayment of the assistance agreement in advance of the maturity of the Bonds, termination and/or repayment of grants, cooperative agreements, direct assistance or other types of financial assistance, and/or other remedial actions.

^[1] From OMB Guidance M-22-11: To avoid a need for duplicative waiver requests from entities that receive funding for one infrastructure project through multiple Federal agencies, the Federal agency contributing the greatest amount of Federal funds for the project should be considered the “Cognizant Agency for Made in America” and should take responsibility for coordinating with the other Federal awarding agencies. Such coordination will provide uniform waiver criteria and adjudication processes, minimize duplicative efforts among Federal agencies, and reduce burdens on recipients. The Cognizant Agency for Made in America shall be responsible for consulting with the other Federal awarding agencies, publicizing the proposed joint waiver, and submitting the proposed joint waiver for review to MIAO.

Attachment M

Davis Bacon Wage Rates

"General Decision Number: RI20240001 08/30/2024

Superseded General Decision Number: RI20230001

State: Rhode Island

Construction Types: Building, Heavy (Heavy and Marine) and Highway

Counties: Rhode Island Statewide.

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories) HEAVY, HIGHWAY AND MARINE CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	01/12/2024
2	02/23/2024
3	03/08/2024
4	03/22/2024
5	04/05/2024
6	05/24/2024
7	05/31/2024
8	06/14/2024
9	06/21/2024
10	07/05/2024
11	07/12/2024
12	08/23/2024
13	08/30/2024

ASBE0006-006 09/01/2023

	Rates	Fringes
HAZARDOUS MATERIAL HANDLER (Includes preparation, wetting, stripping, removal scrapping, vacuuming, bagging & disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems).....	\$ 48.15	34.84

ASBE0006-008 09/01/2023

	Rates	Fringes
Asbestos Worker/Insulator Includes application of all insulating materials, protective coverings, coatings & finishes to all types of mechanical systems.	\$ 48.15	34.84

BOIL0029-001 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 45.87	29.02

BRRIO003-001 06/01/2022

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner.....	\$ 46.86	29.14

BRRIO003-002 09/01/2022

	Rates	Fringes
Marble Setter, Terrazzo Worker & Tile Setter.....	\$ 46.54	30.34

BRRIO003-003 09/01/2022

Rates	Fringes
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Marble, Tile & Terrazzo Finisher.....	\$ 38.78	29.61
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 CARP0330-001 06/03/2024

	Rates	Fringes
CARPENTER (Includes Soft Floor Layer).....	\$ 45.13	30.25
Diver Tender.....	\$ 44.88	30.25
DIVER.....	\$ 57.03	30.25
Piledriver.....	\$ 41.53	29.35
WELDER.....	\$ 44.88	30.25

FOOTNOTES:

When not diving or tending the diver, the diver and diver tender shall receive the piledriver rate. Diver tenders shall receive \$1.00 per hour above the pile driver rate when tending the diver.

Work on free-standing stacks, concrete silos & public utility electrical power houses, which are over 35 ft. in height when constructed: \$.50 per hour additional.

Work on exterior concrete shear wall gang forms, 45 ft. or more above ground elevation or on setback: \$.50 per hour additional.

The designated piledriver, known as the ""monkey"": \$1.00 per hour additional.

 CARP1121-002 01/02/2023

	Rates	Fringes
MILLWRIGHT.....	\$ 41.54	30.73

 * ELEC0099-002 06/01/2024

	Rates	Fringes
ELECTRICIAN.....	\$ 52.11	47.25%
Teledata System Installer.....	\$ 39.09	11.02%+15.31

FOOTNOTES:

Work of a hazardous nature, or where the work height is 30 ft. or more from the floor, except when working OSHA-approved lifts: 20% per hour additional.

Work in tunnels below ground level in combined sewer outfall: 20% per hour additional.

 ELEV0039-001 01/01/2024

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 61.88	37.885+a+b

FOOTNOTES:

a. PAID HOLIDAYS: New Years Day; Memorial Day; Independence

Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

b. Employer contributes 8% basic hourly rate for 5 years or more of service of 6% basic hourly rate for 6 months to 5 years of service as vacation pay credit.

ENGI0057-001 06/01/2024

	Rates	Fringes
Operating Engineer: (power plants, sewer treatment plants, pumping stations, tunnels, caissons, piers, docks, bridges, wind turbines, subterranean & other marine and heavy construction work)		
GROUP 1.....	\$ 48.05	29.90
GROUP 10.....	\$ 41.75	29.90
GROUP 2.....	\$ 46.05	29.90
GROUP 3.....	\$ 41.67	29.90
GROUP 4.....	\$ 38.82	29.90
GROUP 5.....	\$ 45.10	29.90
GROUP 6.....	\$ 35.90	29.90
GROUP 7.....	\$ 29.90	29.90
GROUP 8.....	\$ 29.90	29.90
GROUP 9.....	\$ 41.75	29.90

a. BOOM LENGTHS, INCLUDING JIBS:

- 150 feet and over + \$ 2.00
- 180 feet and over + \$ 3.00
- 210 feet and over + \$ 4.00
- 240 feet and over + \$ 5.00
- 270 feet and over + \$ 7.00
- 300 feet and over + \$ 8.00
- 350 feet and over + \$ 9.00
- 400 feet and over + \$10.00

a. PAID HOLIDAYS:

New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day. a: Any employee who works 3 days in the week in which a holiday falls shall be paid for the holiday.

a. FOOTNOTES:

Hazmat work: \$2.00 per hour additional.
Tunnel/Shaft work: \$5.00 per hour additional.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, lighters, boom trucks and derricks

GROUP 2: Digging machine, Ross Carrier, locomotive, hoist, elevator, bidwell-type machine, shot & water blasting machine, paver, spreader, graders, front end loader (3 yds. and over), vibratory hammer & vacuum truck, roadheaders, forklifts, economobile type equipment, tunnel boring machines, concrete pump and on site concrete plants.

GROUP 3: Oilers on cranes.

GROUP 4: Oiler on crawler backhoe.

GROUP 5: Bulldozer, bobcats, skid steer loader, tractor, scraper, combination loader backhoe, roller, front end loader (less than 3 yds.), street and mobile-powered sweeper (3-yd. capacity), 8-ft. sweeper minimum 65 HP).

GROUP 6: Well-point installation crew.

GROUP 7: Utility Engineers and Signal Persons

GROUP 8: Heater, concrete mixer, stone crusher, welding machine, generator and light plant, gas and electric driven pump and air compressor.

GROUP 9: Boat & tug operator.

ENGI0057-002 05/01/2024

	Rates	Fringes
Power Equipment Operator (highway construction projects; water and sewerline projects which are incidental to highway construction projects; and bridge projects that do not span water)		
GROUP 1.....	\$ 41.95	29.75
GROUP 2.....	\$ 39.95	29.75
GROUP 3.....	\$ 35.23	29.75
GROUP 4.....	\$ 38.93	29.75
GROUP 5.....	\$ 38.93	29.75
GROUP 6.....	\$ 34.65	29.75
GROUP 7.....	\$ 28.65	29.75
GROUP 8.....	\$ 34.20	29.75
GROUP 9.....	\$ 34.28	29.75
GROUP 1.....	\$ 43.20	29.70
GROUP 1A.....	\$ 41.20	29.70
GROUP 2.....	\$ 35.90	29.70
GROUP 3.....	\$ 22.50	29.70
GROUP 4.....	\$ 36.48	29.70
GROUP 5.....	\$ 40.18	29.70
GROUP 6.....	\$ 40.18	29.70
GROUP 7.....	\$ 35.45	29.70
GROUP 9.....	\$ 40.18	29.70

a. FOOTNOTE: a. Any employee who works three days in the week in which a holiday falls shall be paid for the holiday.

a. PAID HOLIDAYS: New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day & Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane, piledriver, lighter, boom truck, hoists, derrick

GROUP 1A: Digging machine, locomotive, John Henry's, directional drilling machine, cold planer, reclaimer, paver, spreader, grader, front end loader (3 yds. and

over), vacuum truck, test boring machine operator, veemere saw, water blaster, hydro-demolition robot, forklift, economobile, Ross Carrier, concrete pump operator and boats

GROUP 2: Well point installation crew

GROUP 3: Utility engineers and signal persons

GROUP 4: Oiler on cranes

GROUP 5: Combination loader backhoe, front end loader (less than 3 yds.), forklift, bulldozers & scrapers and boats

GROUP 6: Roller, skid steer loaders, street sweeper

GROUP 7: Gas and electric drive heater, concrete mixer, light plant, welding machine, pump & compressor

GROUP 8: Stone crusher

GROUP 9: Mechanic & welder

ENGI0057-003 06/01/2024

BUILDING CONSTRUCTION

	Rates	Fringes
Power Equipment Operator		
GROUP 1.....	\$ 47.32	29.90
GROUP 2.....	\$ 45.32	29.90
GROUP 3.....	\$ 45.10	29.90
GROUP 4.....	\$ 41.10	29.90
GROUP 5.....	\$ 37.50	29.90
GROUP 6.....	\$ 38.25	29.90
GROUP 7.....	\$ 43.97	29.90
GROUP 8.....	\$ 41.29	29.90

a. BOOM LENGTHS, INCLUDING JIBS:

- 150 ft. and over: + \$ 2.00
- 180 ft. and over: + \$ 3.00
- 210 ft. and over: + \$ 4.00
- 240 ft. and over: + \$ 5.00
- 270 ft. and over: + \$ 7.00
- 300 ft. and over: + \$ 8.00
- 350 ft. and over: + \$ 9.00
- 400 ft. and over: + \$10.00

a. PAID HOLIDAYS: New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day & Christmas Day. a: Any employee who works 3 days in the week in which a holiday falls shall be paid for the holiday.

a. FOOTNOTE: Hazmat work: \$2.00 per hour additional.
Tunnel/Shaft work: \$5.00 per hour additional.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, lighters, boom trucks and derricks.

GROUP 2: Digging machine, Ross carrier, locomotive, hoist,

elevator, bidwell-type machine, shot & water blasting machine, paver, spreader, front end loader (3 yds. and over), vibratory hammer and vacuum truck

GROUP 3: Telehandler equipment, forklift, concrete pump & on-site concrete plant

GROUP 4: Fireman & oiler on cranes

GROUP 5: Oiler on crawler backhoe

GROUP 6: Bulldozer, skid steer loaders, bobcats, tractor, grader, scraper, combination loader backhoe, roller, front end loader (less than 3 yds.), street and mobile powered sweeper (3 yds. capacity), 8-ft. sweeper (minimum 65 hp)

GROUP 7: Well point installation crew

GROUP 8: Heater, concrete mixer, stone crusher, welding machine, generator for light plant, gas and electric driven pump & air compressor

IRON0037-001 03/16/2024

	Rates	Fringes
IRONWORKER.....	\$ 40.75	32.83

LABO0271-001 12/03/2023

BUILDING CONSTRUCTION

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 37.00	26.90
GROUP 2.....	\$ 37.00	26.90
GROUP 3.....	\$ 37.00	26.90
GROUP 4.....	\$ 37.00	26.90
GROUP 5.....	\$ 39.00	26.90

LABORERS CLASSIFICATIONS

GROUP 1: Laborer, Carpenter Tender, Mason Tender, Cement Finisher Tender, Scaffold Erector, Wrecking Laborer, Asbestos Removal [Non-Mechanical Systems]

GROUP 2: Asphalt Raker, Adzemen, Pipe Trench Bracer, Demolition Burner, Chain Saw Operator, Fence & Guard Rail Erector, Setter of Metal Forms for Roadways, Mortar Mixer, Pipelayer, Riprap & Dry Stonewall Builder, Highway Stone Spreader, Pneumatic Tool Operator, Wagon Drill Operator, Tree Trimmer, Barco-Type Jumping Tamper, Mechanical Grinder Operator

GROUP 3: Pre-Cast Floor & Roof Plank Erectors

GROUP 4: Air Track Operator, Hydraulic & Similar Self-Powered Drill, Block Paver, Rammer, Curb Setter, Powderman & Blaster

GROUP 5: Toxic Waste Remover

LABORERS CLASSIFICATIONS

GROUP 1: Laborer, Carpenter Tender, Mason Tender, Cement Finisher Tender, Scaffold Erector, Wrecking Laborer,

Asbestos Removal [Non-Mechanical Systems]

GROUP 2: Asphalt Raker, Adzemen, Pipe Trench Bracer, Demolition Burner, Chain Saw Operator, Fence & Guard Rail Erector, Setter of Metal Forms for Roadways, Mortar Mixer, Pipelayer, Riprap & Dry Stonewall Builder, Highway Stone Spreader, Pneumatic Tool Operator, Wagon Drill Operator, Tree Trimmer, Barco-Type Jumping Tamper, Mechanical Grinder Operator

GROUP 3: Pre-Cast Floor & Roof Plank Erectors

GROUP 4: Air Track Operator, Hydraulic & Similar Self-Powered Drill, Block Paver, Rammer, Curb Setter, Powderman & Blaster

GROUP 5: Toxic Waste Remover

LAB00271-002 11/27/2022

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
LABORER		
COMPRESSED AIR		
Group 1.....	\$ 55.40	24.15
Group 2.....	\$ 52.93	24.15
Group 3.....	\$ 42.45	24.15
FREE AIR		
Group 1.....	\$ 46.00	24.15
Group 2.....	\$ 45.00	24.15
Group 3.....	\$ 42.45	24.15
LABORER		
Group 1.....	\$ 33.05	24.05
Group 2.....	\$ 35.75	24.85
Group 3.....	\$ 36.50	24.85
Group 4.....	\$ 29.00	24.85
Group 5.....	\$ 37.50	24.85
OPEN AIR CAISSON, UNDERPINNING WORK AND BORING CREW		
Bottom Man.....	\$ 41.50	24.15
Top Man & Laborer.....	\$ 35.60	24.15
TEST BORING		
Driller.....	\$ 41.95	24.15
Laborer.....	\$ 41.95	24.15

LABORER CLASSIFICATIONS

GROUP 1: Laborer; Carpenter tender; Cement finisher tender; Wrecking laborer; Asbestos removers [non-mechanical systems]; Plant laborer; Driller in quarries

GROUP 2: Adzeperson; Asphalt raker; Barcotype jumping tamper; Chain saw operators; Concrete and power buggy operator; Concrete saw operator; Demolition burner; Fence and guard rail erector; Highway stone spreader; Laser beam operator; Mechanical grinder operator; Mason tender; Mortar mixer; Pneumatic tool operator; Riprap and dry stonewall builder; Scaffold erector; Setter of metal forms for roadways; Wagon drill operator; Wood chipper operator; Pipelayer; Pipe trench bracer

GROUP 3: Air track drill operator; Hydraulic and similar powered drills; Brick paver; Block paver; Rammer and curb

setter; Powderperson and blaster

GROUP 4: Flagger & signaler

GROUP 5: Toxic waste remover

LABORER - COMPRESSED AIR CLASSIFICATIONS

GROUP 1: Mucking machine operator, tunnel laborer, brake person, track person, miner, grout person, lock tender, gauge tender, miner: motor person & all others in compressed air

GROUP 2: Change house attendant, powder watchperson, top person on iron

GROUP 3: Hazardous waste work within the ""HOT"" zone

LABORER - FREE AIR CLASSIFICATIONS

GROUP 1: Grout person - pumps, brake person, track person, form mover & stripper (wood & steel), shaft laborer, laborer topside, outside motorperson, miner, conveyor operator, miner welder, heading motorperson, erecting operator, mucking machine operator, nozzle person, rodperson, safety miner, shaft & tunnel, steel & rodperson, mole nipper, concrete worker, form erector (wood, steel and all accessories), cement finisher (this type of work only), top signal person, bottom person (when heading is 50' from shaft), burner, shield operator and TBM operator

GROUP 2: Change house attendant, powder watchperson

GROUP 3: Hazardous waste work within the ""HOT"" zone

LABORER CLASSIFICATIONS

GROUP 1: Laborer; Carpenter tender; Cement finisher tender; Wrecking laborer; Asbestos removers [non-mechanical systems]; Plant laborer; Driller in quarries

GROUP 2: Adzeperson; Asphalt raker; Barcotype jumping tamper; Chain saw operators; Concrete and power buggy operator; Concrete saw operator; Demolition burner; Fence and guard rail erector; Highway stone spreader; Laser beam operator; Mechanical grinder operator; Mason tender; Mortar mixer; Pneumatic tool operator; Riprap and dry stonewall builder; Scaffold erector; Setter of metal forms for roadways; Wagon drill operator; Wood chipper operator; Pipelayer; Pipe trench bracer

GROUP 3: Air track drill operator; Hydraulic and similar powered drills; Brick paver; Block paver; Rammer and curb setter; Powderperson and blaster

GROUP 4: Flagger & signaler

GROUP 5: Toxic waste remover

LABORER - COMPRESSED AIR CLASSIFICATIONS

GROUP 1: Mucking machine operator, tunnel laborer, brake person, track person, miner, grout person, lock tender, gauge tender, miner: motor person & all others in compressed air

GROUP 2: Change house attendant, powder watchperson, top person on iron

GROUP 3: Hazardous waste work within the ""HOT"" zone

LABORER - FREE AIR CLASSIFICATIONS

GROUP 1: Grout person - pumps, brake person, track person, form mover & stripper (wood & steel), shaft laborer, laborer topside, outside motorperson, miner, conveyor operator, miner welder, heading motorperson, erecting operator, mucking machine operator, nozzle person, rodperson, safety miner, shaft & tunnel, steel & rodperson, mole nipper, concrete worker, form erector (wood, steel and all accessories), cement finisher (this type of work only), top signal person, bottom person (when heading is 50' from shaft), burner, shield operator and TBM operator

GROUP 2: Change house attendant, powder watchperson

GROUP 3: Hazardous waste work within the ""HOT"" zone

PAIN0011-005 06/01/2024

	Rates	Fringes
PAINTER		
Brush and Roller.....	\$ 38.07	25.80
Epoxy, Tanks, Towers, Swing Stage & Structural		
Steel.....	\$ 40.07	25.80
Spray, Sand & Water		
Blasting.....	\$ 41.07	25.80
Taper.....	\$ 38.82	25.80
Wall Coverer.....	\$ 38.57	25.80

PAIN0011-006 06/01/2024

	Rates	Fringes
GLAZIER.....	\$ 41.63	26.15

FOOTNOTES:

SWING STAGE: \$1.00 per hour additional.

PAID HOLIDAYS: Labor Day & Christmas Day.

PAIN0011-011 06/01/2024

	Rates	Fringes
Painter (Bridge Work).....	\$ 57.85	26.40

PAIN0035-008 06/01/2011

	Rates	Fringes
Sign Painter.....	\$ 24.79	13.72

PLAS0040-001 01/01/2024

BUILDING CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 43.00	29.10

FOOTNOTE: Cement Mason: Work on free swinging scaffolds under 3 planks width and which is 20 or more feet above ground and any offset structure: \$.30 per hour additional.

PLAS0040-002 01/01/2024

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 38.45	25.30

PLAS0040-003 01/01/2024

	Rates	Fringes
PLASTERER.....	\$ 43.65	29.43

PLUM0051-002 08/28/2023

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 50.59	32.75

ROOF0033-004 06/01/2024

	Rates	Fringes
ROOFER.....	\$ 44.80	31.13

SFRI0669-001 04/01/2024

	Rates	Fringes
SPRINKLER FITTER.....	\$ 49.98	32.85

SHEE0017-002 06/01/2024

	Rates	Fringes
Sheet Metal Worker.....	\$ 42.69	38.45

TEAM0251-001 05/01/2024

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 30.71	36.9125+A+B
GROUP 2.....	\$ 30.86	36.9125+A+B
GROUP 3.....	\$ 30.91	36.9125+A+B
GROUP 4.....	\$ 30.96	36.9125+A+B
GROUP 5.....	\$ 31.06	36.9125+A+B
GROUP 6.....	\$ 31.46	36.9125+A+B
GROUP 7.....	\$ 31.66	36.9125+A+B
GROUP 8.....	\$ 31.16	36.9125+A+B
GROUP 9.....	\$ 31.41	36.9125+A+B

GROUP 10.....\$ 31.21 36.9125+A+B

FOOTNOTES:

A. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, plus Presidents' Day, Columbus Day, Veteran's Day & V-J Day, providing the employee has worked at least one day in the calendar week in which the holiday falls.

B. Employee who has been on the payroll for 1 year or more but less than 5 years and has worked 150 Days during the last year of employment shall receive 1 week's paid vacation; 5 to 10 years - 2 weeks' paid vacation; 10 or more years - 3 week's paid vacation.

C. Employees on the seniority list shall be paid a one hundred dollar (\$100.00) bonus for every four hundred (400) hours worked, up to a maximum of five hundred dollars (\$500.00)

All drivers working on a defined hazard material job site shall be paid a premium of \$2.00 per hour over applicable rate.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Pick-up trucks, station wagons, & panel trucks

GROUP 2: Two-axle on low beds

GROUP 3: Two-axle dump truck

GROUP 4: Three-axle dump truck

GROUP 5: Four- and five-axle equipment

GROUP 6: Low-bed or boom trailer.

GROUP 7: Trailers when used on a double hook up (pulling 2 trailers)

GROUP 8: Special earth-moving equipment, under 35 tons

GROUP 9: Special earth-moving equipment, 35 tons or over

GROUP 10: Tractor trailer

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a

new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R. 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request

review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

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

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

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

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END OF GENERAL DECISION"

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

SECTION 00800

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

ARTICLE 1 - DEFINITIONS

General

The terms "Plans" and "Project Plans" used in various locations throughout these Specifications shall have the same meaning as "Drawings" as defined in the General Conditions. The word "site" shall mean the specific area adjacent to and including the area upon which the work is performed. The words "as directed", "as permitted", "as required", or words of like effect shall mean the direction, permission, and/or requirement of the Owner is intended and similarly the words, "approved", "acceptable", "satisfactory", or words of like effect shall mean approved by, acceptable, or satisfactory to the Owner, unless otherwise provided herein. The words "necessary", "suitable" "equal", or words of like effect shall mean necessary, suitable, or equal in the opinion of the Owner.

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions.

SC-1.01. SPECIFIC CHANGES

Include following sections under paragraph 1.01.

SC-1.19. Engineer – Delete paragraph 1.19 in its entirety and replace with the following:

1.19. Engineer - Owner or Owner's representative as defined by the Owner.

SC-1.43. Delete paragraph 1.43 in its entirety and replace with the following:

1.43 Specifications - Sections included under Division 1 through Division 16 of the Contract Documents.

SC-1.45. Insert the following at the beginning of the definition.

Substantial completion shall mean either that the Work required by the Contract has been completed except for work having a Contract Price of less than one per cent of the then adjusted total contract price, or...

SC-1.52. Add the following new definitions after paragraph 1.52 of the General Conditions:

1.53 Conditions of the Contract - The combined General Conditions and Supplementary Conditions.

1.54 Contract Documents – Request for Proposals, Information to Bidders, Instructions for Bidders, Price Proposal Form, Supplements to Price Proposal, Technical Proposal Requirements, Agreement, Bonds, General Conditions, Supplementary Conditions, Specifications, and Appendices.

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

ARTICLE 2 - PRELIMINARY MATTERS

SC-2.03. Delete paragraph 2.03 of the General Conditions in its entirety and insert the following in its place:

2.03. The Contract Time will commence at the issuance of the Notice to Proceed or within fifteen days of contract execution.

SC-2.05C. Delete paragraph 2.05C of the General Conditions in its entirety and insert the following in its place:

2.05C. Before any Work at the site is started, Contractor shall deliver to Owner, with copies to Engineer and each additional insured identified in Article 5 of the Supplementary Conditions, certificates of insurance (and other evidence requested by Owner) which Contractor is required to purchase and maintain in accordance with the requirements of Article 5.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01. Add a new paragraph immediately after Paragraph 3.01. of the General Conditions which is to read as follows:

3.01 D. Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.

ARTICLE 4.0 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

SC-4.01. Add a new paragraph immediately after Paragraph 4.01. of the General Conditions which is to read as follows:

4.01D. If all lands and rights-of-way are not obtained as herein contemplated before construction begins, Contractor shall begin the work upon such land and rights-of-way as Owner has previously acquired.

ARTICLE 5 - BONDS AND INSURANCE

Amend paragraph 5.01 by adding the following sections:

D. The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds shall be in a form acceptable to the Owner and shall be issued by companies licensed to issue such Bonds in the State of Rhode Island, and the cost thereof shall be included in the Contract Sum. Bonding companies shall be approved by the Owner and shall be listed on the U.S. Treasuries Circular 570 of approved bonding companies. The amount of each bond shall be equal to 100 percent of the Contract Sum, as amended.

Insurance companies shall be approved by the Owner and shall be rated A- or better.

E. The Contractor shall deliver the required bonds to the Owner on or before the date the Agreement

**CITY OF EAST PROVIDENCE
WATER UTILITIES DIVISION
CLEANING & LINING PHASE V WATER SYSTEM UPGRADES**

is entered into.

- F. The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

Amend Paragraph 5.04 as follows:

SC-5.04 The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Law:

5.04A.1. and 5.04A.2. Worker's Compensation

(1) Worker's Compensation Statutory Coverage

5.04A.3., 5.04A.4., and 5.04A.5. Comprehensive General Liability including Premise/Operations; Explosion, Collapse and Underground Property Damage; Products/Completed Operations, Broad Form Contractual, Independent Contractors; Broad Form Property Damage; and Personal Injury liabilities. Carrier shall be "A-rated or higher.

a.) Bodily Injury:

- (i) \$1,000,000- Each Occurrence
- (ii) \$1,000,000- Annual Aggregate

b.) Property Damage:

- (i) \$1,000,000- Each Occurrence
- (ii) \$1,000,000- Annual Aggregate

c.) Products & Complete Operations to be maintained for one (1) year after final payment.

d.) Property Damage Liability Insurance will provide X, C, or U coverage as applicable.

(3) Contractor's Liability:

a.) Bodily Injury:

- (i) \$1,000,000- Each Occurrence

b.) Property Damage:

- (i) \$1,000,000- Each Occurrence
- (ii) \$1,000,000- Annual Aggregate

(4) Personal Injury, with Employment Exclusion deleted:

- a.) \$1,000,000- Annual Aggregate

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5.04A.6. Comprehensive Automobile Liability including all owned (private and others), hired and non-owned vehicles: Carrier shall be A- rated or higher.

- a.) Bodily Injury:
 - (i) \$500,000- Each Person
 - (ii) \$1,000,000- Each Occurrence

- b.) Property Damage:
 - (i) \$1,000,000- Each Occurrence

- c.) Special Hazards:
 - (i) \$1,000,000- Each Occurrence

SC-5.04. Add a new paragraph immediately after Paragraph 5.04B.7. of the General Conditions which is to read as follows:

5.04B.8. Contractor may purchase and maintain excess liability insurance in the umbrella form in order to satisfy the limits of liability required for the insurance to be purchased and maintained in accordance with paragraph 5.04. Evidence of such excess liability shall be delivered to Owner in the form of a certificate indicating the policy numbers and limits of liability of all underlying insurance.

SC-5.04. ADD paragraph 5.04C of the General Conditions:

5.04C. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with this Article 5 on the basis of its not complying with the Contract Documents, Owner will notify Contractor in writing thereof within ten days of the date of delivery of such certificates to Owner in accordance with Paragraph 2.05C. Contractor will provide such additional information in respect of insurance provided by him/her as Owner may reasonably request.

SC-5.05 DELETE paragraph 5.05 of the General Conditions in its entirety.

SC-5.06B DELETE paragraph 5.06 of the General Conditions in its entirety.

SC-5.07B and 5.07C DELETE paragraph 5.07B and 5.07C of the General Conditions in its entirety.

SC-5.08. DELETE paragraph 5.08 of the General Conditions in its entirety.

SC-5.09 – DELETE paragraph 5.09 of the General Conditions in its entirety and replace with the following:

5.09 If Owner has any objection to the coverage afforded by, or other provisions of, the insurance required to be purchased and maintained by Contractor in accordance with Article 5.0 on the basis of its not complying with the Contract Documents, Owner shall notify Contractor thereof in writing. Contractor shall provide to the Owner such additional information in respect of insurance provided by as the Owner may reasonably request.

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ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

Amend Article 6.0 by adding the following:

SC 6.0 Equal Opportunity

The Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex or national origin.

Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising.

SC-6.02. Add the following new paragraphs immediately after Paragraph 6.02B of the General Conditions:

6.02C. This Agreement is subject to the applicable provisions of the Contract Work Hours and Safety Standards Act, Public Law 87-581, 87th Congress, as amended. No Contractor or Subcontractor contracting for any part of the work shall require or permit any laborer or mechanic to be employed on the Work in excess of forty hours in any work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his/her basic rate of pay for all hours worked in excess of forty hours in such work week.

6.02D. Contractor shall employ only competent persons to do the work and whenever Owner shall notify Contractor, in writing, that any person on the Work appears to be incompetent, disorderly, or otherwise unsatisfactory, such person shall be removed from the Project and shall not again be employed on it except with the consent of Owner.

6.02E. Except as may be otherwise required by law, all claims and disputes pertaining to the classification of labor employed on the project under this Contract shall be decided by the governing body having jurisdiction.

SC-6.06. DELETE Paragraphs 6.06A and 6.06B of the General Conditions in their entirety and insert the following in its place:

6.06A. Contractor shall not employ any subcontractor, supplier or other person or organization, (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner may have reasonable objection. Acceptance of any Subcontractor, other person or organization by Owner does not waive Owner's rights to reject defective Work. Contractor shall not be required to employ any Subcontractor, other person or organization against which Contractor has reasonable objection.

SC-6.06. Add a new sentence at the end of Section 6.06 to read as follows:

6.06H. Owner or ENGINEER may furnish to any Subcontractor, Supplier or other person or organization, to the extent practicable, information about amounts paid on their behalf to Contractor in accordance with Contractor's Applications for Payment.

SC-6.10. Add the following language at the end of Paragraph 6.10 of the General Conditions:

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The materials and supplies to be used in the Work of this Contract are exempt from the Sales and Use Tax of the State of Rhode Island. Contractor shall obtain the proper certificates, maintain the necessary records and otherwise comply with the requirements of Chapter 14 of the Acts of 1966 and any amendments thereto.

SC-6.20. Add two sentences at the end of Paragraph 6.20A to read as follows:

If through the acts of neglect on the part of the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the Work, Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against Owner on account of any damage alleged to have sustained, Owner shall notify Contractor, who shall indemnify and save harmless Owner against any such claims.

ARTICLE 8 – OWNER’S RESPONSIBILITIES

SC 8.02. DELETE Section 8.02 in its entirety, and replace with the following:

8.02. In case of termination of the employment of Engineer, Owner shall appoint an Engineer, whose status under the Contract Documents shall be that of the former Engineer.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.03. Add a new paragraph immediately after Paragraph 9.03 of the General Conditions which is to read as follows:

9.03B. Owner will designate an agent to represent him/her at the Site who is not ENGINEER's agent or employee. The duties and responsibilities of the agent will be as enumerated in the agent's agreement with Owner, a copy of which will be furnished to Contractor upon written request.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-11.03.D. DELETE Paragraph 11.03D in its entirety and replace with the following:

11.03D. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment under the following conditions:

11.03D.1. If there is no corresponding adjustment with respect to any other item of Work; and

11.03D.2. If Contractor believes that Contractor has incurred additional expense as a result thereof; or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a claim for an adjustment in the Contract Price in accordance with Article 12 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.05. Add a new paragraph immediately after paragraph 13.05 of the General Conditions to read as follows:

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13.05B. If the Owner stops Work under Paragraph 13.05 Contractor shall be entitled to no extension of Contract Time or increase in Contract Price.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Add a new sentence immediately after paragraph 14.02A.1 of the General Conditions, which is to read as follows:

The Contractor shall furnish evidence that payment received on the basis of materials and equipment not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within sixty days of payment by Owner. Failure to provide such evidence of payment may result in the withdrawal of previous approval(s) and removal of the cost of related materials and equipment from the next submitted Application for Payment.

SC-14.03

Add two new paragraphs immediately after paragraph 14.03 of the General Conditions, which are to read as follows:

14.03.B. No materials or supplies for the Work shall be purchased by Contractor or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. Contractor warrants that he/she has good title to all materials and supplies used by him/her in the Work, free from all liens, claims or encumbrances.

14.03.B. Contractor shall indemnify and save Owner harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material, men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. Contractor shall at Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If Contractor fails to do so, then Owner may, after having served written notice on the said Contractor either pay unpaid bills, of which Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonable sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to Contractor shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this section be construed to impose any obligations upon Owner to either Contractor or his/her Surety.

SC-14.02.

Add four new paragraphs immediately after paragraph 14.02.D.3 of the General Conditions, which are to read as follows:

14.02.D.4. Should Contractor neglect to pay any undisputed claims, made in writing to Owner within thirty days after completion of the Work, but continuing unsatisfied for a period of ninety days, Owner may pay such claim and deduct the amount thereof from the balance due Contractor. Owner may also, with the written consent of Contractor, use any monies retained, due, or to become due under this Contract for the purpose of payment for both labor and materials for the Work, for which claims have not been filed.

14.02.D.5. Security is provided both by the Payment Bond and the power of Owner to retain any monies for

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claims, but payment by one shall in no way impair or discharge the liability of the other.

14.02.D.6. Any and all liens for work and materials may be paid off by Owner within a reasonable time after filing for record in accordance with State and local laws, notice of such liens except where the claim on which the lien is filed is being litigated by Contractor, and in such case Owner may pay the amount of any final judgement or decree or any such claim within a reasonable time after such final judgement or decree shall be rendered.

14.02.D.7 All monies paid by Owner in settlement of liens as aforesaid, with the costs and expenses incurred by Owner in connection therewith, shall be charged to Contractor, shall bear interest at the rate of one and a half percent per month, and shall be deducted from the next payment due Contractor under the terms of this Contract.

SC – 14.07 DELETE Section 14.07 B. Review of Application and Acceptance and Replace with the following:

14.07B. Within 30 days of satisfactory completion of the work and receipt by Owner of Contractor's final application for payment, Owner will make final payment to the Contractor.

Payment hereunder is subject to satisfactory evidence of payment to all subcontractors and resolution of any and all claims and/or liens.

SC – 14.08 DELETE Sections 14.08. Final Completion Delayed.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

SC-15.02

Add a new paragraph immediately after paragraph 15.02A.4. of the General Conditions which is to read as follows:

15.02A.5 If Contractor abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of Owner, or if the Contract or any claim there under shall be assigned by Contractor otherwise than as herein specified;

Delete Section 15.03A.3 and 15.03A.4 in their entirety.

ARTICLE 16 - DISPUTE RESOLUTION

SC-16.

Add a new sentence at the end of Article 16.01 of the General Conditions, which is to read as follows:

Contractor shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings, unless otherwise agreed by him/her and Owner in writing.

Delete all references to arbitration in "General Conditions". Arbitration shall be in accordance with the provisions of the State Arbitration Laws (State of Rhode Island, General Laws, Title 37, Chapter 16), which shall take precedence and shall govern.

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Every contract for the construction, alteration, repair or painting or demolition of any public building, sewer, water treatment or disposal project, highway, or bridge one party to which is the state, a city, a town, or an authority, a board, a public corporation, or any similar body created by statute or ordinance or any committee, agency, or subdivision of any of them which has a contract price of ten thousand dollars (\$10,000) or more and which is executed on or after July 1, 1967, out of, or concerning the performance or interpretation of, the contract as follows:

“All claims, disputes, and other matters in question arising out of or relating to this contract or the performance or interpretation thereof shall be submitted to arbitration. Arbitration shall be commenced by a demand in writing made by one party to the contract upon the other within a reasonable time after the dispute, claim, or other matter in question arose but in no event after payment in full of the contract price has been made and accepted. The written demand shall contain a statement of the question to be arbitrated and a detailed statement of each time or matter in dispute and the name of the arbitrator appointed by that party. The other party to the contract within (10) days of the receipt of the written demand shall appoint an arbitrator and give notice in writing thereof to the party who commenced arbitration. The two (2) arbitrators appointed by the parties shall within ten (10) days of the date of the appointment of the second arbitrator select a third arbitrator who shall be designated as chairperson and who immediately shall give written notice to the parties of his or her appointment. The third arbitrator shall select a time, date and place for hearing and give each party five (5) days notice in writing thereof. The date for hearing shall not be more than fifteen (15) days after the date of appointment of the third arbitrator. The arbitrators shall render their award in writing to each of the parties not more than thirty (30) days after the date hearing shall commence unless the parties shall otherwise agree in writing. In the event the party of whom arbitration is demanded shall fail to appoint his or her arbitrator within the time specified or the two (2) arbitrators appointed by the parties are unable to agree on an appointment of the third arbitrator within the time specified, either party may petition the residing justice of the superior court to appoint a single arbitrator who shall hear the parties and make an award as provided herein. The petitioner shall give five (5) days notice in writing to the other party before filing his or her petition.”

ARTICLE 17 - MISCELLANEOUS

SC-17.07

Add a new paragraph immediately after paragraph 17.06 of the General Conditions, which is to read as follows:

17.07. Both the address given in the Price Proposal Form upon which this Agreement is founded, and Contractor's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to Contractor shall be certified, mailed, or delivered. The delivering at the above named place, or depositing in a postpaid wrapper directed to the first-named place, in any post office box regularly maintained by the post office department, of any notice, letter or other communication to Contractor shall be deemed sufficient service thereof upon Contractor; and the date of said service shall be the date of such delivery or mailing. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by Contractor, and delivered to Owner and ENGINEER. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon Contractor personally.

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WAGE RATES:

SC-17.08

Add the following new paragraphs immediately after paragraph 17.07 of the Supplementary Conditions:

17.08. The requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to the employment of labor, and to the schedule of minimum wage rates established in compliance with laws shall be a part of these Contract Documents. Copies of the wage schedules are included in the Contract Documents, if applicable under this Contract. If, after the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the officials administering the laws mentioned above. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. Contractor shall notify Owner of his/her intention to employ persons in trades or occupations not classified in sufficient time for Owner to obtain approved rates for such trades or occupations.

17.08.1. The schedules of wages referred to above are minimum rates only, and Owner will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of the applicable rate contained in these Contract Documents. All disputes in regard to the payment of wages in excess of these specified in the schedules shall be resolved by Contractor.

17.07.2 The said schedules of wages shall continue to be the minimum rates to be paid during the life of this Agreement and a legible copy of said schedules shall be kept posted in a conspicuous place at the site of the work.

PART II - STATE GOVERNMENT PROVISIONS

Each and every other provision of law or clause required by law to be inserted in this Contract shall be deemed to be also inserted herein in accordance with paragraph SC-3.1.1. of Supplementary Conditions.

1.0 STATE OF RHODE ISLAND PROVISIONS

1.1 The Owner and Contractor agree that all applicable State of Rhode Island Provisions which apply to the work to be performed under this Contract will be followed. The Contractor must inform him/herself of all pertinent State of Rhode Island Provisions with performing this work. The most recent revisions of any State Provisions will apply in this Contract. The most recent provisions supersede any conflicting provisions of this Contract.

1.2 State Wage Rates, As Applicable

END OF SECTION

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SECTION 00840

PAYMENT BOND

- A. An example Payment Bond form is enclosed herein.

END OF SECTION

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
6. Reserved.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.
9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms “labor, materials or equipment” that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – *(Name, Address, and Telephone)*

Surety Agency or Broker:

Owner’s Representative *(Engineer or other)*:

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SECTION 00850

NOTICE OF AWARD

- A. An example Notice of Award is enclosed herein.

END OF SECTION

Notice of Award

Date: _____

Project: _____

Owner: _____

Owner's Contract No.: _____

Contract: _____

Engineer's Project No.: _____

Bidder: _____

Bidder's Address: *[send Notice of Award Certified Mail, Return Receipt Requested]*

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for _____

[Indicate total Work, alternates, or sections of Work awarded.]

The Contract Price of your Contract is _____ Dollars (\$_____).

[Insert appropriate data if unit prices are used. Change language for cost-plus contracts.]

_____ copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

_____ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [_____] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent:

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Owner
By: _____
Authorized Signature

Title

Copy to Engineer

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SECTION 00860

NOTICE TO PROCEED

- A. An example Notice to Proceed is enclosed herein.

END OF SECTION

Notice to Proceed

Date: _____

Project:	
Owner:	Owner's Contract No.:
Contract:	Engineer's Project No.:
Contractor:	
Contractor's Address: <i>[send Certified Mail, Return Receipt Requested]</i>	

You are notified that the Contract Times under the above Contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is _____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must:

_____ *[add other requirements].*

_____	Owner
_____	Given by:
_____	Authorized Signature
_____	Title
_____	Date

Copy to Engineer

DIVISION 1

GENERAL REQUIREMENTS



1. Abbreviations
2. Handling and Distribution
3. Materials - Samples - Inspection
4. Access to the Work
5. Storage of Materials and Equipment
6. Inspection of Work Away From the Site
7. Occupying Private Land
8. Interference with and Protection of Streets
9. Traffic Control
10. Safety
11. Sanitary Regulations
12. Lines, Grades and Measurements
13. Dimensions of Existing Structures and Pipes
14. Work to Conform
15. Pipe Location
16. Limits of Normal Excavation
17. Computation of Quantities
18. Precautions During Adverse Weather
19. Installation of Equipment
20. Test Pits/Vacuum Excavations
21. Buried Utility Warning and Identification Tape
22. Architectural Coatings
23. Noise Limitations
24. Right to Know Law
25. Special Waste
26. Subsurface and Physical Conditions
27. Valve Identification
28. Sales Tax Exemption
29. Hydraulic Uplift of Structures
30. Hours of Construction
31. Open Excavations
32. Protection and Relocation of Existing Structures and Utilities
33. Dust Control
34. Clean Up and Disposal of Excess Material
35. Construction Employment
36. Public Utilities
37. Provisions for Control of Erosion
38. Hurricane Preparedness Plan
39. Disturbance of Existing Survey Markers

PART 1 GENERAL

1.1 ABBREVIATIONS

- A. Where any of the following abbreviations are used in the Contract Documents, they shall have the meaning set forth opposite each.

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AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
IEEE	Institute of Electrical and Electronics Engineers, Inc.
AIS	American Iron and Steel Institute
AISC	American Institute of Steel Construction
AMCA	Air Moving and Conditioning Association
ANS	American National Standard
ANSI	American National Standards Institute
API	American Petroleum Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood-Preservers' Association
AWWA	American Water Works Association
BABA	Build America Buy America Act
CEMA	Conveyor Equipment Manufacturer=s Association
CS	Commercial Standard
IBR	Institute of Boiler and Radiator Manufacturers
IPS	Iron Pipe Size
JIC	Joint Industry Conference Standards
NBS	National Bureau of Standards
NEC	National Electrical Code; latest edition

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NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
Fed. Spec.	Federal Specifications issued by the Federal Supply Service of the General Services Administration, Washington, D.C.
125-lb	ANS American National Standard for Cast-Iron Pipe 250-lb. ANS Flanges and Flanged Fittings, Designation B16.1-1975, for the appropriate class
AWG	American or Brown and Sharpe Wire Gage
NPT	National Pipe Thread
OS&Y	Outside screw and yoke
Stl. WG	U. S. Steel Wire, Washburn and Moen, American Steel and Wire or Roebling Gage
UL	Underwriters' Laboratories
USS Gage	United States Standard Gage
WOG	Water, Oil, Gas
WSP	Working steam pressure

1.2 HANDLING AND DISTRIBUTION

- A. The Contractor shall handle, haul, and distribute all materials and all surplus materials on the different portions of the Work, as necessary or required; shall provide suitable and adequate storage room for materials and equipment during the progress of the Work, and be responsible for the protection, loss of, or damage to materials and equipment furnished by him, until the final completion and acceptance of the Work.
- B. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

1.3 MATERIALS - SAMPLES - INSPECTION

- A. Unless otherwise expressly provided on the Drawings or in any of the other Contract Documents, only new materials and equipment shall be incorporated in the Work. All materials and equipment furnished by the Contractor to be incorporated in the Work shall be subject to the inspection of the Engineer. No material shall be processed or fabricated for the Work or delivered to the Work site without prior concurrence of the Engineer.
- B. As soon as possible after execution of the Agreement, the Contractor shall submit to the Engineer the names and addresses of the manufacturers and suppliers of all materials and equipment he proposes to incorporate into the Work. When shop and working drawings are required as specified

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below, the Contractor shall submit prior to the submission of such drawings, data in sufficient detail to enable the Engineer to determine whether the manufacturer and/or the supplier have the ability to furnish a product meeting the Specifications. As requested, the Contractor shall also submit data relating to the materials and equipment he proposes to incorporate into the Work in sufficient detail to enable the Engineer to identify and evaluate the particular product and to determine whether it conforms to the Contract requirements. Such data shall be submitted in a manner similar to that specified for submission of shop and working drawings.

- C. Facilities and labor for the storage, handling, and inspection of all materials and equipment shall be furnished by the Contractor. Defective materials and equipment shall be removed immediately from the site of the Work. See also Section 01600.
- D. If the Engineer so requires, either prior to or after commencement of the Work, the Contractor shall submit samples of materials for such special tests as the Engineer deems necessary to demonstrate that they conform to the Specifications. Such samples shall be furnished, taken, stored, packed, and shipped by the Contractor as directed. Except as otherwise expressly specified, the Owner shall make arrangements for, and pay for, the tests.
- E. All samples shall be packed so as to reach their destination in good condition, and shall be labeled to indicate the material represented, the name of the building or work and location for which the material is intended, and the name of the Contractor submitting the sample. To ensure consideration of samples, the Contractor shall notify the Engineer by letter that the samples have been shipped and shall properly describe the samples in the letter. The letter of notification shall be sent separate from and should not be enclosed with the samples.
- F. The Contractor shall submit data and samples, or place his orders, sufficiently early to permit consideration, inspection and testing before the materials and equipment are needed for incorporation in the Work. The consequences of his failure to do so shall be the Contractor's sole responsibility.
- G. In order to demonstrate the proficiency of workmen, or to facilitate the choice among several textures, types, finished, surfaces, etc., the Contractor shall provide such samples of workmanship of wall, floor, finish, etc., as may be required.
- H. When required, the Contractor shall furnish to the Engineer triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment performance ratings, and concrete data.
- I. After review of the samples, data, etc., the materials and equipment used on the Work shall in all respects conform therewith.

1.4 ACCESS TO THE WORK

- A. The Contractor shall provide sufficient and proper facilities at all times for inspection of all work under this project in preparation or in progress, by the Owner, the agents and employees of the Owner, by authorized representatives of the State of Rhode Island, the Federal Government and by the Engineers.
- B. The Contractor shall furnish the Engineer or his authorized representative and other personnel mentioned above with such facilities and assistance as are necessary to ascertain performance of the work in accordance with the plans and specifications.

1.5 STORAGE OF MATERIALS AND EQUIPMENT

- A. The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements. The materials and equipment shall be placed as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the work. The Contractor shall assume full responsibility for any damage to any such land or area, or to the Owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such Owner or occupant because of the performance of the Work, the Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. See also Section 01600.
- B. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

1.6 INSPECTION OF WORK AWAY FROM THE SITE

- A. If work to be done away from the construction site is to be inspected on behalf of the Owner during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the inspection can be made.

1.7 OCCUPYING PRIVATE LAND

- A. The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment, any land outside the rights-of-way or property of the Owner. A copy of the written consent shall be given to the Engineer.

1.8 INTERFERENCE WITH AND PROTECTION OF STREETS

- A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits therefor from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.
- B. Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefor.
- C. The Contractor shall, at least 24 hours in advance, notify the Police and Fire Departments in writing, with a copy to the Engineer, if the closure of a street or road is necessary. He shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.

1.9 TRAFFIC CONTROL

- A. Whenever and wherever, in the opinion of the Engineer, traffic is sufficiently congested or public safety is endangered, the Contractor will furnish uniformed special officers to direct traffic and to keep traffic off the roadway area affected by construction operations. If police details are required, the direct cost for the detail will be paid directly by the City of East Providence.
- B. The employment or presence of uniformed special officers, or police shall in no way relieve the Contractor of any responsibility or liability which is his under the terms of the contract.
- C. Flaggers will be permitted when East Providence Police Department traffic detail officers are not available.

1.10 SAFETY

- A. The Contractor shall take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage. The Contractor shall provide protection for all persons including but not limited to his employees and employees of other contractors or subcontractors; members of the public; and employees, agents, and representatives of the Owner, the Engineer, and regulatory agencies that may be on or about the Work. The Contractor shall provide protection for all public and private property including but not limited to structures, pipes, and utilities, above and below ground.
- B. The Contractor shall provide and maintain all necessary safety equipment such as fences, barriers, signs, lights, walkways, guards and fire prevention and fire-fighting equipment and shall take such other action as is required to fulfill his obligations under this subsection.
- C. The Contractor shall comply with all applicable Federal, State and local laws, ordinances, rules and regulations and lawful orders of all authorities having jurisdiction for the safety of persons and protection of property.
- D. The Contractor shall designate a responsible member of his organization at the site whose duty shall be responsible for all matters of safety. This responsible person shall have the authority to take immediate action to correct unsafe or hazardous conditions and to enforce safety precautions and programs.
- E. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until Final Completion and Engineer has issued a notice to Owner and Contractor that the Work is acceptable.

1.11 SANITARY REGULATIONS

- A. The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.
- B. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.

1.12 LINES, GRADES AND MEASUREMENTS

- A. The Contractor shall employ a competent land surveyor, registered within the State of Rhode Island as a Professional Land Surveyor. The Contractor shall require said surveyor to establish all lines, elevations, reference marks, batter boards, etc., needed by the Contractor during the progress of the Work, and from time to time to verify such marks by instrument or other appropriate means.
- B. The Engineer shall be permitted at all times to check the lines, elevations, reference marks, batter boards, etc., set by the surveyor, who shall correct any errors in lines, elevations, reference marks, batter boards, etc., disclosed by such check. Such a check shall not be construed to be an approval of the surveyor's work and shall not relieve or diminish in any way the responsibility of the Contractor for the accurate and satisfactory construction and completion of the entire Work.
- C. The Contractor shall make, check, and be responsible for all measurements and dimensions necessary for the proper construction of and the prevention of misfittings in the Work.

1.13 DIMENSIONS OF EXISTING STRUCTURES AND PIPES

- A. Where the dimensions and locations of existing structures and pipes are of importance in the installation or connection of any part of the Work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

1.14 WORK TO CONFORM

- A. During its progress and on its completion, the Work shall conform truly to the lines, levels, and grades indicated on the Drawings or given by the Engineer and shall be built in a thoroughly substantial and workmanlike manner, in strict accordance with the Drawings, Specifications, and other Contract Documents and the directions given from time to time by the Engineer.
- B. All work done without instructions having been given therefor by the Engineer, without proper lines or levels, or performed during the absence of the Engineer, will not be estimated or paid for except when such work is authorized by the Engineer in writing. Work so done may be ordered uncovered or taken down, removed, and replaced at the Contractor's expense.

1.15 PIPE LOCATION

- A. Exterior pipelines will be located substantially as indicated on the Drawings, but the right is reserved to the Owner, acting through the Engineer, to make such modifications in location as may be found desirable to avoid interference with existing structures or for other reasons. Where fittings, etc., are noted on the Drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.
- B. Small interior piping is indicated diagrammatically on the Drawings, and the exact location is to be determined in the field. Piping shall be arranged in a neat, compact, and workmanlike manner, with a minimum of crossing and interlacing, so as not to interfere with equipment or access ways, and, in general, without diagonal runs.

1.16 LIMITS OF NORMAL EXCAVATION

- A. In determining the quantities of excavation to which unit prices shall apply, the limits of normal width and depth of excavation shall be as described below, unless other limits are indicated on the Drawings or specified.
- B. For pipes in trench, the normal width of the trench shall be measured between vertical planes which are a distance apart equal to the sum of 12 in. plus the outside diameter of the pipe. If the width so computed is less than 3 ft., a width of 3 ft. shall be taken as the normal width for payment. The normal depth shall be measured to a distance of 0.5 ft. below the bottom of the pipe in earth and 1 ft. in rock, unless there be a cradle underneath the pipe, in which case the normal depth shall be measured to the underside of the bedding. The width of trench for the bedding shall be assumed to be that specified above for pipes in trench.
- C. For concrete placed directly against undisturbed earth, the normal width and depth of the excavation for such concrete shall be measured to the neat lines of the concrete as indicated on the Drawings or as ordered.
- D. For concrete placed against rock surfaces resulting from rock excavation, the normal width and depth of the excavation shall be measured to 4 in. outside the neat lines of the concrete as indicated on the Drawings or as ordered.
- E. For other structures, except manholes as noted below, the normal width shall be measured between vertical planes 1 ft. outside the neat lines of the several parts of the structure, except that the width at any elevation shall be measured as not less than the width at a lower elevation. The normal depth shall be measured to the underside of that part of the structure for which the excavation is made.
- F. No additional width or depth of trenches excavated in earth or rock shall be allowed at standard circular manholes.
- G. Wherever bell holes are required for jointing pipe, they shall be provided without additional compensation over and above that resulting from measurements as above described.

1.17 COMPUTATION OF QUANTITIES

- A. For estimating quantities in which the computation of areas by geometric methods would be comparatively laborious, it is agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such areas.
- B. It is further agreed that the computation of the volume of prisms shall be by the method of average end areas.

1.18 PRECAUTIONS DURING ADVERSE WEATHER

- A. During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building-paper shelters, or other suitable means.
- B. During cold weather, materials shall be preheated, if required, and the materials and adjacent structure into which they are to be incorporated shall be made and kept sufficiently warm so that a

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proper bond will take place and a proper curing, aging, or drying will result. Protected spaces shall be artificially heated by suitable means which will result in a moist or a dry atmosphere according to the particular requirements of the work being protected. Ingredients for concrete and mortar shall be sufficiently heated so that the mixture will be warm throughout when used.

1.19 INSTALLATION OF EQUIPMENT

- A. Special care shall be taken to ensure proper alignment to all equipment with particular reference to the pumps, drives, shafts and motors. The units shall be carefully aligned on their foundations by qualified millwrights after their sole plates have been shimmed to true alignment at the anchor bolts. Equipment manufacturer instructions shall be complied with fully. The anchor bolts shall be set in place and the nuts tightened against the shims. After the foundation alignments have been completed, the bed plates or wing feet of the equipment shall be securely bolted in place. The alignment of equipment shall be further checked after securing to the foundations, and after confirmation of all alignments, the sole plates shall be firmly grouted in place. The Contractor shall be responsible for the exact alignment of equipment with associated piping.
- B. All wedges, shims, filling pieces, keys, packing, red or white lead grout, or other materials necessary to properly align, level and secure apparatus in place shall be furnished by the Contractor. All parts intended to be plumb or level must be proven exactly so. Any grinding necessary to bring parts to proper bearing after erection shall be done at the expense of the Contractor.

1.20 TEST PITS/VACUUM EXCAVATION

- A. Test pits or vacuum excavations for the purpose of locating underground pipeline or structures in advance of the construction shall be excavated and backfilled by the Contractor at locations shown on the drawings or in areas where the Contractor deems it necessary to obtain subsurface information. Test pits or vacuum excavations shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer. There shall be no direct reimbursement for test pits/vacuum excavations unless a payment item is specifically indicated elsewhere in the Contract Documents.

1.21 BURIED UTILITY WARNING AND IDENTIFICATION TAPE

- A. Provide detectable aluminum foil plastic backed tape or detectable magnetic plastic tape manufactured specifically for warning and identification of buried piping. Tape shall be detectable by an electronic detection instrument. Provide tape in rolls, 6 inches minimum width, color coded for the utility involved with warning and identification imprinted in bold black letters continuously and repeatedly over entire tape length. Warning and identification shall be CAUTION BURIED PIPING BELOW or similar. Use permanent code and letter coloring unaffected by moisture and other substances contained in trench backfill material. Bury tape with printed side up at a depth of 12 inches below the top surface of earth or the top surface of the subgrade under pavements.

1.22 ARCHITECTURAL COATINGS

- A. Maintain coordination among all Sections requiring coatings. All coatings shall match to the satisfaction of the Engineer with regard to color and texture. Items rejected by the Engineer shall promptly be removed from the job site.

1.23 NOISE LIMITATIONS

- A. All equipment to be furnished under this Contract, unless specified otherwise in the technical specifications, shall be designed to insure that the sound pressure levels does not exceed 85 decibels over a frequency range of 37.8 to 9600 cycles per second at a distance of three feet from any portion of the equipment, under any load condition, when tested using standard equipment and methods. Noise levels shall include the noise from the motor. Mufflers or external baffles shall not be acceptable for the purpose of reducing noise. Data on noise levels shall be included with shop drawing submittals.

1.24 RIGHT TO KNOW LAW

- A. The Contractor shall submit Material Safety Data Sheets for all substances or mixture of substances used on the Project by him/her or his/her subcontractors prior to commencing any work in accordance with all Federal and State requirements.

1.25 SPECIAL WASTE (SEE SECTION 02211)

1.26 SUBSURFACE AND PHYSICAL CONDITIONS

- A. In preparation of Drawings and Specifications, the Engineer has relied upon all existing record drawings of the City's existing utility infrastructure. Copies of these drawings may be examined by appointment at the City of East Providence Water Department during regular business hours. Such drawings are not a part of the Contract Documents.

1.27 VALVE IDENTIFICATION

Not Applicable

1.28 SALES TAX EXEMPTION

- A. Project is exempt from sales tax on products permanently incorporated in the work. Sales tax exemption certificate number shall be available from the Owner.
- B. Contractor shall place the tax exemption certificate number on invoices for materials incorporated in the work.
- C. Upon completion of work, Contractor shall file with Owner a notarized statement that all purchases made were entitled to be exempt. Contractor shall pay legally assessed penalties for improper use of Owner's tax exemption status.

1.29 HYDRAULIC UPLIFT OF STRUCTURES

- A. The Contractor shall be responsible for the protection of all new and existing structures against hydraulic uplift until such structures have been accepted finally by the Owner.

1.30 HOURS OF CONSTRUCTION

- A. Except as otherwise specifically allowed elsewhere in the Contract Documents, normal construction activity shall take place only between the hours of 7:00 am to 5:00 pm excluding, Saturdays, Sundays and legal holidays. The Contractor will not be restricted to a 8-hour workday but shall plan the Work so as to avoid working outside the allowable working hours. However, if despite the Contractor's diligent efforts, the Contractor believes that overtime work is necessary in order for the Contractor to complete the Work, the Contractor may apply to the Engineer and to the Owner for approval to perform overtime work, which approval may be withheld in their sole discretion. No additional compensation or time extension shall be due to the Contractor whether approval is granted or denied.
- B. If the Contractor believes that overtime work is necessary, it shall obtain prior approval from the Engineer and the Owner. The Contractor shall file a request for such approval in writing and shall include the specific reasons therefore and the time that the overtime work is expected to be concluded. Overtime work will normally be limited to evening hours (5:00 p.m. to 8:00 p.m.) Monday through Friday and daytime hours (7:00 a.m. to 5:00 p.m.) on Saturdays except in special circumstances approved by the Engineer and the Owner.

1.31 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property.
- B. For trench excavation, the Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access during construction shall be removed when no longer required. The length or size of trench excavation will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Engineer. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of the open trench, prohibiting stacking excavated material in certain areas and requiring that the trench shall not remain open overnight.
- C. The Contractor shall take precautions to prevent injury to the public due to open excavations. All trenches, excavations, excavated material, equipment, or other obstacles which could be dangerous to the public and treatment plant personnel shall be well lighted at night.

1.32 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

- A. The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him at his expense.
- B. Assistance will be given to the Contractor in determining the location of existing services. The Contractor, however, shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, drain lines, sewers, electrical conduits and

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force mains). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.

- C. Protection and temporary removal and replacement of existing utilities and structures as described in this Section shall be a part of the work under the Contract.
- D. If, in the opinion of the Engineer, permanent location of a utility owned by the Owner is required, the Engineer may direct the Contractor, in writing, to perform the work. If relocation of a privately owned utility is required, the Contractor will notify the Utility and the Contractor will perform the work as directed by the Utility. The Contractor shall fully cooperate with the Owner and the Utility and shall have no claim for delay due to such relocation. The Contractor shall notify all utility companies.

1.33 DUST CONTROL

- A. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of water as necessary, so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use calcium chloride, and it is allowed by local authorities, for more effective dust control, the Contractor shall furnish and apply the material as directed.
- B. Calcium chloride shall be commercial grade, furnished in 100 lb, 5-ply bags, stored under weatherproof cover and stacked alternately for ventilation. Application for dust control shall be at the rate of about 1/2 pound per square yard, unless otherwise directed by the Engineer.

1.34 CLEANUP AND DISPOSAL OF EXCESS MATERIAL

- A. During the course of the work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. The Engineer and the Owner reserve the right to direct site clean-up if deemed necessary. The Contractor shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures and any other refuse remaining from the construction operations and shall leave the entire site of the work in a neat and orderly condition.
- B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, the Contractor shall and his subcontractors shall comply with all applicable Federal, State and local laws and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and elsewhere in the Specifications.
- C. The Contractor is advised that the disposal of excess excavated material in wetlands, stream corridors and plains is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or any person employed by him, will be brought to the immediate attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. Therefore, the Contractor will be required to remove the fill at his own expense and restore the area impacted.

1.35 CONSTRUCTION EMPLOYMENT

- A. The Contractor shall advertise for and give preference in hiring to qualified workers from the City of East Providence for any available positions associated with the work included in this Contract. The

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Contractor shall undertake positive efforts to meet this requirement which shall include, but not limited to, placing employment advertisements in newspapers serving the City, interviewing persons from within the City who may apply for positions, and hiring subcontractors and suppliers from within the City.

1.36 PUBLIC UTILITIES

- A. The Contractor shall comply with the following requirements for excavations in public and private property. Compliance shall include the following:
 - 1. The Contractor shall notify public utility companies in writing at least 72 hours (excluding Saturdays, Sundays and legal holidays) but not more than 30 days before excavating in areas where underground utility plant (pipes, cables, manholes, etc.) exist.
 - 2. The Contractor shall be responsible for providing the Utility Companies with a schedule of his activities in areas where the utilities exist.
 - 3. The Contractor shall immediately notify utility companies of any damage to their utilities resulting from construction operations.
- B. The Contractor shall notify DIGSAFE at least 72 hours before digging, trenching, blasting, demolishing, boring, backfilling, grading, landscaping or other earth moving operations in any public ways, rights of way and easements.

1.37 PROVISIONS FOR CONTROL OF EROSION

- A. The Contractor shall take sufficient precautions during construction to minimize the run-off of polluting substances such as silt, clay, fuels, oils, bitumens and calcium chloride into the supplies and surface waters of the State. Special precautions shall be taken in the use of the construction equipment to prevent operations which promote erosion.
- B. Disposal of drainage shall be in an area approved by the Owner. The Contractor shall prevent the flow or seepage of drainage back into the drainage area. Drainage shall not be disposed of until silt and other sedimentary materials have been removed. Particular care shall be taken to prevent the discharge of unsuitable drainage to a water supply or surface water body.
- C. As a minimum, the following shall apply:
 - 1. In open areas brush and stumps shall not be removed until no more than 1 week prior to the start of excavation in that area. The existing ground surface shall be disturbed as little as possible until no more than one week prior to the start of excavation.
 - 2. Silt fence shall be provided at points where drainage from the work site leaves the site, to reduce the sediment content of the water. Sufficient silt fence shall be provided such that all flow will filter through the hay. Other methods which reduce the sediment content to an equal or greater degree may be used as approved by the Engineer.
 - 3. Drainage leaving the site shall flow to water courses in such a manner to prevent erosion.
 - 4. Loaming and seeding or mulching of cross county areas shall take place as soon after excavation as practicable. This shall be considered part of the work and full payment for the work need not be made until it has been completed.
- D. Measures for control or erosion must be adequate to assure that turbidity in the receiving water will not be increased more than 10 standard turbidity units (s.t.u.), or as otherwise required by the State or other controlling body, in waters used for public water supply unless limits have been established

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for the particular water. In surface water used for other purposes, the turbidity must not exceed 25 s.t.u. unless otherwise permitted.

1.38 HURRICANE PREPAREDNESS PLAN

- A. Within 30 days of the date of the Notice To Proceed, submit to the Engineer and the Owner, for approval, a Hurricane Preparedness Plan. The Plan shall describe in detail the necessary measures which the Contractor will perform, at no additional cost to the Owner, in case of a hurricane warning. Revise Plan as required by the Engineer and Owner.

1.39 DISTURBANCE OF ALL EXISTING SURVEY MARKERS

- A. The Contractor shall replace all bounds and survey markers disturbed by his operations at his own expense. The bounds shall be relocated by a land surveyor registered in the State of Rhode Island.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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SECTION 01010

GENERAL DESCRIPTION OF WORK

PART 1 GENERAL

1.1 LOCATION OF WORK

- A. The location of the work is within the East Providence Water Utilities Division's (EPWUD) water distribution system.
- B. The EPWUD is part of the City of East Providence Department of Public Works. The EPWUD currently operates out of their main facility located at 60 Commercial Way in East Providence, RI.
- C. The EPWUD serves all of the City of East Providence as well as customers in neighboring communities. There are approximately 15,260 services connections, with all but 3 of these within the City of East Providence (3 service connections are located in Barrington, RI).

1.2 SCOPE OF WORK

- A. The work covered by this section of the specifications includes the furnishing of all labor, equipment, tools, appliances, materials, and performing all operations in connection with providing the cleaning and cement-mortar lining for all of the water pipelines outlined in the Contract Documents. This includes furnishing and installing new valves, hydrants, and appurtenances as well as replacing existing water mains where specified.
- B. Work includes excavation, sheeting, shoring, cutting pipe openings, dewatering pipelines and excavations, cleaning and inspecting pipelines, cement lining pipelines, video recorder inspection of cement lining, closing pipe openings, uncovering existing valves, removing existing mainline valves, removing and replacing piping, fittings and valves where obstructions occur, removing inoperative valves, clearing service connections, testing and disinfecting pipelines, backfilling, protection of existing structures, properties, and utilities, and all other appurtenant and related work required to satisfactorily complete the cleaning and cement-mortar lining of the existing cast-iron piping, complete and in strict accordance with the specifications and the applicable drawings, and as directed.
- C. Lead service line replacement, from the curb stop to the meter, is required at the following locations (the City has already replaced public-side of service from water main to curb stop):

149 Anthony Street	129 Summit Street
113 Burgess Avenue	30 Summit Street
17-19 Eighth Street	186 Sutton Avenue
161 Grove Avenue	267 Sutton Avenue
337 North Broadway	106-108 Warren Avenue
357-359 Pleasant Street	21 Whelden Avenue
7 Sixth Street	199-201 Woodward Avenue
- D. Replacement of additional, previously unknown lead service lines will be required where directed by Owner when uncovered during the course of construction. Lead service replacement shall be performed in full, from the water main to the curb stop (public-side of

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service) AND from the curb stop to the meter (private-side of service). No partial lead service replacement, in the event access to private property is not authorized, shall be allowed.

- E. Additional water services and curb stops have been called for replacement throughout the project area, as identified in Section 02650 – Water Service Lines.
- F. The Contract Drawings have been prepared from plans of record provided by the City of East Providence. The Contract Drawings have been generated with the best available information and no warranty is expressed regarding the accuracy of the information. The Contractor shall be responsible for locating in the field all house connections, connecting pipelines, valves, blow-offs, utilities, and related items as shown on the drawings or as identified in the field, as necessary to complete the work. No extra payment will be made for additional work required by the Contractor to locate connecting pipelines, valves, and related items that are not shown on the drawings.
- G. Work is proposed in roadways maintained by the Rhode Island Department of Transportation, including Willett Avenue. Work in any State-maintained roadway will be subject to RIDOT-approval of a Utility Permit and Transportation Management Plan (TMP). The City will obtain RIDOT approval of a Utility Permit and TMP for work planned in Willett Avenue. The Contractor is responsible for preparing permit applications for approval of work in any other State roadway as part of this contract.
- H. Water service and curb stop replacements are planned in Willett Avenue as part of this project, which is also scheduled for pavement restoration by RIDOT. The Contractor shall prioritize service replacements in Willett Avenue in an effort to complete as much of the work in this contract in advance of RIDOT pavement restoration. Regardless, the Contractor will be required to restore concrete base and provide temporary and permanent trench patch at all trenches and excavations opened for this project. Additional pavement restoration may be required based on coordination with RIDOT, which will be paid for using the appropriate bid items.

1.3 DEFINITIONS

- A. Owner, where used in these Specifications, shall refer to the EPWUD.
- B. Engineer, where used in these Specifications, shall refer to Pare Corporation.
- C. Contractor, where used in these Specifications, shall refer to the Bidder awarded a contract to perform the services described herein.
- D. Contract Documents, where used herein, shall refer to the Bid Documents, Specifications, and Drawings inclusive of appendices and attachments.

PART 2 PRODUCTS (Not Used)

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PART 3 EXECUTION

3.1 GENERAL

- A. The Contractor shall be responsible for scheduling its activities and the activities of any subcontractors to meet Contract completion dates and project milestones established herein. Contractor is responsible for contacting customers to schedule the work. The EPWUD will identify services where work is required and will provide existing customer information, but EPWUD does not have contact information for every customer. Contractor shall coordinate with EPWUD to determine appropriate methods to contact customers where contact information is not readily available.
- B. Contractor shall provide a Project Manager to oversee the project. The Project Manager shall be thoroughly familiar with and experienced with municipal pipeline cleaning and lining as well as lead line replacement projects.
- C. The Owner will designate a Project Manager assigned to this project to interface with Contractor's Project Manager on matters of scheduling, customer interactions, dispute resolution, and contract administration. Contractor notes that the Owner and the designated Project Manager will have limited involvement in the project and is not available to direct or carry out the day to day activities of this Contract.
- D. Contractor shall provide a competent Superintendent or Foreman present at all times when work is in progress.
- E. The Contractor shall submit a Work Plan prior to initiating construction activities, which describes their proposed sequence and timing of the work; a complete project schedule; construction methods; product delivery, handling, and storage procedures; and qualifications of their key personnel. Contractor shall assign a Project Manager and Superintendent or Foreman to oversee the work of this contract.

3.2 HAULING, HANDLING, AND STORING OF MATERIALS

- A. Transport and handle items in accordance with manufacturer's instructions.
- B. Schedule delivery to reduce long term on-site storage prior to installation and/or operation.
- C. Deliver products to the site in manufacturer's original sealed containers or other packing systems, complete with instructions for handling, storage, unpacking, protecting and installing.
- D. Promptly inspect shipment to assure that products comply with requirements, quantities are correct, and items are undamaged. Notify Owner verbally, and in writing, of any problems.
- E. All materials which, in the opinion of the Owner, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work and the Contractor shall receive no compensation for the damaged material or its removal.

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3.3 SUBMITTALS

- A. The Contractor shall issue submittals on all equipment and materials to be incorporated into the Work. Any equipment and materials that are ordered, delivered to the site, and/or installed prior to Owner's review shall be done at Contractor's risk.
- B. Provide submittals electronically for Owner's review, in accordance with Section 01300 – Submittals.
- C. Provide Owner minimum 14 calendar days for review of submittals. The Contractor shall be responsible for issuing submittals promptly and timely so that there shall be no delay to the Work.
- D. Revise and reissue rejected submittals promptly.

3.4 QUALITY CONTROL

- A. The Contractor is responsible for controlling the quality of Work including work of its Subcontractors and suppliers and for ensuring that the specified quality is achieved. The Contractor shall maintain control over construction and installation processes to assure compliance with specified requirements.
- B. The Contractor shall maintain control over procurement sources to ensure that materials, equipment and services conform to specified requirements.
- C. The Engineer and Owner have the right but not the responsibility to perform inspections, witness tests, or otherwise monitor or assess the Work and activities. The Engineer's and Owner's right to perform inspections, witness tests, or otherwise monitor or assess the Work and activities does not relieve the Contractor or its subcontractors and vendors of their obligations to comply with the requirements of the Contract Documents.

3.5 PROTECTION OF WORK AND PROPERTY

- A. The Contractor is responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. Public or private property damaged due to Contractor's operations shall be restored to a condition equal to or better than existing condition. The cost of repairs to damaged property shall be borne by the Contractor.
- B. Restoration of damaged property shall be performed promptly to the satisfaction of Owner.
- C. During the course of the work, Contractor shall keep work locations as clean and neat as possible at all times. Contractor shall remove, haul away, and dispose of all residue resulting from the work. Contractor shall make a thorough inspection of the work area at the end of work at all project locations to ensure that it is left clean and free of debris resulting from the work of this Contract.
- D. Contractor shall provide temporary sanitary facilities for use by its workers. At no times shall customer's property be used by the Contractor's workers.

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3.6 HEALTH AND SAFETY

- A. The Contractor shall be fully responsible for the safety and health of its employees and its subcontractors during the performance of the Work.
- B. The Contractor shall be directly responsible for ensuring the work is performed in a safe and healthful manner.

3.7 MEETINGS

- A. Pre-Construction Meeting: After the bids have been opened but prior to the start of the construction there will be a preconstruction meeting to discuss the phasing and scheduling of the construction project. The specific time and place of the conference will be arranged by Owner after the Contract has been awarded.
- B. Progress Meetings: Progress meetings will be held during the course of the project on an as needed basis, as determined by Owner. Potential topics to be covered during progress meetings include the following:
 - 1. Progress of Work in relation to Contract Schedule.
 - 2. Proposed Work activities for forthcoming period.
 - 3. Resources committed to Contract.
 - 4. Coordination of Work with others.
 - 5. Status of procurement of equipment and materials.
 - 6. Status of Submittals.
 - 7. Outstanding actions, decisions, or approvals that affect Work activities.
 - 8. Security issues.
 - 9. Quality Issues
 - 10. Potential Claims
 - 11. Contract Changes
 - 12. Costs & Budget
 - 13. Mitigation Measures

3.8 WORK HOURS

- A. Normal construction activity shall take place only between the hours of 7:00 am to 4:00 pm excluding, Saturdays, Sundays and legal holidays unless otherwise allowed by Owner.
- B. Allowable work hours in State-maintained roadways shall be in accordance with RIDOT-approved TMP unless alternate hours are allowed by RIDOT and the City of East Providence.
- C. The Contractor shall plan their Work to avoid working beyond allowable working hours.

3.9 CONTRACT CLOSEOUT

- A. Substantial Completion: the construction must be complete. For this purpose, completion of

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construction shall be defined in accordance with the following guidelines:

1. The Contractor has completed work at all project sites included in the Contract, including removal of existing hardware, installation of new hardware, and restoration of service at all locations.
2. Contractor shall accompany Owner during any final site walkthroughs and compilation of punch list, as applicable.
3. All shop drawings must have final approval.

B. Final Completion shall include the following activities:

1. Complete punch list.
2. Issue outstanding field reports to Owner
3. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. The Contractor shall submit the following documents with or prior to Final Application for Payment, as applicable: Contract Completion and Acceptance Certificate, Consent of Surety to Final Payment, Release and Waiver of Liens and Claims, Affidavit of Payment of Debts and Claims, and remaining releases, waivers, guarantees, and all data required by the Contract Documents.
4. Complete final cleaning operations, including final disposal of any removed hardware and removal of unused inventory from the project site.

3.10 GUARANTEE PERIOD

- A. Guarantee period begins upon Final Completion of the project.
- B. During the guarantee period as defined in General Conditions, the Contractor shall correct all deficiencies.
- C. Corrective work will be identified by Owner. The Contractor will be notified of the item(s) requiring corrective work.
- D. The Contractor shall begin work on all corrective work within 72 hours of being notified of the deficiency by Owner and will then work continuously until the deficiency is corrected. Upon completion of the corrective work, the Contractor shall submit a letter report to the Owner detailing a description of the deficiency and the corrective action that was taken. If the Contractor does not begin work within 72 hours of being notified or does not then work continuously to correct the work, the Owner may have the work completed by others and have all costs deducted from money that would otherwise be due to the Contractor.
- E. The Contractor will coordinate all corrective work with Owner.

END OF SECTION

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SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 EXTENT OF WORK

- A. Measurement. The quantities to be measured under the various items in the Bid Form will be those quantities of work completed in accordance with the Contract Documents. 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 Contract Documents.

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 on the Bid Form 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 on the Bid Form 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 Owner for the construction of all structures, foundations, pipes, and appurtenances, including disposal of the excavated materials in fills, backfills, embankments, designated stockpiles, or as spoil as approved by Owner, is included in the prices for the various items of work on the Bid Form and no separate payment will be made thereof.
- D. Boulder Excavation. Payment for boulder excavation less than 1 cubic yard in size, including furnishing and installing appropriate backfill material, is included in the various items of work on the Bid Form and no separate payment will be made thereof.
- E. Filling, Backfilling, Embankment, and Disposal of Surplus Materials. Payment for filling, backfilling for all structures, foundations, underground electric conduits and pipes, including appurtenances, construction of embankments, and disposal of surplus material is included in the prices for the various items of work on the Bid Form and no separate payment will be made thereof, unless otherwise indicated.
- F. Sheeting, Shoring and Bracing. Payment for all necessary sheeting, shoring and bracing is included in the prices for the various items on the Bid Form and no separate payment shall be made thereof, unless otherwise indicated (e.g., permanent sheeting).
- G. 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 on the Bid Form and no separate payment will be made thereof.
- H. Preparation of Site. Payment for preparation of site is included in the Lump Sum Price for

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Bid Item 1 – Mobilization and Demobilization on the Bid Form and no separate payment will be made thereof. Preparation of site includes setting up construction plant(s), offices, shops, storage areas, sanitary and other facilities required by the specifications or Federal, State, and Local law or regulations; grading (including furnishing and installing fill material and removal and disposal of excess material) and rock removal at the site for all temporary facilities required as part of construction; 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 on the Bid Form but is necessary for the complete construction of the project set forth by the contract.

- I. Bonds. Payment for bonds required by the contract is included in the prices bid for the various items of work on the Bid Form and no separate payment will be made thereof.
- J. Certifications. Payment for testing and certifications performed to ensure materials comply with the requirements of these Contract Documents shall not be paid for separately and are incidental to the individual items of work listed on the Bid Form.
- K. Environmental Protection. Payment for work under this Section is included in the prices for the various Items on the Bid Form 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 on the Bid Form 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 on the Bid Form and no separate payment will be made thereof.
- L. No separate payments will be made for cleaning up. Such clean-up 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 work or items associated with Division 1 - General Requirements. Contractor shall incorporate the cost for these items into the Bid Items listed on the Bid Form.
- O. No separate payment shall be made for costs associated with Professional Engineer(s), licensed in the State of Rhode Island, performing all design calculations, which shall be sealed and signed by said Professional Engineer(s). The Contractor is called to the attention that individual sections of these contract documents indicate when design calculations are required. Design calculations performed, sealed and stamped by a Professional Engineer licensed in the State of Rhode Island is included in the prices for the various Items on the Bid Form and no separate payment will be made thereof
- P. Hydrostatic/Bacteriological/VOC Testing. Payment for work under this Section is included in the prices for the various Items on the Bid Form and no separate payment will be made thereof. This shall include, but is not limited to, furnishing and installing required corporations, valves, tubing, piping, fittings and any other incidentals required to

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successfully perform all required testing. The City makes no guarantee as to the availability of adequate pressures to perform required testing, it shall be the contractor's responsibility to provide and operate all necessary pumping equipment for all testing purposes. Any other incidentals required to perform testing, including laboratory fees, shall not be paid for separately.

- Q. Contractor will be reimbursed for costs associated with support of existing utilities the actual paid invoiced amount from the Utility Company in question, or direct labor and materials costs incurred by the Contractor, as approved by Owner with relation to supporting existing utilities as required to permit installation of new water service. Reimbursement for costs incurred to support existing utilities will be from the Allowance established in the bid.
- R. Traffic control details shall be paid from the Allowance for the total number of manhours of uniformed traffic control as furnished by the East Providence Police Department for the purposes of directing traffic, inclusive of 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.
 - e. The City shall pay East Providence police details directly. The Contractor shall provide flaggers in the event police detail is unavailable, the cost of which will be paid using the Allowance item.

1.3 BID ITEMS

- A. Appurtenant items of work 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.
- B. The Owner reserves the right to remove select bid items and to increase or decrease the unit quantity of bid items. The successful proposer is made aware that the unit price so stated on the Bid Form constitutes full compensation for that item, regardless of any increase or decrease in the unit quantity of that bid item. There is no guarantee of any minimum or maximum quantity for any bid item. Standards of the industry (e.g. renegotiation of the bid price due to a 25% increase or decrease in the unit quantity of the bid item) shall not be enforceable under this contract. Renegotiation of bid prices is solely at the discretion of the Owner.
- C. Bid Item No. 1 – Mobilization and Demobilization shall be measured at the Lump Sum price

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provided on the Bid Form. The payable amount will be for the preparatory work and operations which must be performed or for costs which must be incurred prior to beginning work, final clean-up and demobilization for temporary facilities and equipment, restoration of impacted areas disturbed due to construction of all temporary facilities, furnishing redline markups of as-built constructed features, and the cost of payment and performance bonds 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 office(s), utilities, temporary fencing, installation, maintenance, and removal of tracking pads, and other facilities necessary for work on the project. Demobilization shall include, but not be limited to, moving out of personnel and equipment, cleaning entire site, and removing debris and rubbish. There shall be no separate payment associated with furnishing, installing, and removing a temporary field office for use by the Contractor, should the Contractor determine that one is required.

- D. Payment for work associated with mobilization and demobilization will be limited to 75% of the lump sum amount of this item until the work is completed and the Contractor has completely demobilized. No more than 50% of the lump sum amount of this item shall be paid for in the Contractor's first pay application. The lump sum price bid for this item shall not exceed 5 percent of the total of all other bid items.

1.4 MEASUREMENT

- A. The measurement of all quantities of items listed on 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 prior to the submission for payment. The measurement submitted shall be in the same unit description listed on the Bid Form.
- B. Method of measurement shall be as so specified in the applicable technical specifications.

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 as defined by these specifications. No payment shall be made for work beyond these limits unless the work has been authorized by the Owner in writing.
- D. Basis of payment shall as so specified in the applicable technical specifications.

1.6 PARTIAL PAYMENT FOR PRODUCTS

- A. The Contractor may request partial payment for Products (supplies, material and/or equipment) which are delivered and stored off-site. The request may only be made when submitting Contractor's proposal for a Schedule of Values. In order for this request to be

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considered, the Contractor must comply with the requirements of this sub-section and the Agreement. Any payments approved pursuant to this sub-section shall not exceed sixty-five percent (65%) of the Product's invoiced value and shall be subject to retainage as set forth in the Agreement. Contractor shall obtain prior approval since the Owner reserves the right to refuse approval for payment for any equipment or materials suitably stored off-site in its sole discretion, regardless of whether all conditions contained herein have been met.

- B. Partial payment may be made for Products eligible for off-site delivery and storage upon presentation by the Contractor of a Bill of Sale, an invoice or an Affidavit certifying that the material is received by the Owner free and clear of all liens, encumbrances and security interests of any kind and including for off-site delivery evidence acceptable to the Owner that "all risks" property insurance in an amount sufficient to protect the interests of the Owner is in effect at the approved site and that the Owner is a loss payee equal to or greater than its percentage of ownership.
- C. Partial payment for Products delivered and stored off-site shall be contingent upon Contractor's compliance with the storage and protective maintenance requirements set forth in these specifications and all other requirements necessary to preserve equipment warranties for the benefit of the Owner.
- D. All costs associated with delivery to and storage of equipment or material at an off-site facility shall be assumed by the Contractor notwithstanding the Contractor's request for, and obtaining approval of the Owner to so deliver and store the materials.
- E. The Contractor shall provide written evidence to the Owner of having made arrangements for unrestricted access by the Owner and its authorized representatives to the materials wherever stored, including provision for the Owner to take control and possession of such materials at any time and without restriction.
- F. The Contractor must provide the Owner, upon request and prior to any partial payment, documentation that transfers absolute legal title to such material to the Owner conditional only upon receipt of final payment. Neither such transfer of this nor any partial payment shall constitute acceptance by the Owner of the materials nor void the right to reject materials subsequently found to be unsatisfactory, or in any way relieve the Contractor of any obligation arising under the Contract Documents.

1.7 EXTRA WORK

- A. Extra work, if any, shall be performed and paid for in accordance with the Contract Agreement.

END OF SECTION

PART 1 GENERAL

1.1 SINGLE CONTRACT RESPONSIBILITY

- A. The work included in these contract documents is to be performed under the responsibility of a single prime contract. The Contractor is responsible for the coordination of all the work, whether performed by its own personnel or its subcontractors, and will maintain such procedures as necessary to keep its workmen and suppliers informed of project progress so as not to unnecessarily delay completion of the work.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Survey work and other field engineering responsibilities of the Contractor.

1.2 REQUIREMENTS

- A. The Contractor shall be responsible for layout of the work and the establishing of lines and grades.
- B. Establish elevations, lines, levels, reference marks, batter boards, etc., required during the progress of the Work. Verify such marks by instrument to confirm accuracy.
- C. Locate and protect survey control and reference points.
- D. Make, check, and be responsible for all measurements and dimensions necessary for the proper construction of the Work.
- E. The Engineer will be permitted to check the lines, elevations, reference marks, batter boards, etc., set by the Contractor. The Contractor shall correct any errors found in lines, elevations, reference marks, batter boards, etc. Such a check shall not be construed as approval of the Contractor's work and shall not relieve or diminish the responsibility of the Contractor for the accurate construction and completion of the Work.
- F. Control datum for survey as shown on Drawings.

1.3 QUALITY ASSURANCE

- A. Qualifications
- B. Qualifications
 - 1. Employ a Civil Engineer or Land Surveyor registered within the State of Rhode Island, acceptable to the Engineer.
- C. Certifications
 - 1. Submit certificate signed by the Contractor's Engineer or Land Surveyor stating elevations and locations of the Work are in conformance with the Contract Documents.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.1 The Contractor is responsible for obtaining all federal, state and local permits required to complete the work and to comply with all regulatory requirements. The Contractor shall fill out all forms and furnish all drawings required to obtain the permits. A copy of the approved permit shall be submitted to the Engineer. All fees associated with these permits shall be paid by the Contractor as part of the project. Work shall not commence on any phase of the work requiring a permit until the permit is obtained.

A. The Work specified in this section includes permits and regulatory requirements. Specific requirements are also included in other specification areas.

B. Related Work Described Elsewhere:

1. Contract, Section 00500
2. General Specifications, Section 01000
3. Miscellaneous and Special Project Requirements, Section 01100
4. Construction Facilities and Temporary Services, Section 01500
5. Traffic Regulation, Section 01570

1.2 **SUBMITTALS**

A. Submit draft copies of all permit applications to the Engineer a minimum of five (5) days before the permit application is submitted to the permitting agency.

B. Submit a copy of all permits obtained by the Contractor.

1.3 **REGULATORY AGENCIES**

A. Contractor shall comply with all laws, rules, regulations, and ordinances promulgated by any authority having jurisdiction over the Work, including, but not limited to:

1. Permit for Discharge of Construction Water into the City of East Providence's Sewer System in accordance with the Rules and Regulations for the Use of Wastewater Facilities within the City of East Providence
 Contact: City of East Providence
2. Utility Permit and Transportation Management Plan (TMP) for State roadways.
 Contact: Rhode Island Department of Transportation.

B. Contractor shall comply with the Rhode Island Pollutant Discharge Elimination System (RIPDES) General Permit for Storm Water Discharges Associated with Construction Activities (latest revision).

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1.4 PERMITS OBTAINED BY CONTRACTOR

- A. City of East Providence:
 - 1. N/A
- B. The Contractor shall be responsible for obtaining Utility Permit and Transportation Management Plan (TMP) approval from RIDOT for work in State-maintained roadways.
- C. Prior to performing the Work, Contractor shall be responsible for obtaining and paying for all other permits required for the work of this Contract including but not limited to permits required of his equipment, work force, and of particular operations (such as fuel storage, air emissions, disposal of excavated material). Such permits may include those listed above. Contractor shall determine and obtain all necessary permits to enable Contractor and Engineer occupation of the construction trailers at the work site.
- D. The Contractor shall be solely responsible for obtaining, and paying for at no additional cost to the City, all permits, licenses, mitigation, certifications or approvals required for either transportation, off-loading, stockpiling, storage and final use or off-site disposal of excavated material and construction and demolition material generated during the performance of the Work.
- E. At no additional cost to the City, the Contractor shall be responsible for collecting representative samples of materials to be disposed of off-site and providing any analyses as may be required to receive agency approvals for use or off-site disposal of material and for scheduling and coordinating inspections necessary for receipt of local or state permits, approvals or certifications.
- F. The Contractor shall be responsible for providing to the City in a timely and acceptable manner copies of all permits, licenses, certifications or approvals or other applicable information required to demonstrate receipt of required permits.
- G. Should the Contractor propose construction or means and methods which are not allowed by the permits included herein, the Contractor shall be solely responsible for obtaining any permit amendments or new permits which would allow compliance with Contractor's proposed means and methods at no additional cost to the City. The Contractor shall be constrained from commencing construction within the affected areas until applicable permit amendments or new permits have been received.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 PERMIT COSTS AND FINES

- A. Any and all costs, including the City and Engineer costs, of fines levied by RIDEM/EPA for violations of RIPDES, RIDOT for violations of the Road Opening Permit, or other permit requirements which are a direct result of the Contractor's performance or lack thereof shall be paid by the Contractor at no additional cost to the City.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section includes health and safety requirements for the City of East Providence Water System Upgrades. Requirements included in this section are in addition to Local, State, and Federal requirements. Where conflicts or discrepancies exist between requirements, the more stringent requirement shall govern.

- B. Related Work Described Elsewhere:
 - 1. Contract, Section 00500.
 - 2. General Specifications, Section 01000

1.2 COMPLIANCE

- A. In prosecuting the work of this Contract, the Contractor and Sub-Contractors shall provide working conditions on each operation that shall be as safe and healthful as the nature of that operation permits. The various operations connected with the Work shall be so conducted that they will not be injurious to safety or health, and shall otherwise conform to the requirements of the Contract Documents. The Contractor and Sub-contractors shall comply at a minimum with all requirements of the Contract Documents and provisions, regulations and recommendations issued pursuant to the Occupational Safety and Health Act of 1970, and the Construction Safety Act of 1969, as amended, and with laws, rules and regulations of other authorities having jurisdiction, with regard to all matters relating to the safety and health of workers and the general public. Compliance with government requirements is mandated by law and considered only a minimum level of safety performance. All work shall therefore be performed in accordance with best safe work practices recognized by the construction industry and the requirements of the Contract Documents.

- B. The Contractor shall stop work whenever a work procedure or a condition at a work site is deemed unsafe.

- C. On Site Employees: 10-Hour OSHA Construction Safety Program: All personnel shall be trained in and bear certification of satisfactory completion of training in an approved 10 Hour OSHA Construction Safety Program as outlined in RIGL 28-20-35.

- D. Reference Codes, Standards and other applicable Documents
 - 1. OSHA - U.S. Department of Labor, Occupational Safety and Health Administration, Construction Standards and Interpretations, 29 CFR Part 1926, Subpart S, Section 1926.800, “Underground Construction”, final rule dated June 2, 1989.
 - 2. OSHA - U.S. Department of Labor, Occupational Safety and Health Administration, Construction Standards and Interpretations, 29 CFR Part 1910.120 “Hazardous Waste Operations and Emergency Response”
 - 3. FEMA – Federal Emergency Management Agency, Emergency Operations Plan Requirements
 - 4. CERCLA - Comprehensive Environmental Response, Compensation and Liability Act, National Contingency Plan, Section 105
 - 5. U.S. Department of Labor, Occupational Safety and Health Act of 1970, as amended.

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6. NFPA Standard for Fire Prevention During Welding, Cutting, and Other Hotwork, 1994 edition
7. NFPA 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations, 1996 Edition
8. U.S. Department of Labor, Construction Safety Act of 1969, as amended.
9. Rhode Island Fire Laws and Rules, Annotated, 2000-2001
10. Rhode Island Fire Prevention Code (NFPA 1 Fire Prevention Code, 1997 Edition as amended)
11. All other Federal, State and Local requirements and regulations in effect at the time of construction, including new regulations or modifications to existing regulations introduced during the Contract Time.

1.3 SUBMITTALS

A. CONTRACTORS HEALTH AND SAFETY MANUAL - GENERAL REQUIREMENTS:

1. No later than four weeks after NTP, the Contractor shall submit its Health and Safety Manual.
2. Contractor's Health and Safety Manual shall address the items listed in this specification, at minimum, including any additional items Contractor deems appropriate. Contractor is solely responsible for their Health and Safety Manual and the health and safety of their personnel.
3. The Health and Safety Manual shall be appropriate to the scope of work to be performed. General policies and procedures will be supplemented and updated appropriately to address the specific conditions, methods, and equipment to be used for the work. The Manual shall include as a framework for safety and health programming the following basic elements and plans in sufficient detail to provide a clear guideline for a safe working environment:
 - a. A statement signed by an Officer of the Firm of the Contractor's commitment to (1) provide a safe and healthful project and (2) to implement its Safety and Health Program.
 - b. Specific assignments of safety and health-related roles and responsibilities. An explanation of the procedures that safety and project management personnel will follow to rectify unsafe working conditions or hazards when they are identified.
 - c. Detailed procedures for:
 1. Training of site supervision.
 2. Safety and Health Project Orientation for workers.
 3. On-going Safety and Health training for workers.
 4. Providing safety and health information to the Contractor's employees.
 5. Safety and health inspections on the project.
 6. Disciplinary action.
 7. Safety and Health Project Orientation for visitors.
 8. Accident-related record keeping, investigation and surveillance.
 - d. An Emergency Action plan addressing all types of emergencies, with which the Contractor may reasonably and predictably be confronted.
 - e. A list of required health and safety related permits for specific construction operations.
 - f. Job hazard analyses:
 1. A procedure for identifying how and under what circumstances job hazard analyses shall be conducted.
 2. Guidelines for the preparation and review of job hazard analyses and handling recommendations resulting from the analyses.

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3. Job hazard analyses as they are developed and updated.
- g. Reporting formats for required reports and submissions.
- h. All detailed site-specific procedures shall include requirements for mandatory eye and head protection and adherence to 6-foot fall protection requirements. Site-specific procedures shall require all chainsaws used on-site to be equipped with kickback guards/breaks and require all other power tools to be equipped with all protective features as provided by the manufacturer.
- i. Detailed Site Specific Procedures for conducting safe working conditions (including the designation of “competent persons” as required by OSHA) associated with:
 1. Blasting
 2. Compressed air and gases
 3. Concrete work
 4. Confined spaces/permit-required confined spaces
 5. Crane operations and maintenance
 6. Rigging operations, equipment inspection and testing
 7. Electrical hazards
 8. Excavation and excavation support
 9. Fall Protection
 10. Fire Protection and Prevention
 11. First aid, CPR and Blood borne Pathogens
 12. Hand and power tools
 13. Hazard Communication
 14. Housekeeping
 15. Scaffolding, Ladders and Walking and Working Surfaces
 16. Lockout/Control of Energy Sources
 17. Materials handling and storage
 18. Mechanized equipment
 19. Construction Health Hazard Monitoring
 20. Personal Protective Equipment and clothing
 21. Hearing protection
 22. Respiratory Protection
 23. Sanitation
 24. Welding and cutting
 25. Confined Space Procedures
 26. Underground Excavation
 27. Underground Construction
 28. Traffic Control Program
- j. Hazardous material handling.
 1. A silica exposure plan to limit exposure of workers to silica dust. The plan shall include the applicable preventative measures recommended and contained in NIOSH ALERT: 1996 Publication 96-112 “Preventing Silicosis and Deaths in Construction Workers”.
 2. The Contractor shall develop a written chemical safety plan to address all chemicals used during construction, including Contractor’s construction water treatment systems. This safety plan shall include detailed procedures to prevent chemical accidents to the maximum extent possible during chemical transport, transfer, storage, use and disposal. Include appropriate MSDS sheets.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 SAFETY PROGRAM ADMINISTRATION

- A. The Contractor shall be fully responsible for the safety and health of its employees, its subcontractors, and lower tier subcontractors during the performance of the Work. The Contractor shall be directly responsible for establishing and implementing the project-specific Contractor Safety and for the protection of its workers, the workers of its Subcontractors, the PM, the City and the general public.
- B. The Contractor shall be directly responsible for ensuring the work is performed in a safe and healthful manner.

END OF SECTION

PART 1 GENERAL

1.1 RELATED SECTIONS

- A. Contract Agreement, Section CA.

1.2 QUALITY CONTROL

- A. Conform to reference standard by date of issue current on date of Bid Opening..

1.3 SCHEDULE OF REFERENCES

- A. AA: Aluminum Association, 818 Connecticut Avenue, N.W., Washington, DC 20006.
- B. AABC: Associated Air Balance Council, 1000 Vermont Avenue, N.W., Washington, DC 20005.
- C. AASHTO: American Association of State Highway and Transportation Officials, 444 North Capitol Street, N.W., Washington, DC 20001.
- D. ACI: American Concrete Institute, Box 19150, Redford Station, Detroit, MI 48219.
- E. ADC: Air Diffusion Council, 230 North Michigan Avenue, Chicago, IL 60601.
- F. AFBMA: Antifriction Bearing Manufacturers Association, 1101 Connecticut Avenue, N.W., Suite 700, Washington, DC 20036.
- G. AGA: American Gas Association.
- H. AGC: Associated General Contractors of America, 1957 "E" Street, N.W., Washington, DC 20006.
- I. AGMA: American Gear Manufacturers Association, 1500 King Street, Suite 201, Alexandria, VA 22314.
- J. AI: Asphalt Institute, Asphalt Institute Building, College Park, MD 20740.
- K. AIA: American Institute of Architects, 1735 New York Avenue, N.W., Washington, DC 20006.
- L. AISC: American Institute of Steel Construction, 400 North Michigan Avenue, Eighth Floor Chicago, IL 60611.
- M. AISI: American Iron and Steel Institute, 1000 16th Street, N.W., Washington, DC 20036.
- N. AITC: American Institute of Timber Construction, 333 W. Hampden Avenue, Englewood, CO 80110.
- O. AMCA: Air Movement and Control Association, 30 West University Drive, Arlington Heights, IL 60004.
- P. ANSI: American National Standards Institute, 1430 Broadway, New York, NY 10018.

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- Q. AOAC: Association of Official Agriculture Chemists.
- R. APA: American Plywood Association, Box 11700, Tacoma, WA 98411.
- S. API: American Petroleum Institute, 1220 "L" Street, N.W., Washington, DC 20005.
- T. ARI: Air-Conditioning and Refrigeration Institute, 1501 Wilson Boulevard, Arlington, VA 22209.
- U. ASCE: American Society of Civil Engineers, 345 E. 47th Street, New York, NY 10017.
- V. ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, N.E., Atlanta, GA 30329.
- W. ASME: American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.
- X. ASNS: American Standard for Nursery Stock.
- Y. ASPA: American Sod Producers Association, 4415 West Harrison Street, Hillside, IL 60162.
- Z. ASTM: American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.
- AA. AWI: Architectural Woodwork Institute, 2310 South Walter Reed Drive, Arlington, VA 22206.
- BB. AWWA: American Wood-Preservers' Association, 7735 Old Georgetown Road, Bethesda, MD 20014.
- CC. AWS: American Welding Society, 550 LeJeune Road, N.W. Miami, FL 33135.
- DD. AWWA: American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235.
- EE. BIA: Brick Institute of America, 11490 Commerce Park Drive, Reston, VA 22091.
- FF. CDA: Copper Development Association, 57th Floor, Chrysler Building, 405 Lexington Avenue, New York, NY 10174.
- GG. CEMA: Conveyor Equipment Manufacturer's Association
- HH. CFR: Code of Federal Regulations.
- II. CLFMI: Chain Link Fence Manufacturers Institute, 1101 Connecticut Avenue, N.W., Washington, DC 20036.
- JJ. CRSI: Concrete Reinforcing Steel Institute, 933 Plum Grove Road, Schaumburg, IL 60195.
- KK. CS: Commercial Standard
- LL. DHI: Door and Hardware Institute, 7711 Old Springhouse Road, McLean, VA 22101.
- MM. EJCDC: Engineers' Joint Contract Documents Committee, American Consulting Engineers Council, 1015 15th Street, N.W., Washington, DC 20005.
- NN. EJMA: Expansion Joint Manufacturers Association, 25 North Broadway, Tarrytown, NY 10591.

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- OO. FGMA: Flat Glass Marketing Association, 3310 Harrison, White Lakes Professional Building, Topeka, KS 66611.
- PP. FM: Factory Mutual System, 1151 Boston-Providence Turnpike, P.O. Box 688Norwood, MA 02062.
- QQ. FS: Federal Specification, General Services Administration, Specifications and Consumer Information Distribution Section (WRSIS), Washington Navy Yard, Building 197, Washington, DC 20407.
- RR. GA: Gypsum Association, 1603 Orrington Avenue, Evanston, IL 60201.
- SS. JIC: Joint Industrial Council, c/o National Machine Tool Builders Association, 7901 Westpark Drive, McLean, VA 22102.
- TT. HIS: Hydraulic Institute Standards.
- UU. IBR: Institute of Boiler and Radiator Manufacturers, aka Hydronics Institute, P. O. Box 218, 35 Russo Place, Berkeley Heights, NJ 07922.
- VV. ICBO: International Conference of Building Officials, 5360 S. Workman Mill Road, Whittier, CA 90601.
- WW. IEEE: Institute of Electrical and Electronics Engineers, 345 East 47th Street, New York, NY 10017.
- XX. IMIAC: International Masonry Industry All-Weather Council, International Masonry Institute, 815 15th Street, N.W., Washington, DC 20005.
- YY. MBMA: Metal Building Manufacturer's Association, 1230 Keith Building, Cleveland, OH 44115.
- ZZ. MFMA: Maple Flooring Manufacturers Association, 60 Rivere Drive Northbrook, IL 60062.
- AAA. MIL: Military Specifications, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.
- BBB. ML/SFA: Metal Lath/Steel Framing Association, 221 North LaSalle Street, Chicago, IL 60601.
- CCC. NAAMM: National Association of Architectural Metal Manufacturers, 221 North LaSalle, Street Chicago, IL 60601.
- DDD. NBS: National Bureau of Standards
- EEE. NCMA: National Concrete Masonry Association, P.O. Box 781, Herndon, VA 22070.
- FFF. NEBB: National Environmental Balancing Bureau, 8224 Old Courthouse Road, Vienna, VA 22180.
- GGG. NEC: National Electric Code.
- HHH. NEMA: National Electrical Manufacturers' Association, 2101 "L" Street, N.W. Washington, DC 20037.
- III. NFPA: National Fire Protection Association, P.O. Box 9101, Quincy, MA 02269.

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- JJJ. NFPA: National Forest Products Association, 1619 Massachusetts Avenue, N.W., Washington, DC 20036.
- KKK. NSWMA: National Solid Wastes Management Association, 1730 Rhode Island Avenue, N.W. Washington, DC 20036.
- LLL. NTMA: National Woodwork Manufacturers Association, 205 W. Touhy Avenue, Park Ridge, IL 60068.
- MMM. PCA: Portland Cement Association, 5420 Old Orchard Road, Skokie, IL 60077.
- NNN. PCI: Prestressed Concrete Institute, 201 North Wells Street, Chicago, IL 60606.
- OOO. PS: Product Standard, U.S. Department of Commerce, Washington, DC 20203.
- PPP. PTI: Post Tensioning Institute.
- QQQ. RIS: Redwood Inspection Service, One Lombard Street, San Francisco, CA 94111.
- RRR. RCSHSB: Red Cedar Shingle and Handsplit Shake Bureau, 515 116th Avenue Bellevue, WA 98004.
- SSS. SAE: Standard Automotive Engineering.
- TTT. SDI: Steel Deck Institute, P.O. Box 9506, Canton, OH 44711.
- UUU. SDI: Steel Door Institute, 712 Lakewood Center North, 14600 Detroit Avenue, Cleveland, OH 44107.
- VVV. SIGMA: Sealed Insulating Glass Manufacturers Association, 111 East Wacker Drive, Chicago, IL 60601.
- WWW. SJI: Steel Joist Institute, 1205 48th Avenue North Suite A, Myrtle Beach, SC 29577.
- XXX. SMACNA: Sheet Metal and Air Conditioning Contractors' National Association, 8224 Old Court House Road, Vienna, VA 22180.
- YYY. SSPC: Steel Structures Painting Council, 4400 Fifth Avenue, Pittsburgh, PA 15213.
- ZZZ. TCA: Tile Council of America, Inc., Box 326 Princeton, NJ 08540.
- AAAA. UL: Underwriters' Laboratories, Inc., 333 Pfingston Road, Northbrook, IL 60062.
- BBBB. USS Gage: United States Standard Gage
- CCCC. WCLIB: West Coast Lumber Inspection Bureau, 6980 S.W. Varns Road, Box 23145, Portland, OR 97223.
- DDDD. WWPA: Western Wood Products Association, 1500 Yeon Building, Portland OR 97204.

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PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

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SECTION 01100

MISCELLANEOUS AND SPECIAL PROJECT REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section includes restriction on Contractor hours of operation and site noise.
- B. Related Work Described Elsewhere:
 - 1. General Specifications, Section 01000
 - 2. Summary of Work, Section 01010.
 - 3. Construction Facilities and Temporary Services, Section 01500.
 - 4. Traffic Regulation, Section 01570

1.2 CONSTRUCTION WORK HOUR RESTRICTIONS BY ENGINEER AND OWNER

- A. Except as otherwise specifically allowed elsewhere in the Contract Documents, normal construction activity shall take place only between the hours of 7:00 am to 5:00 pm excluding, Saturdays, Sundays and legal holidays. The Contractor shall plan the Work so as to avoid working beyond these hours. However, if despite the Contractor's diligent efforts, the Contractor believes that overtime work is necessary in order for the Contractor to complete the Work, the Contractor may apply to the Engineer and to the Owner for approval to perform overtime work, which approval may be withheld in their sole discretion. No additional compensation or time extension shall be due to the Contractor whether approval is granted or denied.
- B. If the Contractor believes that overtime work is necessary, it shall obtain prior approval from the Engineer and the Owner. The Contractor shall file a request for such approval in writing and shall include the specific reasons therefore and the time that the overtime work is expected to be concluded. Overtime work will normally be limited to evening hours (5:00 p.m. to 8:00 p.m.) Monday through Friday and daytime hours (7:00 a.m. to 5:00 p.m.) on Saturdays except in special circumstances approved by the Engineer and the Owner.

1.3 CONSTRUCTION WORK HOUR RESTRICTIONS BY CITY OF EAST PROVIDENCE

- A. The Contractor's construction operations shall comply with all Laws, Permits and the City of East Providence Code of Ordinances. Should the Contractor sustain any delay or damages in the prosecution of the Work due to the Contractor's failure to conform to the requirements of the Permit, Laws or Ordinances as determined by the City of East Providence or other regulatory agency, the Contractor shall not be entitled to an extension of Contract Time or Contract Price.

1.4 PROHIBITION OF BLASTING

- A. The Contractor shall be prohibited from performing blasting at the site.

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PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Furnish all labor, materials and equipment and perform all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Section, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.
- B. The control of environmental pollution requires consideration of air, water and land, and involves management of noise and solid waste, as well as other pollutants.
- C. Schedule and conduct all work in a manner that will minimize the erosion of soils in the area of the work. Provide erosion control measures such as diversion channels, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching or other special surface treatments as are required to prevent silting and muddying of streams, rivers, impoundments, lakes, etc. All erosion control measures shall be in place in an area prior to any construction activity in that area.
- D. This Section is intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines.
- E. All phases of sedimentation and erosion control shall comply with and be subject to the approval of the Rhode Island Department of Environmental Management. Prepare a Stormwater Pollution Prevention Plan, including an erosion and sedimentation control drawing meeting the requirements for approval by that agency and Section 02370 Stormwater Pollution Prevention. Upon approval, furnish two copies of the approved Drawing to the Engineer.

1.2 APPLICABLE REGULATIONS

- A. Comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement.

1.3 NOTIFICATIONS

- A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectionable acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. After receipt of such notice from the Engineer or from the regulatory agency through the Engineer, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

1.4 IMPLEMENTATION

- A. Prior to commencement of the work, meet with the Engineer to develop mutual understandings relative to compliance with these provisions and administration of the environmental pollution control program.
- B. Remove temporary environmental control features, when approved by the Engineer and incorporate permanent control features into the project at the earliest practicable time.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 EROSION CONTROL

- A. Provide positive means of erosion control such as shallow ditches around construction to carry off surface water. Erosion control measures, such as siltation basins, hay check dams, mulching, jute netting and other equivalent techniques, shall be used as appropriate. Flow of surface water into excavated areas shall be prevented. Ditches around construction area shall also be used to carry away water resulting from dewatering of excavated areas. At the completion of the work, ditches shall be backfilled and the ground surface restored to original condition or new final condition as shown on the Drawings.

3.2 PROTECTION OF STREAMS AND SURFACE WATERS

- A. Take all precautions to prevent, or reduce to a minimum, any damage to any stream or surface water from pollution by debris, sediment or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that has been used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in the stream, shall not be directly returned to the stream. Divert such waters through a settling basin or filter before being directed into streams or surface waters.
- B. Do not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water or any storm sewer. Water from dewatering operations shall be treated by filtration, settling basins, or other approved method to reduce the amount of sediment contained in the water to allowable levels.
- C. Take all preventative measures to avoid spillage of petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken in accordance with a contingency action plan approved by the Rhode Island Department of Environmental Management. Submit two copies of approved contingency plans to the Engineer.
- D. Water being flushed from structures or pipelines after disinfection, with a residual chlorine concentration of 2 mg/l or greater, shall be either discharged to the chlorine contact tank or treated with a dechlorination solution, in a method approved by the Engineer, prior to discharge.

3.3 PROTECTION OF LAND RESOURCES

- A. Restore land resources within the project boundaries and outside the limits of permanent work to a condition, after completion of construction that will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.

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- B. Outside of areas requiring earthwork for the construction of the new facilities, do not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.
- C. Before beginning operations near them, protect trees that may possibly be defaced, bruised, injured, or otherwise damaged by the construction equipment, dumping or other operations, by placing boards, planks, or poles around them. Monuments and markers shall be protected similarly.
- D. Any trees or other landscape features scarred or damaged by the Contractor's equipment or operations shall be restored to their original condition. The Engineer will decide the method of restoration to be used and whether damaged trees shall be treated and healed or removed and disposed of:
 - 1. All scars made on trees by equipment, construction operations, or by the removal of limbs larger than 1-in in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted.
 - 2. Climbing ropes shall be used where necessary for safety. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Engineer, shall be immediately removed and replaced.
- E. The locations of the Contractor's storage and other construction buildings, required temporarily in the performance of the work, shall be in cleared portions of the job site or areas to be cleared as shown on the Drawings and approved by the Engineer and shall not be within wetlands or floodplains. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings. Drawings showing storage facilities shall be submitted for approval of the Engineer.
- F. If the Contractor proposes to construct temporary roads or embankments and excavations for plant and/or work areas, he shall submit the following for approval at least ten days prior to scheduled start of such temporary work:
 - 1. A layout of all temporary roads, excavations, embankments and drainage to be constructed within the work area.
 - 2. Details of temporary road construction.
 - 3. Drawings and cross sections of proposed embankments and their foundations, including a description of proposed materials.
 - 4. A drawing showing the proposed restoration of the area in accordance with the Drawings and Specifications. Indicate the proposed removal of any trees and shrubs outside the limits of existing clearing area. Indicate locations of guard posts or barriers required to control vehicular traffic and protect trees and shrubs to be maintained undamaged. The Drawing shall provide for the obliteration of construction scars as such and shall provide for a natural appearing final condition of the area. Modification of the Contractor's approved drawings shall be made only with the written approval of the Engineer. No unauthorized road construction, excavation or embankment construction including disposal areas will be permitted.
- G. Remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess of waste materials, or any other vestiges of construction as directed by the Engineer. It is anticipated that excavation, filling and plowing of

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roadways will be required to restore the area to near natural conditions which will permit the growth of vegetation thereon.

- H. All debris and excess material will be disposed of outside wetland or floodplain areas in an environmentally sound manner.

3.4 PROTECTION OF AIR QUALITY

- A. Burning - The use of burning at the project site for the disposal of refuse and debris will not be permitted.
- B. Dust Control - Maintain all excavations, embankment, stockpiles, access roads, plant sites, waste areas, borrow areas and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded and which would cause a hazard or nuisance to others.
- C. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted to control dust. The use of petroleum products is prohibited. The use of chlorides may be permitted with approval from the Engineer.
- D. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor shall have sufficient competent equipment on the job to accomplish this. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer.

3.5 NOISE CONTROL

- A. Make every effort to minimize noises caused by the construction operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with Federal and State regulations.

3.6 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION

- A. Maintain all facilities constructed for pollution control as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

- A. The Emergency Response Plan applies to personal injuries sustained on the site and to the discovery of and/or including personal injuries sustained as a result of contact with hazardous material that could be detrimental to human health or the environment including asbestos. The Emergency Response Plan required by this Section does not relieve the Contractor from the requirements of OSHA regulations as referenced elsewhere in these specifications and the requirements of the Sections of these specifications.
- B. The procedure requirements contained herein are intended to address unanticipated contact with chemicals or hazardous materials during the project. The Emergency Response Plan will also address the Contractor's/Subcontractor's responsibilities should workers sustain personal injuries on-site or the threat of personal injuries exist on the site related to unanticipated contact with chemicals or hazardous materials.
- C. Should an unanticipated incident occur that is considered serious and/or an imminent hazard by the Contractor's Site Safety and Health Officer (SSHO) work within the area influenced by the incident will be suspended until the emergency situation has been brought under control, the incident has been evaluated, and site conditions which contributed to the emergency have been mitigated.
- D. An emergency situation or imminent hazard includes, but is not limited to, the following:
 - 1. buried drum(s) with unknown or known toxic contents
 - 2. groundwater or soils of an unnatural color
 - 3. levels of volatile organic compounds (as measured by a photoionization detector) in excess of critical action levels established by the Contractor's Certified Industrial Hygienist (CIH) in the Hazardous Materials Health and Safety Plan
 - 4. spills or leaks of chemicals or petroleum products on-site
 - 5. other perceived threats
 - 6. loss of negative pressure during asbestos abatement
- E. Site personnel shall report all incidents to the Contractor's SSHO and the Engineer's on-site representative as soon as possible. The Contractor's SSHO will determine the appropriate steps to be taken subject to the Engineer's concurrence. All site incidents will be investigated and documented by the Engineer. Specific mitigation actions to deal with the emergency are not included within these procedures.

1.2 DESCRIPTION OF REQUIREMENTS

- A. The site-specific Emergency Response Plan shall be submitted to the Engineer for review before any work covered in the specific procedures is initiated. It is the Contractor's responsibility to implement appropriate emergency response actions to protect his/her workers safety. Therefore, the Engineer will not approve the Emergency Response Plan but only review to verify that items specified in this section are addressed. The Contractor shall implement, maintain and enforce these procedures at the appropriate time prior to and during all phases of the Work.
- B. The Contractor shall utilize the services of an industrial hygienist certified by the American Board of Industrial Hygienists (ABIH) to develop and implement the Emergency Response Plan.

1.3 REGULATORY REQUIREMENTS AND APPLICABLE PUBLICATIONS

- A. The site specific Emergency Response Plan shall be consistent with the requirements of:
 - 1. National Contingency Plan, Section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
 - 2. FEMA (Federal Emergency Management Agency) Emergency Operations Plan Requirements.
 - 3. OSHA (Occupational Safety and Health Administration) Standards and Regulations contained in Title 29 Code of Federal Regulations, Part 1910.120 "Hazardous Waste Operations and Emergency Response".
 - 4. OSHA (Occupational Safety and Health Administration) Standards and Regulations contained in Federal Regulations, Part 1910.146 "Permit - Required Confined Spaces".
 - 5. Environmental Protection Agency (EPA) Regulations contained in Title 40, Code of Federal Regulations, Part 112, "Spill Prevention Control and Countermeasure Plan."
 - 6. Rhode Island DEM.
- B. The Emergency Response Plan shall include, but not necessarily be limited to, the following components as required by OSHA 29 CFR 1910.120(i)(J):
 - 1. Site Description and Evaluation.
 - 2. Names of key personnel and alternates responsible for safety and health (responsibilities and chain of command).
 - 3. Emergency Equipment and First Aid Requirements.
 - 4. Emergency Response Plan and Contingency Procedures.
 - 5. Spill Prevention Control Countermeasure Plan in accordance with EPA 40 CFR 112.
- C. The site specific Emergency Response Plan shall be submitted to the Engineer within 30 days after the Notice-To-Proceed, in an acceptable format for review prior to commencement of any on-site work.
- D. Any disregard for the provision of these specifications shall be deemed just and sufficient cause for termination of the Contract without compromise or prejudice to the rights of the Contractor.

1.4 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES

- A. The Contractor shall develop an emergency response and contingency plan for on-site and off-site emergencies, as specified in OSHA 29 CFR 1910.120 (1), which shall address at a minimum:
 - 1. Pre-emergency planning
 - 2. Personnel roles, lines of authority, training and communication
 - 3. Emergency recognition and prevention
 - 4. Safe distances and places of refuge
 - 5. Site security and control
 - 6. Evacuation routes and procedures
 - 7. Decontamination
 - 8. Emergency Medical treatment and first aid
 - 9. Emergency alerting and response procedures
 - 10. Critique of response and follow-up
 - 11. Personal Protection Equipment and emergency equipment
- B. In the event of any emergency the Contractor shall without delay: take diligent action to remove or otherwise minimize the cause of the emergency; alert the Engineer; and institute whatever measures

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might be necessary to prevent any repetition of the conditions or actions leading to, or resulting in, the emergency.

- C. Should the emergency be related to the contact of unanticipated contaminated material, the Contractor shall enact emergency response activities or shall evacuate the area until the emergency is otherwise mitigated in compliance with the Emergency Response Plan.
- D. Emergency medical care services shall be prearranged at a nearby medical facility with established emergency routes.
- E. The Contractor shall establish emergency communications with health and emergency services. The names of the services and their facilities, name of contact, emergency routes and emergency communications arrangements shall be posted at the site. The posted list shall include the following minimum points:
 - 1. Ambulance service and fire department telephone numbers.
 - 2. Procedure to prompt notification of Engineer and Owner.
 - 3. Location of emergency showers/eye wash facilities.
 - 4. Location of self-contained breathing devices.
 - 5. Specific procedures for handling personnel with excessive exposure to chemicals or contaminated soil.
- F. All emergency contact names and telephone numbers shall be posted at all project phones.
- G. All designated site emergency vehicles shall be equipped with route maps providing directions to the off-site medical facility. All drivers of support vehicles shall become familiar with the emergency route and the travel time required.
- H. In the event that an accident or some other incident such as an explosion, or an exposure to toxic chemical levels occurs during the course of the project, the Engineer and Owner shall be telephoned immediately and receive a written notification within 2 hours. The report shall include the following items:
 - 1. Name, organization, telephone number, and location of the Contractor.
 - 2. Name and title of the person(s) reporting.
 - 3. Date and time of accident/incident.
 - 4. Location of accident/incident, i.e. site location, facility name.
 - 5. Brief summary of accident/incident giving pertinent details including type of operation ongoing at time of accident.
 - 6. Cause of accident/incident, if known.
 - 7. Casualties (fatalities, disabling injuries).
 - 8. Details of any existing chemical hazard or contamination.
 - 9. Estimated property damage, if applicable.
 - 10. Nature of damage, effect on contract schedule.
 - 11. Action taken by Contractor to insure safety and security.
 - 12. Other damage or injuries sustained (public or private).
- I. Contingency Planning: Procedures and Contractor personnel responsibilities for potential emergencies shall be identified in the Emergency Response Plan. Emphasis in the contingency planning section shall be placed on procedures.

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PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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SECTION 01152

APPLICATION FOR PAYMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Submit Applications for Payment to the Owner in accord with the schedule established by Conditions of the Contract and Agreement between Owner and Contractor.

1.02 RELATED REQUIREMENTS

- A. Agreement between Owner and Contractor: Lump Sum or Unit Prices.
- B. Conditions of the Contract: Progress payment, Retainages, and Final Payment.
- C. Section 01650 - Contract Closeout.

1.03 FORMAT AND DATA REQUIRED

- A. Submit itemized applications typed on forms approved by the Owner.

1.04 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

A. Application Form:

1. Fill in required information, including that for Change Orders executed prior to the date of submittal of the application.
2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
3. Execute certification with signature of a responsible officer of Contract firm.

B. Continuation Sheets:

1. Fill in total list of all scheduled component items of Work, with item number and scheduled dollar value for each item.
2. Fill in dollar value in each column for each scheduled line item when work has been performed.
3. List each Change Order executed prior to the date of submission, at the end of the continuation sheets.
 - a. List by Change Order number, and description, as for an original component item of work.

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1.05 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the Owner or the Engineer requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:
 - 1. Project
 - 2. Application number and date
 - 3. Detailed list of enclosures.
- B. Submit one copy of data and cover letter for each copy of application.

1.06 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in Application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting as specified in Section 01650 – Contract Closeout.

1.07 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to the Owner at the times stipulated in the Agreement on a monthly basis.
- B. Number: Three copies of each Application as required by the Owner.
- C. When the Owner finds Application properly completed and correct, he will process certificate for payment to Contractor.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Promptly implement the change order procedures.
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time-and-materials/force account basis.
 - 3. Provide full documentation to the Owner on request.
- B. Designate in writing the member of Contractor's organization:
 - 1. Who is authorized to accept changes in the Work.
 - 2. Who is responsible for informing others in the Contractor's employ of the authorization of changes in the Work.
- C. Owner will designate in writing the person who is authorized to execute Change Orders.

1.02 RELATED REQUIREMENTS

- A. Agreement: The amount of established unit prices.
- B. Conditions of the Contract:
 - 1. Methods of determining cost or credit to Owner resulting from changes in Work made on a time and material basis.
 - 2. Contractor's claims for additional costs.
- C. Section 01152: Applications for Payment.
- D. Section 01600: Materials and Equipment.

1.03 DEFINITIONS

- A. Change Order: See General Conditions.
- B. Work Change Directive, EJCDC Document C-940: A written order to the Contractor, signed by the Owner and Engineer, which amends the Contract Documents as described, and authorizes Contractor to proceed with a change which affects the Contract Sum or the Contract Time, for inclusion in a subsequent Change Order.

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- C. Field Order, EJCDC document C-942. A written order, instructions or interpretations, signed by the Engineer making minor changes in the Work not involving a change in the Contract Sum or Contract Time.

1.04 PRELIMINARY PROCEDURES

- A. Owner or Engineer may initiate changes by submitting a Proposal Request to Contractor. Request will include:
 - 1. Detailed description of the Change, Products, and location of the change in the Project.
 - 2. Supplementary or revised Drawings and Specifications.
 - 3. The Projected time span for making the change, and a specific statement as to whether overtime work is or is not, authorized.
 - 4. A specific period of time during which the requested price will be considered valid
 - 5. Such request is for information only, and is not an instruction to execute the changes, nor to stop work in progress.
- B. Contractor may initiate changes by submitting a written notice to Owner, containing:
 - 1. Description of proposed changes.
 - 2. Statement of the reason for making the changes.
 - 3. Statement of the effect on the Contract sum and the Contract Time.
 - 4. Statement of the effect on the work of separate Contractors.
 - 5. Documentation supporting any changes in Contract Sum or Contract Time as appropriate.

1.05 CONSTRUCTION CHANGE AUTHORIZATION

- A. In lieu of Proposal Request, the Owner may issue a construction change authorization for Contractor to proceed with a change for subsequent inclusion in a change order.
- B. Authorization will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change, and will designate the method of determining any change in Contract Time.
- C. Owner and Engineer will sign and date the Construction Change Authorization as authorization for the Contractor to proceed with the changes.
- D. Contractor may sign and date the Construction the Construction Change Authorization to indicate agreement with the terms therein.

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1.06 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Engineer to evaluate the quotation.
- B. On request provide additional data to support time and cost computations:
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Products required.
 - a. Recommend source of purchase and unit costs.
 - b. quantities required.
 - 4. Taxes, insurance, and bonds.
 - 5. Credit for work deleted from Contract, similarly documented.
 - 6. Overhead and profit.
 - 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs, and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal, plus additional information:
 - 1. Name of the Owner authorized agent who ordered the work, and the date of the order.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time record, plus summary of hours worked, and hourly rates paid.
 - 4. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing of quantities.
 - c. Subcontracts.
- D. Document requests for substitutions as specified in Section 01600.

1.07 PREPARATION OF CHANGE ORDERS

- A. Owner or Engineer will prepare each change order.

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- B. Form: Change Order: EJCDC document C-941
- C. Change Order will describe changes in the Work, both additions and deletions, with attachments of revised contract documents to define details of the change.
- D. Change order will provide an accounting of the adjustment in the Contract Sum and the Contract Time.

1.08 LUMP-SUM/FIXED PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either:
 - 1. Owner's or Engineer's Proposal Request and Contractor's responsive Proposal as mutually agreed between Owner and Contractor.
 - 2. Contractor's Proposal for a change, as recommended by the Engineer.
- B. Owner and Engineer will sign and date the Change Order as authorization for the Contractor to proceed with the changes.
- C. Contractor may sign and date the Change Order to indicate agreement with the terms therein.

1.09 UNIT PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either:
 - 1. Owner's or Engineer's definition of the scope of the required changes.
 - 2. Contractor's Proposal for a change, as recommended by the Owner or Engineer.
 - 3. Survey of completed work.
- B. The amounts of the unit prices to be:
 - 1. Those stated in the Agreement.
 - 2. Those mutually agreed upon between Owner and Contractor.
- C. When quantities of each of the items affected by the Change Order can be determined prior to start of the work:
 - 1. Owner and Engineer will sign and date the Change Order as authorized for the Contractor to proceed with the changes.
 - 2. Contractor may sign and date the change order to indicate agreement with the terms therein.
- D. When quantities of the items cannot be determined prior to start of the work:

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1. Engineer or Owner will issue a construction change authorization directing Contractor to proceed with the change on the basis of unit prices, and will cite the applicable unit price.
2. At completion of the change, Owner or Engineer will determine the cost of such work based on the unit prices and quantities used.
 - a. Contractor shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.
3. Engineer or Owner will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
4. Owner and Contractor will sign and date the Change Order to indicate their agreement with the terms therein.

1.10 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/CONSTRUCTION CHANGE AUTHORIZATION

- A. Engineer and Owner will issue a Construction Change Authorization directing Contractor to proceed with the changes.
- B. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article “Documentation of Proposals and Claims” of this Section.
- C. Engineer will determine the allowable cost of such work, as provided in General Conditions and Supplementary Conditions.
- D. Engineer or Owner will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
- E. Owner and Contractor will sign and date the Change Order to indicate their agreement therewith.

1.11 CORRELATION WITH CONTRACTOR’S SUBMITTALS

- A. Periodically revise Request for Payment forms to record each change as a separate item of Work, and to record the adjusted Contract Sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time.
 1. Revise subsidies to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

PART 2 – PRODUCTS (Not Used)
PART 3 – EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. This Section specifies the general methods and requirements of submissions applicable to the following work-related submittals: Shop Drawings, Product Data, and other information as specified herein. Detailed submittal requirements will be specified in the technical specification sections.
- B. All submittals shall be clearly identified by reference to Specification Section, Paragraph, Drawing No. or Detail as applicable. Submittals shall be clear and legible and of sufficient size for sufficient presentation of data.

1.2 SCOPE OF WORK

- A. The Contractor shall submit shop drawings on all equipment and materials, structural details, piping layouts and all miscellaneous items to be incorporated into the Work. All shop drawings shall be submitted using the transmittal form furnished by the Engineer.
- B. Such drawings shall be project-specific and shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish or shop coat, etc., depending on the subject of the drawing. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for the Contract.
- C. When so specified or if considered, in advance, by the Engineer to be acceptable, manufacturer's specifications, catalog data, descriptive matter, illustrations, etc., may be submitted in place of shop and working drawings.
- D. The Contractor shall be responsible for the prompt and timely submittal of all shop and working drawings so that there shall be no delay to the Work due to the absence of such drawings. Prior to the submittal of any shop drawings, the Contractor shall submit a schedule of proposed shop drawing transmittals. The schedule shall identify the subject matter of each transmittal, the corresponding specification section number and the proposed date of submission. During the progress of the Work the schedule shall be revised and resubmitted as necessary.
- E. The Contractor shall review shop drawings and product data, including those by subcontractors, prior to submission to determine and verify the following:
 - 1. Field measurements
 - 2. Field construction criteria
 - 3. Catalog numbers and similar data
 - 4. Conformance with the Specifications
- F. No material or equipment shall be purchased or fabricated especially for the Contract until the required shop and working drawings have been submitted as hereinabove provided and approved for conformance to the Contract requirements. All such materials and equipment and

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the work involved in their installation or incorporation into the Work shall then be as shown in and represented by said drawings.

- G. Until the necessary approvals have been made, the Contractor shall not proceed with any portion of the Work (such as the construction of foundations), the design or details of which are dependent upon the design or details of work, materials, equipment or other features for which review is required.
- H. All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from his subcontractors and returning reviewed drawings to them.
- I. If a shop drawing shows any deviation from the Contract requirements, the Contractor shall make specific mention of the deviations in the Transmittal Form furnished by the Engineer and provide a description of the deviations in a letter attached to the submittal.
- J. The review of shop and working drawings hereunder will be general only, and shall not relieve, diminish or alter in any respect the responsibilities of the Contractor under the Contract Documents and in particular, the specific responsibility of the Contractor for details of design and dimensions necessary for proper fitting and construction of the work as required by the Contract and for achieving the result and performance specified thereunder.
- K. Should the Contractor submit equipment that requires modifications to the structures, piping, electrical conduit, wires and appurtenances, layout, etc., detailed on the Drawings, he shall also submit details of the proposed modifications. If such equipment and modifications are accepted, the Contractor, at no additional cost to the Owner, shall do all work necessary to make such modifications.

1.3 SHOP DRAWINGS AND PRODUCT DATA

- A. Shop drawings as specified in individual work Sections include, but are not necessarily limited to, custom-prepared data such as fabrication and erection/installation (working) drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications, as applicable to the Work.
- B. Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns (submitted as physical units or color chips, painted coupons, etc. – photocopies of colors shall not be accepted), manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, production or quality control inspection and test reports and certifications, and mill reports as applicable to the Work.
- C. The Contractor shall provide a written letter with the shop drawing from an executive with the manufacturer certifying the product meets the American Iron and Steel requirement.

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1.4 SUBMITTAL PROCEDURES

- A. Transmit all submittals with form provided by the Engineer. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the Work or in the work of any other contractor.
- B. Sequentially number the transmittal forms. Resubmittals shall have original number with an alphabetic suffix.
- C. Identify Contract, Contractor, Subcontractor and/or Supplier; pertinent drawing sheet and detail number(s), and specification section number, as appropriate. Clearly indicate model and options being proposed and strike out all non-relevant data. Identify the building, equipment or structure to which the drawing applies.
- D. All submittals must be cross-referenced to the appropriate specification section and detail included in the contract drawings.
- E. Only drawings that have been checked and corrected by the fabricator should be submitted to the Contractor by his subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall stamp and sign them certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- F. All technical submittals or calculations shall bear the stamp and signature of a Professional Engineer registered in the State of Rhode Island.
- G. Schedule submittals in accordance with the Progress Schedule and deliver to the Engineer at job site. Coordinate submission of related items.
- H. Identify variations from Contract Documents and product which may be detrimental to successful performance of the completed Work.
- I. Revise and resubmit submittals within 14 days. Identify all changes made since previous submittal.
- J. All shop drawings submitted by subcontractors for approval shall be sent directly to the Contractor for checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
- K. The Contractor shall check all subcontractors' shop drawings to verify measurements, size of members, materials, and details to satisfy himself that they conform to the intent of the Drawings and Specifications. Shop drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission to the Engineer for approval.
- L. All details on shop drawings submitted for approval shall show clearly the relation of the various parts to the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before submitted for approval.

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- M. Project work, materials, fabrication, and installation shall conform with approved shop drawings and product data.

1.5 SUBMITTALS REQUIRED

- A. Submit a list of Shop Drawings indicating specification section number, contents, proposed numbering system, and time schedule for preparation and submission for all Shop Drawings for the Contract. This list should be provided within 30 days after the Notice to Proceed.
- B. Shop Drawings as defined in Paragraph 1.3.A: Eight copies, Product Data as defined in Paragraph 1.3.B: Eight copies, Certificates as defined in Paragraph 1.4: Eight Copies.
- C. Submittals should include:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The Project title and number
 - 3. Contractor identification.
 - 4. The names of:
 - a. Contractor
 - b. Supplier
 - c. Manufacturer
 - 5. Identification of the product, with the specification section number, page and paragraph(s).
 - 6. Field dimensions, clearly identified as such.
 - 7. Relation to adjacent or critical features of the Work or materials.
 - 8. Applicable standards, such as ASTM or Federal Specification numbers.
 - 9. Identification of deviations from Contract Documents.
 - 10. Identification of revisions on resubmittals.
 - 11. A blank space suitably sized for the Contractor and the Engineer stamps.

1.6 REVIEW OF SHOP DRAWINGS, PRODUCT DATA AND WORKING DRAWINGS

- A. The review of shop drawings and data will be for general conformance with the design concept and Contract Documents. They shall not be construed:
 - 1. as permitting any departure from the Contract requirements;
 - 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
 - 3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.
- B. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.
- C. If the shop drawings or data as submitted describe variations and show a departure from the Contract requirements which the Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings without noting an exception.

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- D. Submittals will be returned to the Contractor with a code indicating whether or not the submittal was approved and whether or not it has to be resubmitted.
- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals, the Contractor shall direct the Engineers attention, by use of revision triangles or other clear, written notation, to revisions other than the corrections requested by the Engineer on previous submissions. Such revisions shall be so noted on the letter of transmittal and on the resubmitted shop drawings. All such revisions which are not clearly identified shall be made at the risk of the Contractor. The Contractor shall make corrections as may be required by the Engineer to all work done because of this type revision that is not in accordance with the Contract Documents.
- F. Partial submittals may not be reviewed. The Engineer will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor, and will be considered "Not Approved" until resubmitted. The Engineer may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.
- G. Repetitive Review
 - 1. Shop drawings and other submittals will be reviewed no more than twice at the Owner's expense. All subsequent reviews will be performed at times convenient to the Engineer and at the Contractor's expense, based on the Engineer's then prevailing rates. The Contractor shall reimburse the Owner for all such fees invoiced to the Owner by the Engineer. Submittals are required until approved.
 - 2. Any need for more than one resubmission, or any other delay in obtaining Engineer's review of submittals, will not entitle Contractor to extension of the Contract Time.
- H. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Contractor shall give written notice thereof to the Engineer at least seven working days prior to release for manufacture.
- I. When the shop drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

1.7 DISTRIBUTION

- A. Distribute reproductions of approved shop drawings and copies of approved product data, where required, to the job site file and elsewhere as directed by the Engineer. Number of copies shall be as directed by the Engineer but shall not exceed six.

1.8 GENERAL PROCEDURES FOR SUBMITTALS

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections of the Specifications, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the Work.

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1.9 PROFESSIONAL ENGINEER (P.E.) CERTIFICATION FORM

- A. If specifically required in other related Sections, submit a P.E. Certification for each item required, in the form attached to this Section, completely filled in and stamped.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

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P.E. CERTIFICATION FORM

The undersigned hereby certifies that he/she is a professional engineer registered in the State of Rhode Island and that he/she has been employed by

_____ to design
(Name of Contractor)

(Insert P.E. Responsibilities)

in accordance with Section _____ for the

(Name of Project)

The undersigned further certifies that he/she has performed the design of the _____
_____, that said design is in conformance
(Name of Project)

with all applicable local, state and federal codes, rules, and regulations, and that his/her signature and P.E. stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the

(Insert Name of Owner)

or Owner's representative within seven days following written request therefor by the Owner.

P.E. Name

Contractor's Name

Signature

Signature

Address

Title

Address

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality Assurance and Control of Installation
- B. References
- C. Field samples
- D. Inspection and testing laboratory services
- E. Manufacturers' field services and reports

1.2 RELATED SECTIONS

- A. Section 01300 - Submittals

1.3 QUALITY ASSURANCE AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.4 REFERENCES

- A. Conform to reference standard by date of issue current on date of Contract Documents.
- B. Obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

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- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention of inference otherwise in any reference document.

1.5 FIELD SAMPLES

- A. Install field samples at the site for review, as required by individual specification sections.
- B. Acceptable samples represent a quality level for the work.
- C. Where field sample is specified in individual sections to be removed, clear area after field sample has been accepted by Engineer.

1.6 INSPECTION AND TESTING LABORATORY SERVICES

- A. The Contractor shall submit names of all the firms to be utilized for testing and analytical services for approval by the Engineer. No results or observations will be accepted unless performed by an approved testing firm.
- B. The testing firm will perform inspections, tests and other services specified in individual specification sections and as required by the Engineer.
- C. Reports will be submitted by the testing firm to the Engineer, in duplicate, indicating observations and results of tests, and compliance or non-compliance with Contract Documents.
- D. Cooperate with testing firm, furnish samples of materials, design mix, equipment, tools, storage, access, and assistance as requested.
 - 1. Notify Engineer and testing firm seven (7) days prior to expected time for operations requiring services.
 - 2. All costs associated with testing will be paid by the Contractor.
- E. Re-testing required due to non-conformance to specified requirements shall be performed by the same testing firm per instructions by the Engineer. Payment for re-testing will be paid by the Contractor with no additional cost to the Owner.

1.7 MANUFACTURER'S FIELD SERVICES AND REPORTS

- A. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer used shall be subject to approval of Engineer.
- B. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balance of equipment as applicable, and to initiate instructions when necessary.
- C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

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D. Submit report in duplicate to Engineer for review, within 30 days of observation.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE

- A. This Section specifies the general requirements for traffic regulation, minimum performance criteria for maintenance and protection of traffic, road closures, and coordination with other parties for the duration of the Work.
- B. The Contractor shall be responsible for the maintenance and protection of traffic on public roadways impacted by its operations for the duration of the Work. The Contractor shall bear all costs for designing, furnishing, and maintaining traffic control facilities for the duration of the work.
- C. The Contractor shall obtain permission from the Rhode Island Department of Transportation (RIDOT) and/or the City of East Providence to temporarily close lanes and for other temporary traffic control measures required in performing the Work. Variations to the Traffic Plans must be approved by the City of East Providence and/or RIDOT requiring work under this Contract.
- D. The Contractor shall provide a sufficient number of travel lanes and pedestrian passageways to move all traffic ordinarily using the project area. **If at all possible, at least one travel lane shall remain open.**
- E. The Contractor shall coordinate its traffic control facilities with the schedule restrictions and construction operations of other parties as specified herein and specified by Section 01010 and Section 01100.
- F. Related work described elsewhere:
 - a. General Description of Work, Section 01010

1.2 REFERENCE STANDARDS

- A. Federal Highway Administration, Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition.
- B. Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction.

PART 2 PRODUCTS

2.1 TRAFFIC DEVICES AND MARKINGS

- A. Traffic devices and markings shall conform to Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction Divisions I & III and the FHWA Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition.

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2.2 TRAFFIC CONTROL FACILITIES

- A. Temporary traffic control equipment shall be furnished by the Contractor at the start of construction, adjusted as needed throughout the course of the Work and removed or restored at the completion of the Work and shall include, but shall not be limited to traffic barriers, channelizing devices, signage, re-stripping, work zone warnings and flashing arrow boards.
- B. The Contractor shall restore all public highways and traffic control devices to a condition equal to, or better than that that existed prior to the Work.

PART 3 EXECUTION

3.1 MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL DEVICES

- A. The Contractor shall not close any State or City streets or rights-of-way without prior permission from the Rhode Island Department of Transportation and/or the City of East Providence. The Contractor shall maintain existing traffic flows to all areas adjacent to the work areas. The Contractor shall not close or obstruct any portion of a street, road, or private way that shall be rendered unsafe by the Contractor's operations. Instead, the Contractor shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.
- B. Streets, roads, private ways, and walks not closed, shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for adequacy and safety of provisions made therefore.
- C. The Contractor shall, as least seven (7) days in advance, notify the City and Engineer in writing if the closure of a street or road is necessary and at least two (2) days in advance, notify the Police, Fire, and Public Works Departments in writing, with a copy to the Engineer. The Contractor shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.
- D. Throughout the duration of the Work, the Contractor shall maintain all temporary and permanent traffic control facilities, signs, barricades and other protective devices in a sturdy, clean, legible condition and at the locations designated by the MPOT Plan. The Contractor shall cover or remove signs not in use. Maintenance of devices will include repairing; adjusting; washing; repainting, and the re-application of reflective sheeting.
- E. Care shall be exercised such that weeds, shrubbery, and construction materials, equipment, and spoils do not obscure the message of any sign, light, or barricade.
- F. No defective and/or damaged devices shall be installed. Devices showing defects or damage shall be either repaired or removed and replaced at no additional cost to the Owner.
- G. Any and all costs, including Owner and Engineers costs, of fines levied for violation of any permit requirements which are a direct result of Contractor's performance or non-

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compliance with issues permits or applicable regulations shall be paid by Contractor at no cost to the Owner.

- H. Travel lanes and pedestrian passageways shall be drained and kept neat and reasonably smooth and in suitable condition at all times in order to provide minimum interference to vehicular and pedestrian traffic consistent with the proper prosecution of the work.
- I. Suitable ingress and egress shall be provided at all times where required, for all intersecting roads and driveways, and for all abutting properties having legal access.
- J. The Contractor shall keep all signs in proper position, clean and legible at all times. Care shall be taken so that weeds, shrubbery, construction materials or equipment, and spoil, are not allowed to obscure any sign, light or barricade. Signs that do not apply to existing conditions shall be removed or adjusted so that the legend is not visible to approaching traffic.
- K. Should the Contractor fail to perform any of the work required under this Section, the Owner may perform or arrange for others to perform such work. In such cases, the Owner will deduct from money due or to become due to the Contractor all expenses connected therewith which are found to be greater than the cost to the Owner had the Contractor performed the specified work.
- L. At no time shall the Contractor leave equipment or materials in the travel lanes or pedestrian walkways overnight without permission from the Engineer and without proper signs and lighted barricades.

3.2 MAINTENANCE AND PROTECTION OF TRAFFIC (MPOT) PLAN

- A. The MPOT is to be implemented in accordance with the Traffic Management Plans.
- B. The MPOT plan shall be implemented so that the duration and physical extent of any temporary lane closure is minimized. The MPOT and the Contractor's use of laydown shall also be designed to minimize the need for Police details.

3.3 PARKING

- A. The Contractor shall be responsible for managing employee parking throughout the duration of the Contract. The Contractor shall secure and establish parking at work site in a legal and safe manner that does not adversely affect traffic flows on public roads.
- B. The Contractor is responsible for all cost associated with no parking postings.

3.4 ROAD MAINTENANCE AND SITE ACCESS

- A. Contractor shall establish entrances and exits to the site that conform to the Maintenance of Traffic Plans and are approved by the Engineer.
- B. Contractor shall install and maintain wheel wash facilities at all project work areas.

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- C. The Contractor shall retain the services of a street sweeper to remove all muck and dust tracked onto Public roadways due to its operations.

3.5 SEQUENCE OF CONSTRUCTION

- A. In accordance with other specification sections.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. When, in the opinion of the Owner or the Engineer, public safety or convenience requires the services of police, the Engineer may direct the Contractor to provide manpower to direct traffic within the location of work under this Contract.
- B. When so directed, the Contractor shall make all arrangements for obtaining the necessary manpower. All costs for policing will be paid by the Owner. The Contractor shall pay all incidental costs related to the coordination for these services.
- C. The intent is to insure public safety by police direction of traffic. Police are not to serve as watchmen to protect the Contractor's equipment and materials, or to warn pedestrians of such hazards as open trenches.
- D. Nothing contained herein shall be construed as relieving the Contractor of any of his responsibilities for protection of persons and property under the terms of the Contract.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Closeout procedures.
 - 2. Final cleaning.
 - 3. Adjusting.
 - 4. Project as-built documents
 - 5. Spare parts and maintenance materials

- B. Contract closeout shall verify that construction work is complete and in conformance with the plans and specifications, and shall permit the formal contract documentation to be completed.

1.2 DEFINITION

- A. Contract Closeout is a planned series of activities that shall verify the completed construction and installation work for the Contract.

- B. The Contract Closeout will be comprised of the following components:
 - 1. Checkout and Certifications
 - 2. Start-up
 - 3. Substantial Completion
 - 4. Final Completion
 - 5. Guarantee Period

1.3 CHECKOUT AND CERTIFICATIONS:

- A. Prior to checkout and certification the following tasks must be completed:
 - 1. The construction must be complete. For this purpose, completion of construction shall be defined in accordance with the following guidelines:
 - a. The Contractor has completed the construction and erection of the Work in conformance to the Contract drawings and specifications.
 - b. The Contractor has installed and adjusted operating products, equipment, systems, or facilities, as applicable, as specified by the erection, installation, or operations and maintenance instructions of the manufacturer.

 - 2. All shop drawings must have final approval.
 - 3. All shop tests must be complete and approved test results submitted to the Owner.

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1.4 START-UP

- A. Prior to start-up the following tasks must be complete:
 - 1. All checkout and certifications must be satisfactorily completed,
 - 2. All operations and maintenance manuals must be approved,
 - 3. All preliminary training by the manufacturer's representatives must be completed,
 - 4. An approved start-up procedure must be in place.

1.5 SUBSTANTIAL COMPLETION:

- A. As soon as practical after the initial start-up, the Contractor shall arrange for the manufacturers' representatives to perform all field tests and complete all additional training.
- B. All Contract requirements are coordinated into a fully operational system. All individual units of equipment and treatment are fully operative and performing at specified efficiencies. Where efficiencies are not specified, performance must meet acceptable standards for the particular unit.
 - 1. All field tests have been completed and satisfactory reports forwarded to the Owner.
 - 2. All final training has been completed by the manufacturers' representatives.
 - 3. All spare parts and lubricants have been satisfactorily delivered to the Owner.

1.6 FINAL COMPLETION

- A. Prior to final completion, the following tasks must be completed:
 - 1. All items in the punch list must be completed.
 - 2. The Contract closeout documentation must be submitted to and approved by the Owner.
 - 3. A response plan to address warranty issue must be submitted to and approved by the Owner.

1.7 GUARANTEE PERIOD

- A. During the guarantee period as defined in General Conditions, the Contractor shall correct all deficiencies.
- B. Corrective work will be identified by the Owner. The Contractor will be notified of the item(s) requiring corrective work.
- C. The Contractor shall begin work on all corrective work within 72 hours of being notified of the deficiency by the Owner and will then work continuously until the deficiency is corrected. Upon completion of the corrective work, the contractor shall submit a letter report to the Owner detailing a description of the deficiency and the corrective action that was taken. If the Contractor does not begin work within 72 hours of being notified, or does not then work continuously to correct the work, the Owner may have the work completed by others and have all costs deducted from money that would otherwise be due to the Contractor.
- D. The Contractor will coordinate all corrective work with the Owner.

1.8 RECORD DOCUMENTS

- A. Throughout the Contract Time, maintain on site, one set of the following Record Documents. Actual revisions to the Work shall be recorded in these documents:
1. Contract Drawings.
 2. Specifications.
 3. Addenda
 4. Change Orders and other Modifications to the Contract Documents.
 5. Reviewed shop drawings, product data, and samples, including all sketches, drawings, diagrams, details and tables prepared or used by Contractor to construct or illustrate any portion of the Work.
 6. Written interpretations and clarifications.
 7. Field Orders.
 8. Field test reports properly verified.
 9. Photographs.
- B. Store As-Built Documents separate from documents used for construction and protect from fire, vandalism and theft.
- C. Record information concurrent with construction progress. Establish survey control onsite and conduct site survey of existing conditions and as-built conditions. Final survey data will be stamped by a Land Surveyor registered in the State of Rhode Island.
- D. Record Documents and Shop Drawings: Upon commencement of work and request by the Contractor, one set of reproducible Contract Drawings will be provided to the Contractor for use and reference. If any Drawings are reissued during construction due to approved changes in the Work, a revised copy of affected drawings in the same reproducible form will also be provided to the Contractor. If Contractor requests an electronic CAD version of the Drawings, a copy of CAD files in version 2020 AutoCAD software format will be provided for the Contractor's convenience in establishing a CAD system. CAD files will be provided as a courtesy only and are not part of the contract documents nor are they guaranteed or warranted for accuracy or completeness in any manner. The Contractor shall be fully responsible for any costs associated with use of the CAD files. Contractor solely assumes all risk in using the provided CAD files. If any Drawings are reissued during construction by the Owner due to approved changes in the Work, an updated CAD file will also be provided to the Contractor in AutoCAD format to which all of the aforementioned provisions will also apply. For record documentation, the Contractor is required to legibly mark the reproducible Contract Drawings, and all shop drawings and construction drawings to record actual construction including:
1. Measured depths of excavations in relation to finish floor/invert datum.
 2. Measured horizontal and vertical locations of excavation limits, underground tunnels, pipelines, utilities, and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract Drawings.
 6. Make the complete set of Record Documents available to the Construction Manager for review prior to each Application for Payment. For each review, highlight changes made since the previous review by boldly encircling the change and by describing the change and change number in the revision block at the bottom of the Drawings. Updating the Record

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Documents by the Contractor is a condition precedent to acceptance of the Application for Payment by the Construction Manager.

7. Prior to submittal of the Contractor's Final Application for Payment, submit two prints of all marked documents. The Design Engineer, upon completion of all work or at other time as agreed to with the Construction Manager and Commission, will record information of the permanent project as-built document based upon documentation furnished by the Contractor, Construction Manager, and Commission.
 8. Point to point wiring diagrams and construction sketches which the electrical contractors have developed to detail project wiring.
 9. Lighting circuit wiring which was field designed and not on Contract Drawings.
 10. Layout shop drawings for field run construction such as piping, conduit, etc.
 11. Field changes to manufacturer's shop drawings.
 12. Referencing Request For Information (RFI) of field change notice numbers on as-built drawings.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
1. Manufacturer's name, address and telephone number and product model and serial number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and Modifications.
- F. Submit Record Documents to Owner with claim for final Application or Payment.

1.9 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner's inspection.
- B. Accompany Owner in inspection to verify conformance with the Contract Documents. Prepare a punch list of work items that have been determined by inspection to not conform with Contract Documents. Punch list items will include work items that are missing, incomplete, damages, not the correct item, or improperly installed or constructed. The Contractor shall correct the punch list items by re-work, modification, or replacement, as appropriate, until the items do conform to the Contract Documents. The punch list shall be produced and maintained by the Contractor, with copies to the Owner.
- C. Provide submittals to Owner that are required by governing or other authorities.
- D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. The Contractor shall submit the following documents with or prior to Final Application for Payment: Contract Completion and Acceptance Certificate, Consent of Surety to Final Payment, Release and Waiver of Liens and Claims, Affidavit of Payment of Debts and Claims, and remaining releases, waivers, guarantees, and all data required by the Contract Documents.

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1.10 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion:
1. Clean the site, including landscape development areas of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
 2. Remove waste and surplus materials, rubbish, fencing equipment, temporary utilities and construction facilities from the site, unless otherwise directed by the Owner.
 3. Grade site to provide drainage flow to an approved catch basin or drainage system.

1.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01710

CLEANING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Execute cleaning during progress of construction and at completion of the project as required by General Conditions.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract.
- B. Each Specification Section: Cleaning of specific products or work.
- C. Section 01650: Contract Closeout.

1.03 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations and antipollution laws.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

PART 3 – EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the work areas, the site and adjacent properties free from accumulations of waste materials, dust, rubbish, windblown debris, and any other nuisance debris resulting from construction operations.
- B. Provide on-site waste container for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site daily and dispose of at legal disposal areas at offsite locations.

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- D. Provide daily sweeping of the road surface with adequate 'street' brooms. The entire construction site is to be swept free of gravel, dust and dirt and returned to the trench area for the duration of the construction and until the permanent patch is installed. Calcium chloride is to be applied daily as conditions warrant or as directed by the Engineer. Costs associated with daily sweeping of the road surface and application of calcium chloride shall be included in the appropriate bid item(s); no separate payment shall be made.
- E. At the discretion and direction of the Engineer, the Contractor shall employ the use of a "full size" mechanical type street sweeper at a minimum of one time during the work week and for a full work day (7 am to 5 pm). The street sweeper shall be used on all disturbed roadways and in the vicinity of the Contractor's staging area(s) and yard(s). The Engineer will have the authority to direct the Contractor to employ the street sweeper in other areas in certain situations. The sweeper shall be a self propelled and driveable three or four wheel "Pelican" municipal type that employs the use of a built-in water dust control system. The Contractor shall inform the Engineer of the location and time that the sweeper will be in use before any street sweeping work is conducted. It shall be the City of East Providence's discretion whether or not City water will be used for street sweeping. If the City grants City water use for street sweeping, the Contractor is required to implement a testable back flow prevention device between the City water source (i.e. hydrant) and the mechanical street sweeper. There will be no additional charge to the Contractor for water used for dust control. The Contractor is responsible for all hauling and proper disposal of debris collected by all sweeping operations under this contract. This sweeping operation shall be conducted to the satisfaction and approval of the Engineer. Please note that this item does **not** take the place of standard daily site cleaning.
- F. Street sweeping using mechanical sweeper will be measured for payment per hour and paid for under the item "MECAHNICAL FULL SIZE STREET SWEEPER" on the Bid Form. All other cleaning is incidental to the work and shall not be paid for separately.

3.02 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- C. Prior to final completion, the Owner, Engineer., and Contractor shall conduct an inspection of all effected work areas for final cleaning approval.

END OF SECTION

DIVISION 2

SITE WORK



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SECTION 02015

TEST PITS

PART 1 GENERAL

1.1 SCOPE OF WORK

The work under this section includes furnishing all labor, equipment appliances, materials, and incidentals, and performing all operations in connection with excavating and backfilling, by machine and/or by hand, exploratory test pits at locations indicated or directed. The purpose of the test pits shall be for locating water mains, groundwater, storm drains, sewerage pipes, and other utilities, rocks structure foundations, or other obstacles, and for examining soil.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION

3.1 GENERAL

- A. Test pit excavations shall have neat, clean-cut and vertical sides. Upon completion of the test pit excavation, the Owner shall be notified so that any necessary location measurements can be made. Excavation and backfilling shall conform to the applicable requirements of the Section 02211 “Earth Trench Excavation and Backfill”. Hand digging shall be employed when required by the owner.
- B. It shall be agreed that the Contractor entered into this contract with full knowledge that in any work involving excavation, operation in public highways, or adjacent to other development, some unforeseen utility relocations, obstacle, difficulties, unforeseen soil or groundwater conditions, etc., may be encountered; and that the contractor has included in his bid and contract obligations the assumptions of the risks and costs to which such obstacles, etc. may subject him.

3.2 METHOD OF MEASUREMENT

Excavation for test pits will be measured for payment by the unit “Each”.

3.3 BASIS FOR PAYMENT

Payment for “TEST PITS”, measured as provided above, will be made at the unit price bid as listed under that item in the Bid, and such price shall include the excavation, backfill and compaction of all materials, all labor, equipment and incidentals, and the restoration of property. No payment will be made for test pits used as excavation trenches for the installation of new water transmission mains, service connections, valves and hydrant assemblies and appurtenant work. Crushed processed gravel shall be paid for under a separate item. Temporary and permanent pavement replacement shall be paid for at the unit price as listed in the bid.

END OF SECTION

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SECTION 02211

EARTH TRENCH EXCAVATION AND BACKFILL

PART 1 GENERAL

1.1 WORK INCLUDED

- A. The work under this section includes the furnishing of all labor, equipment and materials, and performing all operations in connection with excavating (rock/ledge less than 1 c.y. in volume and overburden soils), backfilling, compacting, grading and all other incidental work required to perform the project as described in the Contract Documents.
- B. The work also includes providing approved earth borrow, sand, bank run gravel, and gravel bedding, when directed for backfills and refills of excavations; excavation and disposal at approved locations of pavements, surplus and unsuitable materials; installation of underground water main piping; protection of new work; compaction of trench bottom, backfills and subgrades; excavation and backfilling of all other appurtenant work as required or as directed.

1.2 REFERENCES

- A. Within this section, the Rhode Island Department of Transportation "Standard Specifications for Road and Bridge Construction", latest edition, shall be referred to as the State Standards. All references to measurement and payment are deleted.
- B. American Society for Testing and Materials (ASTM) publications:
 - C136-76 Sieve or Screen Analysis of Fine and Coarse Aggregates
 - D422-63 Particle Size Analysis of Soils (R 1972)
 - D1140-54 Amount of Material in Soils Finer than No. 200 (74 micrometer) (R 1971) sieve
 - D1556-82 Density of Soil in Place by the Sand Cone Method
 - D1557-78 Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54 kg) Rammer and 18-in (457 mm) Drop
 - D2167-66 Density of Soil in Place by the Rubber Balloon Method (R 1977)
 - D2419-74 Test for Sand Equivalent Value of Soils and Fine Aggregates (1979)
 - D2487-83 Classification of Soils for Engineering Purposes
 - D2922-81 Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
 - D3017-78 Moisture Content of Soil and Soil-Aggregate in Place by Nuclear

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Methods (Shallow Depth)

1.3 RELATED WORK SPECIFIED ELSEWHERE

- Section 02015 – Test Pits
- Section 02221 – Rock Removal
- Section 02377 – Excavation Support Systems
- Section 02401 – Dewatering, Control, and Diversion of Water
- Section 02486 – Restoration of Lawns and Rights-of-Way Areas
- Section 02513 – Pavement Restoration
- Section 02640 – Valves, Tapping Sleeves, and Appurtenances
- Section 02644 – Fire Hydrants
- Section 02650 – Water Service Lines
- Section 02713 – Installation of Water Pipeline Systems

1.4 LAWS AND REGULATIONS

- A. All work under this Contract shall be accomplished in accordance with regulations of local, county, State, and Federal agencies, and national or utility company standards as they apply.

1.5 SUBSURFACE DATA

- A. No subsurface investigations have been made by the Owner. Upon notification to the Owner, the Bidders will be allowed the right to make any subsurface explorations they deem necessary to satisfy themselves of the existing ground conditions. Any subsurface investigation made by the Bidder shall be at their expense.

1.6 QUALITY ASSURANCE

- A. Qualification of Workmen

Provide at least one person who shall be thoroughly trained and experienced in the skills required, who shall be completely familiar with the design and application of work described for this section, and who shall be present at all times during progress of the work of this section, and who shall direct all work performed under this section.

1.7 JOB CONDITIONS

- A. All excavated earth materials approved by the Owner as suitable for reuse shall be used for backfilling excavations and for rough grading as necessary for the completion of the contract work. All surplus or unsuitable materials, rock from rock excavation, and boulders and pavement materials, shall be removed and legally disposed of off-site by the Contractor at no additional expense to the Owner.

- B. Unsuitable Materials:

- 1. Unsuitable materials are herein defined as organic material, peat, organic silt or combinations thereof; and any existing materials of such gradation that more than 40%

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of its total weight passes the No. 200 sieve in a standard gradation analysis (ASTM D422). All materials of whatever description which are too loose or saturated for use as backfill to provide satisfactory bearing shall also be considered as unsuitable. Tests required to evaluate such conditions shall be made at the Contractor's expense. If unsuitable material is encountered at the depths indicated on the Drawings for bottom limit of excavation, the Contractor shall immediately notify the Owner and shall not proceed further until instructions are given.

2. The Contractor shall satisfactorily excavate and remove all unsuitable material to lines, grades, and limits indicated on the Drawings or as directed in writing by the Owner, and shall legally dispose of such material off-site. All resulting below grade excavations shall be refilled with compacted common earth borrow.
3. Material which becomes unsuitable as a result of the Contractor's lack of dewatering or improper dewatering shall be removed by the Contractor and replaced with crushed processed gravel, as directed and approved by the Owner, at no additional expense to the Owner.

C. Disposition of Existing Utilities:

1. Call Dig Safe seventy-two (72) hours before commencing with any excavation, in order that all pertinent utility companies become informed of such work.
2. If active utilities existing on the site are encountered they shall be carefully protected from damage. When an active utility line is exposed during construction, its location and elevation shall be documented and both the Engineer and the utility owner notified in writing.
3. Active utility lines damaged in the course of construction operations shall be repaired or replaced as determined by the Engineer, without additional cost to the Owner.

D. Dewatering:

1. The required excavations may be to some extent below existing groundwater levels. All excavations shall be kept dry at all times, and all construction work shall be performed in the dry, unless otherwise authorized or directed by the Owner. The providing and maintaining of facilities from flooding is included under Section 02401 "DEWATERING, CONTROL, AND DIVERSION OF WATER" of these Specifications.

1.8 SUBMITTALS

- A. Provide submittals in accordance with Section 01300 – Submittals.
- B. Certified Laboratory Test Reports: Before delivery of materials, five (5) certified copies of the reports of all tests required herein, under materials and in referenced publications, shall be submitted to the Owner. These reports shall be submitted a minimum of five (5) working days prior to the intended use of the materials on-site. The testing shall have been performed in an independent laboratory approved by the Owner. Additional testing shall be submitted when the source of materials is changed.

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PART 2 PRODUCTS

2.1 MATERIALS

- A. Common borrow shall be a well-graded granular material of which at least 80 percent by weight shall be retained on the No. 200 sieve. It shall be free from peat, organic matter and debris, and shall not contain any stones or clay lumps in excess of 8 inches in their greatest dimensions. The Contractor shall submit a sample of the material he proposes to use as borrow backfill, together with results from an approved laboratory showing grain size analysis and proctor density relationships for those soils. Any materials of whatever description, which are too uniformly graded or saturated to be readily compactable, shall be not utilized for earth borrow.
- B. Structural backfill shall be composed of hard, durable stone and coarse to fine sand, free of peat, vegetable or organic matter, clay lumps and other debris. The gravel refill shall be readily compactable and shall not contain any stones that are in excess of two-thirds of the depth of the layer to be compacted. Structural backfill shall conform to the following gradation requirements:

U.S. Standard Sieve Size	Percent Passing by Weight
1"	55 - 100
No. 4	20 - 95
No. 40	0 - 50
No. 200	0 - 10

- C. Gravel for use as pipe bedding shall conform to the requirements for State Standard "Gravel Borrow" with the exception that 100 percent shall pass the 1-1/2 inch mesh sieve or shall be approved 1-inch commercial grade crushed stone or gravel. Filter stone shall conform to all requirements of the State Standards for filter stone. Filter stone shall conform to the following gradation limits:

U.S. Standard Sieve Size	Percent Passing by Weight
1"	100
3/4"	70 - 85
1/2"	10 - 40
3/8"	0 - 20
No. 4	0 - 5

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- D. Crushed stone for pipe bedding shall consist of clean, hard, durable fragments of crushed rock and shall be free from clay, organic matter, or other objectionable material. Crushed stone shall conform to the following gradation limits:

U.S. Standard Sieve Size	Percent Passing by Weight
1"	100
3/4"	90 - 100
1/2"	20 - 50
3/8"	0 - 20
No. 4	0 - 5

- E. Sand shall consist of clean, hard, durable particles not frozen, and shall conform to the following gradation requirements:

U.S. Standard Sieve Size	Percent Passing by Weight
3/8"	100
No. 4	80 - 100
No. 10	30 - 50
No. 40	5 - 25
No. 100	0 - 5

- F. Except as otherwise specified, all fills, refills, and backfills for paved surfaces, utilities, and appurtenances shall be made with gravel borrow or structural fill as hereinafter specified.

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- G. Gravel borrow sub-base for gravel roadways, utilities and pipe bedding, shall be composed of hard, durable stone and coarse to fine sand, not frozen and free from loam and undesirable organic matter, containing no stone having any dimension greater than two-thirds of the depth of layer to be compacted. Gravel borrow or bank-run gravel shall conform to the following gradation requirements:

U.S. Standard Sieve Size	Percent Passing by Weight
3"	60 – 100
½"	50-85
3/8"	45-80
No. 4	40-75
No. 40	0 - 45
No. 200	0 - 10

- H. All refills and fills not supporting or influencing structures, pavement or utilities, shall be made with approved granular material containing sound stone, gravel and sand, free of frozen materials, silt, clay, vegetation, roots, peat, muck or other unsuitable matter.
- I. Cost for sampling, transporting and making all laboratory tests required to obtain characteristics of materials proposed to be used for fills, refills, backfills, including gradation tests and determination of moisture density relationships, will be borne by the Contractor.

PART 3 EXECUTION

3.1 GENERAL

- A. All topsoil and unsuitable or excess materials shall be stripped to their entire depths from areas of new construction or regrading. Materials suitable for reuse shall be stored in approved locations that will not interfere with construction operations. Topsoil shall be stripped and stored before any underlying excavation begins. Stripped topsoil to be reused shall be free from clay, large stones and debris. Excess topsoil and other materials shall remain the property of the Owner and shall be stockpiled by the Contractor at designated location(s) within the Town limits as directed by the Owner. All unsuitable materials shall be excavated and legally disposed of off-site by the Contractor.
- B. Earth excavation shall include the excavation, removal and satisfactory disposal of all materials of whatever nature encountered from within the limits indicated or specified or as directed in writing. It shall include, but not be limited to, earth materials such as peats, organic or inorganic silts, clay, sand and gravel, cobbles and boulders less than 1 cubic yard in volume, soft or disintegrated rock which, in the opinion of the Owner, can be removed without blasting or drilling, pavement, and all obstructions not specifically included in another section.
- C. Slope sides of excavations to comply with local codes and ordinances having jurisdiction.

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Shore and brace, if required, to ensure the safety of workers and the general public. Dewater as needed for construction. Barricade and/or plate all open excavations when not actively working in them.

- D. All excavation operations shall be accomplished to prevent the undermining or disturbance of existing pipelines, utilities and structures, of any completed construction.
- E. All excavations shall be backfilled as specified.

3.2 EXCAVATION FOR STRUCTURES

- A. Excavation under slabs shall be to the exact elevations required except as otherwise indicated on the Drawings.
- B. Additional Excavation - When excavation has reached required subgrade elevations, notify Engineer who will make an inspection of conditions.
 - 1. If the "assumed" bearing materials, as shown on the Drawings and Specifications, are not encountered at the subgrade elevations indicated, carry excavations deeper and replace excavated material, as directed by the Engineer.
 - 2. Removal of unsuitable material and its replacement as directed by the Engineer will be paid on the basis of contract conditions relative to changes in work.
- C. Excavation for Structures - Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 feet, and extend a sufficient distance from footings to permit placing and removal of concrete formwork, other construction and for inspection.
 - 1. In excavating for footings, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive other work.
- D. Frost Protection:
 - 1. Make no excavations to full depth indicated when freezing temperature may be expected. Protect the bottom so excavated areas remain free from frost if progress is delayed. Protect the subgrade of in-place footings from frost. Should protection fail, remove frozen materials and replace with concrete or gravel fill as directed, at no cost to the Owner.

3.3 EXCAVATION FOR UTILITIES

- A. Excavation shall be made to the alignment, invert and finish grades shown on the Drawings, or as modified by the Owner. Excavations shall be accurately graded to allow satisfactory construction of the contract work.
- B. The bottoms of excavations shall be thoroughly compacted and in approved condition prior to placing gravel bedding. Gravel bedding shall be placed in layers not exceeding 6 inches in loose depth and each layer shall be compacted by at least two (2) passes of an approved plate-

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type vibratory compactor. The moisture content of the gravel shall be adjusted by moistening or drying so that proper compaction will be obtained. Where crushed stone bedding is used for pipe bedding, the Owner may waive the compaction requirement.

- C. Bell holes and depressions for joints shall be dug after the trench bottom has been graded and compacted, and after gravel bedding, if required, has been placed and compacted. The bottom quadrant of each pipe barrel shall have complete and uniform bearing for the full length of each pipe. The trench bottom shall again be thoroughly compacted just prior to final shaping for bedding and installation of pipe.
- D. Excavation operations adjacent to and below existing structures and utilities shall be done manually and in a manner to prevent disturbance of, or damage to, the existing structures and utilities.
- E. The Contractor shall be responsible for keeping all excavated and construction material a safe distance back from the edge of excavations to avoid overloading the sides of excavations and to prevent slides or cave-ins.
- F. If an excavation is made deeper or wider than that shown on the Drawings, there will be no extra payment for such unauthorized excavation beyond the specified payment limits, unless directed in writing by the Owner. Backfill of all unauthorized excavations shall be made by the Contractor with either selected materials from excavations or from borrow, as directed by the Owner, and at no expense to the Owner. All additional work and materials resulting from unauthorized excavations, including but not limited to additional rock removal, dewatering, pavement, loam and seed or other work required by the Owner, shall be furnished and installed at no additional expense to the Owner.
- G. If a pipe is to be placed in fill, or the top of the pipe is within 2 feet of existing ground surface, the fill shall first be placed as specified herein to a height of not less than 2 feet over the top of the pipe and for a width of 5 feet beyond each side of the pipeline. Following placement of such fill, excavation and backfill shall proceed as specified herein.
- H. Where the Contractor elects to use shoring installed as the excavation progresses, to maintain or otherwise protect the sides of the excavation from cave-ins or loss of ground, shoring shall be adequately braced to prevent cave-ins or loss of ground, and portions of the shoring or bracing shall be left in place as directed by the Owner to maintain stability as backfilling progresses.
- I. No excessive trench widths will be allowed to avoid the use of sheeting or shoring and bracing. The trench width for unbraced excavations at, and below, a level 1-foot above the top of the pipe, shall not exceed the maximum trench width indicated on the Drawings for the size pipe being installed.
- J. Where existing subsurface utilities or other facilities adjacent to or crossing through the excavation require temporary support or protection, such temporary support or protection shall be satisfactorily provided by the Contractor at no additional expense to the Owner. All necessary measures shall be taken by the Contractor to prevent lateral movement or settlement of existing facilities or of work in progress.

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- K. Grading shall be done as necessary to prevent surface water from flowing into excavations and, any water accumulating therein shall be removed by pumping or other approved method. The pipelines shall not, at any time, be used for trench drainage.
- L. Excavations shall be adequately sheeted, shored, and braced, as necessary, to permit proper excavation of the work and to protect all slopes and earth banks. Sheeting shall be installed as required to prevent cave-ins or settlement and to protect workmen, adjacent structures and utilities. Shoring and sheeting may be removed as the backfilling progresses, but only when banks are safe against caving. The Owner may direct that sheeting, shoring, and bracing be left in place at any time during the progress of the work, and direct that timber be used for sheeting and bracing and authorized to be left in place and cut off at a specified elevation. No separate payment will be made for sheeting, unless ordered by the Owner to be left-in-place, in which case payment will be as specified under Section 02377 "EXCAVATION SUPPORT SYSTEMS".

In removing sheeting or bracing, care shall be taken to prevent voids. Voids, if formed, shall immediately be filled with sand. The installation of sheeting, shoring, and bracing shall comply with the safety precautions as outlined in the Associated General Contractors of America, Manual of Accident Prevention in Construction, and all local, county, State, and Federal regulations. Dewatering shall be performed, as required, for all excavations below groundwater level.

3.4 ROCK EXCAVATION (over 1 c.y.)

- A. Refer to Specification Section 02221 – Rock Removal.

3.5 DEWATERING

- A. Excavations may, to some extent, be below existing groundwater levels, causing the site to be subject to surface water and groundwater flow during the course of construction. Refer to Section 02401 "DEWATERING, CONTROL, AND DIVERSION OF WATER" of these Specifications for additional requirements.
- B. The Contractor shall control and pitch the grading to prevent water from running into the excavated areas of the structures or to prevent damage to other structures or work already accomplished.
- C. The Contractor shall furnish all pumping and other dewatering equipment necessary to keep excavated areas dry during construction. The groundwater shall be pumped adequately so that it is maintained a minimum of two (2) feet below the bottom of the excavation at all times. Filters shall be used on the dewatering devices to prevent the removal of fines from the soil. Water shall not be directed onto adjacent property.
- D. Operation and Performance: Operate the dewatering system continuously, 24 hours per day, 7 days per week, until such time as construction work below existing water levels is complete, unless directed otherwise. Measure and record the performance of the dewatering system at the same time each day by use of suitable observation wells or piezometers installed in

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conjunction with the dewatering system. After placement of initial work, the water level may be allowed to rise, but at no time it to be higher than one (1) foot below the prevailing level of excavation or backfill.

3.6 BACKFILLING OF UTILITY TRENCHES

- A. Unless directed otherwise by Owner, excavations shall not be backfilled until all work has been satisfactorily performed, and not until the work as installed conforms to all requirements specified in these sections. Each layer of backfill material shall be moistened as necessary and compacted in such a manner as to permit the proper and desired compaction of the filled excavation, so that paving of excavated areas can proceed immediately after backfilling is completed.
- B. All excavations shall be backfilled as soon as practicable with approved excavated material. If suitable material as approved by the Owner is not available from the excavations in the quantities required for proper backfilling of excavations, the Contractor shall provide the necessary approved bank-run gravel or earth borrow for backfills from off-site sources, as required.
- C. Placement of gravel bedding shall be done in accordance with the following procedure:
 - 1. The bottoms of excavations shall be thoroughly compacted and in approved conditions prior to placing gravel bedding. Gravel bedding shall be placed in layers not exceeding 4 inches in loose depth and each layer shall be compacted by at least two (2) passes of an approved plate-type vibratory compactor. The moisture content of the gravel bedding shall be adjusted by moistening or drying so that proper compaction will be obtained.
 - 2. Gravel bedding shall be graded, compacted and shaped so that the full length of pipe barrel has complete and uniform bearing for the bottom quadrant of each pipe. Bell holes and depressions for joints shall be dug after the gravel bedding has been graded and compacted, and shall be the proper clearance for joining of pipes.
 - 3. The Contractor shall exercise care in all operations to prevent disturbing joints, displacement of or damage to the pipes already installed. As the work progresses, the pipelines will be checked by the Owner to determine whether any disturbance, displacement, or damage has occurred. If inspection shows poor alignment, displaced or damaged pipe, disturbed joints or other defects, the Owner shall require that all designated defects be remedied in a satisfactory manner by the Contractor at no additional expense to the Owner.
 - 4. Backfill over pipe is to be in accordance with AWWA Standard C600.
- D. All other backfill placed in trenches below a level 12 inches above the top of pipe shall consist of selected backfill placed in layers not exceeding 4 inches in loose depths. Selected backfill shall be compatible materials as approved by the Owner, not frozen, and free of clods of earth, stones larger than 2 inches in diameter, or unsuitable materials. The selected backfill shall be deposited uniformly on both sides of the pipe and shall be thoroughly compacted by tamping under and on each side of the pipe to provide uniform support around the pipe, free from voids.
- E. The balance of backfill in trenches shall be compatible materials as approved by the Owner, not frozen, and without any stones larger than 6 inches in their greatest dimension. All trench

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backfilling shall be carefully placed to avoid disturbance of new work and of existing utilities or structures. The moisture content of backfill shall be such that proper compaction will be obtained. Trench backfill shall be compacted to the minimum densities specified hereinafter. Unless otherwise approved by the Owner in writing, the trench backfill shall be spread in layers not exceeding 12 inches in loose depth, and each layer shall be compacted by at least four (4) passes of an approved plate-type vibratory compactor. It is the responsibility of the Contractor to assure that the minimum specified densities are obtained. Puddling or jetting of backfill with water will not be permitted. In the event that the Contractor believes that their compaction equipment is capable of performing the required compaction with lift heights greater than 12-inches, the Contractor shall provide documentation to the Engineer and Owner showing this and also the Contractor shall perform density testing as specified in these specifications on each lift, at least every 200 feet of trench length at no additional cost to the Owner.

- F. During filling and backfilling operations, pipelines will be checked by the Owner to determine whether any displacement of the pipe has occurred. If the inspection of the pipelines shows poor alignment, displaced pipe or any other defects, the defects designated by the Owner shall be remedied in a satisfactory manner by the Contractor at no additional expense to the Owner.
- G. Any backfill that fails to comply with the minimum density requirements specified hereinafter shall be re-compacted or, if necessary, removed to the limits directed by the Owner. The trench shall then be refilled with approved materials and by approved methods. The backfill shall be compacted by approved methods to the minimum requirements specified hereinafter. The Contractor shall perform all of this work at no additional expense to the Owner.
- H. After backfilling trenches the Contractor shall maintain the filled surfaces in good condition, with a smooth surface level with adjacent undisturbed surfaces. Any subsequent settling shall be immediately repaired by the Contractor in a manner satisfactory to the Owner, and such maintenance shall be provided by the Contractor for the remainder of this contract at no additional expense to the Owner.
- I. The finished surfaces of filled excavations shall be compacted and reasonably smooth, and free from surface irregularities. Subgrade upon which either topsoil is to be placed, or pavements are to be constructed, shall be maintained in a satisfactory condition until the finish courses are placed. The storage or stockpiling of materials on finished subgrade will not be permitted.
- J. Prior to placing base course material in areas to be paved, all soft or unsuitable material shall be removed and replaced with suitable material from excavation or earth borrow, as approved by the Owner. All low sections, holes or depressions shall be brought to the required grade with material approved by the Owner. The entire surface shall be shaped to line, grade, and cross-section and thoroughly compacted.

3.8 COMPACTION

- A. Fills placed under pavements shall be compacted to not less than 95 percent of the ASTM maximum dry density.
- B. Backfill material shall be placed in lifts no greater than 6 inches and compacted to 95 percent of maximum density under slabs and 95 percent of maximum density under footings.

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Maximum density will be determined by AASHTO T-180 Method A or D. Density of soil in place will be determined by AASHTO T-191 or by a nuclear moisture density gauge approved by the Engineer. The method of correcting for oversize particles in soil compaction test results shall conform to AASHTO T-224-671.

- C. All disturbed in-situ material shall be compacted to 95 percent of maximum density under slabs and footings. Maximum density will be determined by AASHTO - T-180 Method A or D. Density of soil in place will be determined by AASHTO T-191 or by a nuclear moisture density gauge approved by the Engineer.
- D. All percentages of compaction specified herein shall be related to the maximum dry density as established by Method D, ASTM D1557-70, and verified in the field by ASTM D1556-68, D2167-66 or an approved nuclear density testing device. Prior to placing, at least one (1) laboratory test shall be made on a representative sample of each of the fill and backfill materials proposed to be furnished for the earthwork operations to determine gradation and moisture density characteristics. These tests will be made by a testing laboratory selected by the Owner and at the Contractor's expense.
- E. Field density tests to determine the actual in-place densities being attained will be made at the Contractor's expense and in sufficient quantity to determine that the required compaction is being attained, but in no case less than the following frequency:

- At every 200 linear feet for utility trenches and paved roadways.

All retesting necessitated by failure of the backfill to comply with the minimum percent of compaction shall be performed by a testing laboratory selected by the Owner and the cost for the retesting will be paid for by the Contractor.

- F. Where vibratory compaction equipment is specified herein, or is directed to be used by the Engineer, all such equipment whether plate-type or roller shall be furnished with a vibrating surface at least 24-inches in width and capable of operating at a minimum of 2,000 blows per minute. Equipment not specifically designed as vibrating compaction equipment shall not be permitted for compaction of either existing in-place materials or of fills, refills, and backfills. Jackhammers, rubber-tired vehicles, and similar equipment not specifically designed and manufactured for the compaction of granular materials will not be approved for use.
- G. Surfaces to be compacted, unless otherwise specified, shall be compacted by not less than six (6) complete passes of the approved vibratory compactors in order to obtain the required percentage of compaction. A complete pass shall consist of the entire coverage of the surface area to be compacted with one trip of the equipment. Each trip of the equipment shall overlap the previous trip by at least one (1) foot.
- H. Dumping, spreading, preparing, and compacting of several layers of fill material across the site may be performed simultaneously, providing there is sufficient total area to permit these operations to proceed in a systematic manner.
- I. No rolling equipment shall be used to compact fill, refill, or backfill material within four (4) feet of the vertical faces of any concrete walls or utility pipes. Plate vibratory tampers shall be

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used in these restricted areas and in other areas too confined to satisfactorily use rolling equipment.

- J. It is the intent of these compaction requirements that the minimum in-place dry density of the compacted materials resulting from the specified minimum number of passes of the compaction equipment will be equal to or greater than the minimum percentages specified herein. Additional passes of the specified equipment shall be required if the minimum in-place dry densities, as specified, are not obtained with the minimum passes indicated.

3.9 PROTECTION OF EXISTING UTILITIES AND STRUCTURES

- A. Excavation and backfill operations shall be done in such a manner to prevent cave-ins of excavations or the undermining, damage, or disturbing of existing utilities and structures or of new work. Backfill shall be placed and compacted so as to prevent future settlement or damage to existing utilities and structures and new work.
- B. Any excavations improperly backfilled or where settlement occurs shall be reopened to the depth required then refilled with approved materials and compacted, and the surface restored to the required grade and condition, at no additional expense to the Owner.
- C. Any damage due to excavation, backfilling or settlement of the backfill, or injury to persons or damage to property occurring as a result of such damage shall be the responsibility of the Contractor. All costs to repair such damage shall be borne by the Contractor and shall be performed in a manner satisfactory to, and at no additional expense to, the Owner.

3.10 TEST PITS

- A. Refer to Section 02015 "TEST PITS" of these Specifications.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. The volume of "EARTH EXCAVATION AND BACKFILL" for new water mains, valves, hydrants, service connections, and all other items requiring excavation and backfill shall not be measured separately for payment
- B. "CRUSHED PROCESSED GRAVEL" for pipe bedding and subbase for pavements, sidewalks and driveways, and as backfill and refill of below-grade excavations, as directed, will be measured separately for payment as the actual volume in cubic yards (C.Y.) measured in-place, compacted to the lines, grade and limits shown on the Drawing.

For gravel delivered by weight and where site measurement is impractical, a conversion factor of 2,800 lbs. Per cubic yard of loose gravel and a compaction factor of 80% shall be applied to establish quantities for payment in cubic yards.

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4.2 BASIS OF PAYMENT

- A. No separate payment will be made for work required under this Section of the Specifications for earth excavation, backfill, shoring, compaction, steel plating and all necessary related work. Compensation for such work shall be considered to be included in the prices bid for other items of the proposal.
- B. Payment for “CRUSHED PROCESSED GRAVEL”, measured as provided above, will be made at the unit price as listed in the bid, and shall constitute full compensation for all labor, equipment, tools, supplies, materials and work incidental, appurtenant and necessary to satisfactorily complete the work, as specified and indicated, or as directed by the Owner.
- C. No separate payment will be made for sheeting and bracing, except that sheeting ordered by the Owner to be left-in-place will be measured and paid for as specified in Section 02377 “EXCAVATION SUPPORT SYSTEMS”.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Removal and disposal of rock, ledge, and boulders previously identified and discovered during excavation for pipeline, structures, and appurtenances.
- B. Mechanical trench rock removal.

1.2 RELATED SECTIONS

- A. Section 01400 – Quality Control
- B. Section 02211 – Earth Trench Excavation and Backfill

1.3 SUBMITTALS

- A. Provide submittals under provisions of Section 01300 – Submittals.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material exceeding ½ cu. yd. for bulk, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping or blasting:
 - 1. Excavation of Trenches and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch wide, short-tip-radius rock bucket; rated at not less than 120-hp flywheel power with bucket-curling force of not less than 25,000 lbf and stick-crowd force of not less than 18,700 lbf; measured according to SAE J-1179.
 - 2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 210-hp flywheel power and developing a minimum of 45,000-lbf breakout force; measured according to SAE J-732.

PART 3 EXECUTION

3.1 INSPECTION

- A. Verify site conditions and note irregularities affecting work of this section.

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- B. Beginning work of this section means Contractor's acceptance of existing conditions.

3.2 ROCK AND BOULDER REMOVAL

- A. Where rock or boulders are exposed on the sides, or in the bottom, of excavations, they shall be wholly or partially removed as specified or directed. Rock and boulders shall be removed to not less than the trench width payment lines indicated and to not less than twelve (12) inches below the underside of pipes. Any removal of rock and boulders beyond the trench payment lines indicated on the drawings shall be performed at the expense of the Contractor. In no event shall the contractor be entitled to monies related to the removal of rock and boulders beyond the trench payment limits without the written approval of the Owner.
- B. Depressions resulting from the removal of boulders shall be refilled with approved compacted gravel bedding, earth borrow or other excavated material as directed. Unauthorized excavations in rock or excavations made beyond the indicated or directed limits, shall be refilled with approved compacted gravel bedding or earth borrow as directed by, and at no expense to, the Owner.

3.3 ROCK REMOVAL – MECHANICAL METHOD

- A. Excavate for and remove rock by the mechanical method.
- B. Cut away rock at excavation bottom to form level bearing.
- C. Remove shaled layers to provide sound and unshattered trench bottom.
- D. Excavate to 12 inches below invert elevation of pipe and 24 inches wider than pipe outside diameter.
- E. Remove excavated material from site and legally dispose of material.
- F. Correct unauthorized rock removal in accordance with backfilling and compaction requirements of Section 02211 – Earth Trench Excavation and Backfill.
- G. Contractor shall not be entitled to monies from the removal of rock and boulders beyond the trench payment limits.

3.4 FIELD QUALITY CONTROL

- A. Provide for visual inspection of bearing surfaces and cavities formed by removed rock.
- B. The Contractor is to notify the Engineer prior to construction of any structures within the rock excavation for approval.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

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- A. "ROCK REMOVAL" will be measured in cubic yards (C.Y.) in its original position, prior to excavation, computed to the payment lines indicated or directed in writing by the Owner. If rock excavation is directed to be performed to less than the payment width and/or depth, the Contractor will be paid only for the quantities of rock excavated within the lines. Unauthorized excavations will not be measured for payment.
- B. Those portions of trench excavation classified and paid for as "ROCK REMOVAL" of the various depths and as listed in the bid will be the actual volumes of rock removed within the payment lines at the applicable bottom depth price.
- C. Boulders or detached rock fragments which are ½ cubic yard and more in volume will be measured individually and the volume computed from the average dimensions taken in three representative directions.

4.2 BASIS OF PAYMENT

- A. Payment for "ROCK REMOVAL", measured as provided above, will be made at the unit price bid as listed in the Bid.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work:

The work covered under this section of the Specifications consist of furnishing all labor, equipment and materials, and performing all operations in connection with providing, installing, maintaining, and removing all temporary and permanent timber sheeting and bracing on each wall of the excavation necessary to permit the proper installation and construction of the work; to prevent injury to persons or damage to pavements, utilities or structures; to prevent injurious caving or erosion, or loss of ground; to maintain at all times pedestrian and vehicular traffic on public or private streets; or where shown on the Drawings, necessary for unforeseen reasons, or directed by the Owner, all in accordance with the specifications and the Drawings and as directed.

B. Related Works Specified Elsewhere:

- | | |
|---|---------------|
| 1. Earth Trench Excavation and Backfill | Section 02211 |
| 2. Dewatering, Control and Diversion of Water | Section 02401 |
| 3. Installation of Water Pipeline Systems | Section 02713 |

PART 2 PRODUCTS

2.1 MATERIALS

A. Timber Sheeting and Bracing:

Timber sheeting and bracing may be of any species of wood which will satisfactorily withstand all driving and construction stresses and the loads to which the members will be subjected. Sheeting shall not be less than three inches nominal thickness. All timber sheeting and bracing shall be free from wormholes, windshakes, loose knots, decayed or unsound portions or other defects which might impair its strength or tightness.

B. Miscellaneous Hardware and Fastening:

Provide all miscellaneous hardware and fastenings necessary in connection with the satisfactory installation of all sheeting and bracing on each wall of the excavation.

PART 3 EXECUTION

3.1 INSTALLATION AND REMOVAL

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A. Installation:

1. Sheeting and bracing shall be of sufficient strength to safely sustain all loads from each of the sides of the excavations together with all water pressure and surcharge.
2. The Contractor shall be exclusively responsible for the adequacy of sheeting and bracing used, and shall take all precautions necessary to prevent movement of material along any of the sides of excavations. It is expressly understood and agreed that whenever sheeting and bracing is used, it shall not relieve the Contractor of the sole responsibility of any damages or injury due to installation or failure of the sheeting or bracing or the settling of the backfill, the pipeline or the adjacent ground. Such sheeting, and bracing shall be done in accordance with Associated General Contractors of America "Manual of Accident Prevention in Construction" and as required by the United States, Department of Labor, Occupational Safety and Health Administration.
3. Sheeting shall be permanently left in place where indicated or directed by the Owner.
4. Where timber sheeting is used, it shall be driven ahead of all excavation operations. Sheeting shall be driven to sufficient depths below the lowest excavation level to maintain sufficient restraint of the adjacent soil and to prevent movement of the sheeting. If voids occur behind the sheeting, they shall be filled immediately with selected material to the satisfaction of the Owner

B. Removal of Timber Sheeting:

1. Withdrawal of sheeting shall be carefully performed to prevent movement of material along the sides of the backfilled excavations; to prevent damage to utilities, structures or the work and to avoid injury to persons. Unless otherwise permitted, sheeting shall be withdrawn in lifts of not more than four feet, and all voids shall be filled immediately with selected materials and thoroughly compacted.
2. Where directed by the Owner, timber sheeting ordered left in place shall, after the excavations have been satisfactorily backfilled and compacted to within six inches of the cutoff grade, be cut-off and the remainder permanently left in place as follows:
 - a. In paved areas, two feet below existing ground surface.
 - b. At all other locations, at a level two feet above the top of pipe.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. The work and materials required by this Section of the Specifications will not be measured separately for payment and the cost thereof shall be deemed to be included in the unit prices bid for the applicable items of work, unless ordered by the Owner to be left-in-place as provided above.

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- B. Where permanent timber sheeting is ordered by the Owner to be left in place, measurement for payment will be the surface area in square feet (S.F.) of permanent timber sheeting so ordered to be left in place. Measurement of the surface area will be the product of the horizontal length of timber sheeting along each side of the trench times the applicable height of timber sheeting below the specified cutoff level. No allowance will be made for the quantity of timber wasted in cutting of sheeting within the specified cut-off limits, nor for timber wasted in cutting and fitting sheeting.

4.2 BASIS OF PAYMENT

- A. No separate payment will be made for work required under this Section of the Specifications for "Excavation Support Systems" and necessary related work. Compensation for such work shall be considered to be included in the prices bid for other items of the proposal.

END OF SECTION

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SECTION 02401

DEWATERING, CONTROL AND DIVERSION OF WATER

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work:

The work covered under this section of the Specifications consist of the furnishing all labor, equipment, tools and materials, and performing all operations in connection with the dewatering, control, and diversion of water and all other operations necessary to maintain all excavations and work areas of this contract in a dry condition. The Contractor shall be responsible for providing, maintaining, operating and removing all dewatering and other facilities, including all pumping and appurtenant equipment required to maintain in a dry condition the areas in which construction of this contract is to be conducted. The Contractor shall be responsible for performing all required dewatering in a manner to prevent injury to persons or public health and damage to existing facilities or the work in progress.

B. Related Works Specified Elsewhere:

- | | |
|---|---------------|
| 1. Earth Trench Excavation and Backfill | Section 02211 |
| 2. Excavation Support Systems | Section 02377 |
| 3. Installation of Water Pipeline Systems | Section 02713 |

PART 2 PRODUCTS

2.1 MATERIALS

- A. The Contractor shall provide all end caps, bypasses, pumps, drains, well points, sediment tanks, cofferdams or any facility necessary for the control, collection and disposal of all surface and subsurface water encountered in the performance of the contract work.

PART 3 EXECUTION

3.1 GENERAL

- A. The excavations for work required under this contract may be to some extent below existing ground water levels. The Contractor shall operate and maintain all pumps, drains, well points or any facility necessary for the control, collection and disposal of all surface and subsurface water encountered in the performance of the contract work. All excavations shall be kept dry at all times and all construction work shall be performed "in the dry", unless otherwise authorized or directed by the owner.

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- B. Any damage to existing facilities or new work resulting from the failure of the Contractor to maintain the work areas in a dry condition shall be repaired by the Contractor, as directed by the Owner, at no additional expense to the Owner. Pumping shall be continuous where specified or directed or as necessary to protect the work and to maintain satisfactory progress.
- C. Where cofferdams are necessary so that the work may be performed in the dry, the Contractor shall design, furnish, install, maintain and remove all such cofferdam facilities. Cofferdams shall be designed to withstand all imposed loads and to prevent injury to persons or damages to existing structures and property and to the work.
- D. Due to the age of the distribution system, the City of East Providence makes **no** warranty as to the completeness of water shutdowns from open pipes during the work. It is the contractor's responsibility to provide an adequate number and proper type of pumps to dewater the excavations to prosecute the work. There will be no extra payments to the contractor for delays as a result of inadequate dewatering.

3.2 WORKMANSHIP

- A. The Contractor's pumping and dewatering operations shall be carried out in such a manner that no loss of ground will occur. All pipelines or structures not stable against uplift during construction or prior to completion shall be thoroughly braced or otherwise protected against movement or damage.
- B. Water being disposed of by the pumping and dewatering operations shall be disposed of in such a manner to avoid pollution of existing water courses, injury to persons or public or private property or to the work completed or in progress. Dewatering shall be accomplished by approved methods which have a background record of successful dewatering of similar excavations and subsurface conditions expected to be encountered in the work.
- C. Cofferdams shall be installed to sufficient depths to allow a reasonable depth of below-grade excavation below the work to be constructed. They shall be as watertight as necessary for the construction of the work in the dry. They shall be of such dimensions as to give sufficient clearance for construction and inspection of the work and to permit installation of all necessary dewatering facilities.
- D. The Contractor shall be solely responsible for the design, construction, adequacy and safety of all cofferdam facilities and for any injury or damage caused by the installation or failure of the cofferdam facilities. Cofferdams, including all sheeting and bracing required, shall be removed by the Contractor after completion of the permanent construction unless otherwise directed by the Owner.
- E. The Contractor shall be responsible for providing and maintaining all ditching, grading, sheeting and bracing, pumping and appurtenant work for the temporary diversion of water courses and protection from flooding as necessary to permit the construction of work in the dry.

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- F. Upon completion of the contract work in each construction area, the Contractor shall remove all temporary construction and shall do all necessary earthwork and grading to restore the areas disturbed to their original condition or to such other conditions as indicated or directed by the Owner.
- G. Water shall not be permitted to flow into or through excavations in which work is under way or has been partially completed. The Contractor shall not restrict or close off the natural flow of water in such a way that ponding or flooding will occur and shall at all times prevent flooding of public and private property. All damages resulting from flooding or restriction of flows shall be the sole responsibility of the Contractor, at no additional expense to the Owner.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. The work and materials required by this Section of the Specifications will not be measured separately for payment.

4.2 BASIS OF PAYMENT

- A. No separate payment will be made for work required under this Section of the Specifications for “Dewatering, Control and Diversion of Water” and necessary related work. Compensation for such work shall be considered to be included in the prices bid for other items of the proposal.

END OF SECTION

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between April 1st and May 15th unless otherwise approved by the Owner.

- C. Deciduous Plants shall be planted only when dormant; before leaves appear in the Spring or subsequent to their loss in the Fall, unless otherwise specified by the Owner.
- D. Evergreen Plants shall be planted in the Spring, until the time when new growth begins to take place, and from August 21st to October 15th.

1.4 PROTECTION OF TREES

- A. All trees, except those approved by the Owner to be removed for construction, which are subject to damage in conjunction with this contract shall be protected by wood planking, wrapping or whatever means which might become necessary or as directed by the Owner. Any tree to be removed and replaced after construction, shall be bagged, balled, stored, and maintained in a safe condition, pending replanting. One (1) year guarantee will commence from the day of replanting.
- B. No backfill of any nature shall be placed by the Contractor above the root spread of a tree or plant which it is desired to preserve until a fill of porous material not less than three inches in depth, or as directed by the Owner, and a mulch layer have first been placed above its roots.
- C. Where tree root protection is ordered, the area to be protected shall be thoroughly cleaned of all vegetation. Porous material shall then be spread loosely over the area to a depth ranging from three to twelve inches. On top of the porous material, a mulch layer shall be spread, over which a layer of fill material acceptable to the Owner shall be placed.
- D. Care shall be taken that trees or shrubs which are to be preserved in place are not scarred or damaged by the operations under this item. The root area to be protected shall be the area of ground surface lying within the periphery of the tree or as directed by the Owner.

1.5 ESTABLISHMENT

- A. At all times adequate protection shall be provided for all restored areas against trespassing or damage by others. The moving of heavy equipment or materials over restored areas shall be avoided as far as possible, but if necessary, must be done on planks.
- B. The Contractor shall properly care for all lawn areas by watering, weeding, mowing, rolling, trimming, and edging, and by performing any other necessary operations of maintenance. All areas and spots that do not show a prompt "catch" shall be reseeded at intervals of 10 days which shall continue until a good growth of grass is established over the entire restoration area. The methods pursued in the renewal or replacement of disturbed areas shall be as specified.

Maintenance shall immediately follow the accomplishment of planting operations or the accomplishment of any other unit of work so specified, and shall continue for a period of

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sixty days after the close of the specified planting season during which the last planting operations or lawn operations were accomplished, and if necessary, shall continue further until the requirements of the above are fulfilled. No requirements of this specification shall be interpreted to relieve the Contractor of the responsibility of maintenance as outlined.

1.6 GUARANTEE AND REPLACEMENT

- A. The Owner will not accept lawn areas until the completion of all the work required under this project.
- B. Sodded areas shall be guaranteed for a period of one (1) year after acceptance by the Owner, and shall be alive and in satisfactory growth at the end of the guarantee period. At the end of the guarantee, upon written request by the Contractor, the Owner will inspect sodded areas. Any sodded area required under this Contract that is dead or not in satisfactory growth, as determined by the Owner, shall be removed and replaced as soon as conditions permit, during the normal planting season. In case of any question regarding the condition and satisfactory establishment of a rejected area, the Contractor may elect to allow such sodded areas to remain through another complete growing season at which time the rejected areas, if found to be dead, or in an unhealthy or badly impaired condition, shall be replaced. All replacements shall be of the same kind specified. They shall be furnished and planted as specified; the cost shall be borne by the Contractor, except for possible replacements resulting from removal, loss or damage due to occupancy of the Project in any part, or vandalism.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All topsoil needed to complete the work shall be provided by the Contractor by processing topsoil obtained in stripping and stockpiling operations during construction at the site; and/or obtain from an approved source off the site at no additional cost to the Owner. The topsoil shall be natural, friable soil possessing characteristics of the topsoil of the vicinity which produce heavy growth of crops, grass or other vegetation and shall be reasonably free from subsoil, clay, lumps, stones, stumps, roots and similar objects, any of which are larger than one inch in diameter, brush, objectionable weeds or other litter, excess acid or alkali or any other material or substance which may be harmful to plant growth or a hindrance to grading and maintenance operations.
- B. Commercial fertilizer shall be a complete fertilizer with 30 to 40 percent of the nitrogen derived from natural organic sources and containing in available form by weight 8 percent nitrogen, 6 percent phosphoric acid and 4 percent potash. The commercial fertilizer shall be delivered to the site in the original unopened containers which shall bear the guaranteed statement of analysis of the manufacturer.
- C. Lime shall be ground, dolomitic, agricultural limestone and shall contain a minimum of

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85 percent total carbonates. It shall be ground to a fineness so that 80 percent will pass

through a No. 100 sieve and 95 percent through a No. 60 sieve. A certificate from a reputable producer of ground, dolomitic agricultural limestone attesting that his product meets the above specifications shall be submitted by the Contractor.

- D. Lawn seed shall be fresh, clean, new crop seed. Seed may be mixed by an approved method on the site or may be mixed by the dealer. If the seed is mixed on site, each variety shall be delivered in the original containers which shall bear the guaranteed analysis of the dealer. If the seed is mixed by the dealer, the Contractor shall furnish to the Owner the guaranteed statement of the dealer of the composition of the mixture and percentages of purity and germination of each variety. Grass seed for the areas to be seeded shall be composed of the following seeds mixed in the proportions by weight and testing the minimum percentages of purity and germination as indicated herein.

<u>Type of Seed</u>	<u>Proportion by weight Percent</u>	<u>Percent of Purity</u>	<u>Percent Germination</u>
1. <u>Lawn or Developed Areas</u>			
Penn Lawn Chewings			
Fescue	40	95	88
Pennstar Bluegrass	25	95	90
Merion Bluegrass	25	95	90
Perennial Ryegrass	10	98	90
2. <u>Field or Partially Cleared Forested Areas</u>			
Alsike Clover	5	98	85
Creeping Red Fescue	45	98	85
Kentucky – 31 Fescue	30	98	85
Perennial Rye	20	95	90

- E. All sod shall be well-established, good quality, permanent lawn grass, grown in open ground on a recognized sod farm. It shall be strongly rooted, containing seventy-five (75) percent Merion Bluegrass (*Poa pratensis merion*) and twenty-five (25) percent Pennlawn Fescue, free of pernicious weeds and coarse, burned or bare spots. Grass shall have been mowed to a height of two (2) inches before lifting, and shall have a uniform soil thickness of one and one-half (1-1/2) inches. The Contractor shall furnish the Owner with an adequate sample for inspection and approval before any sod is delivered to the site.

- F. Mulch shall be of any of the following material, or any approved locally available material other than these specified. Mulch material which contains an excessive quantity of matured seed of noxious weeds or other species will not be acceptable. Straw or other mulch material which is fresh and excessively brittle, or which is in such an advanced stage of decomposition as to smother or retard the growth of grass, will not be acceptable.

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1. Straw: Straw shall be the threshed straw of oats, wheat, barley, rye, flax beans or peas.
 2. Hay: Hay shall be cured, dried, and shall be of such types as native hay, Sudan-grass hay, broom-sedge hay, and grass clippings.
- G. After subgrades of the areas have been satisfactorily brought to the proper condition, elevations and contours, and immediately prior to placing and spreading the topsoil, the subgrade shall be loosened by discing, scarifying or other approved method, to a depth of approximately 3 inches to permit bonding of the topsoil to the subgrade.
- H. Topsoil shall be placed only when seeding can follow within a reasonable time. The topsoil shall be uniformly distributed and compacted on the areas designated to be seeded in sufficient depth to compensate for any shrinkage. The average thickness of the compacted topsoil shall not be less than six (6) inches. The surface of the areas shall finish evenly with adjacent undisturbed surfaces. They shall be rolled with a hand roller weighing not more than 100 pounds per foot of width. During the rolling, all depressions caused by settlement or rolling shall be filled with additional topsoil and the surfaces shall be regraded and rolled until they present a smooth and uniform finish free from depressions where water will stand and with all surfaces at the required grade. Topsoil shall not be placed when the topsoil or subgrade is frozen, excessively wet, extremely dry or in a condition which would be detrimental to the operations. All areas shall be protected and maintained in a proper and satisfactory condition until they are fertilized and seeded.

PART 3 EXECUTION

3.1 LOAMING

A. Preparation :

Prepare the subgrade of all areas on which loam is to be placed at the proper elevation free of depressions and irregularities. Clear all vegetation, stones, roots, brush, debris and any other material which might interfere with or be harmful to plant growth.

B. Placing Loam:

Loaming shall be performed only when it can be followed within a reasonable time for seeding. The loam shall be uniformly distributed and compacted on the areas designated to be grassed in sufficient depth to compensate for any shrinkage. The surfaces of the loamed areas to be sodded shall be rolled with a hand roller weighing not more than 100 pounds per foot of width. During the rolling, all depressions caused by settlement or rolling shall be filled with additional loam and the surfaces shall be regraded and rolled until they present a smooth and uniform finish, free of depressions where water will stand and with all surfaces at the required grade. Loam shall not be placed when the loam of subgrade is frozen, excessively wet, extremely dry or in a condition which would be detrimental to the operations. All loam areas shall be protected and maintained in a proper and satisfactory condition until the subsequent operations.

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C. Fine Grading:

The soil surface shall be brought to the required finished grades free from ridges and depressions, through successive stages of light rolling, fine grading and raking operations. The surfaces shall be cleared of all objectionable weeds and shall be free from stone, roots, or objects larger than one inch in diameter and other materials which would be a hindrance to planting operations or to plant growth. A finely pulverized soil surface shall be obtained.

3.2 SEEDING

- A. Before starting work, approved types of equipment shall be on hand and it shall be demonstrated that the applications of lime, fertilizer and seed will be made at the specified rates.
- B. Lawn grass mix as specified herein, shall be used for seeding and sodding in all existing lawn areas disturbed by this construction. All other disturbed areas unless otherwise superseded by previous right of way easement agreements shall be seeded with field grass mix, as specified herein.
- C. The seed bed shall be brought to the required finished grades, free from ridges and depressions, through successive stages of light rolling, fine grading and raking operations. The surfaces shall be cleared of all objectionable weeds and shall be free from stone, roots or objects larger than one inch in diameter and other material which would be a hindrance to planting operations or to plant growth. A finely textured seed bed shall be obtained.
- D. Lime shall be spread uniformly over the areas to be seeded at a rate of 2,000 pounds per acre. Fertilizer shall be spread uniformly over the areas to be seeded at a rate of 900 pounds per acre. Each material shall be worked independently into the top 3 inches of soil by discing, harrowing or other acceptable methods. Sticks, stones and debris shall be removed from the areas and satisfactorily disposed of.
- E. After the areas to be seeded have been prepared as specified herein, the specified seed mixture shall be uniformly sown thereon at a rate of 4 pounds per 1,000 square feet. Hand seeders, power-drawn drills or other approved equipment shall be used. After sowing, the seed shall be lightly covered and the seed areas compacted by rolling.

All seeding shall be done only at times approved by the Owner.

No seeding shall be permitted after a rain unless the surface of the ground is loosened or when the velocity of the wind exceeds a gentle breeze or about five miles an hour. Extreme care shall be exercised during seeding and raking so that no change in grade is made and so that the seed is not raked from one spot to another.

3.3 MULCHING

- A. Care shall be exercised at all times to retain the soil on the roots of the sod during the process of transplanting. Dumping from vehicles will not be permitted. The sod shall be planted

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within twenty-four hours from the time it is harvested unless it is tightly rolled or stored roots-to-roots in a satisfactory manner. All sod in stacks shall be kept moist and shall be protected from exposure to the sun and from freezing. No storage longer than five days will be permitted. Sod which becomes dried out or does not meet the specifications will be rejected.

- B. There shall be a minimum of four inches, after tamping, of topsoil under all sod unless otherwise specified. Excavations or trenches shall be made to a sufficient depth below the finished grade of the sod to accommodate the depth of topsoil as specified and the thickness of sod as specified. Fertilizer shall be applied at a rate to provide 100 pounds of nitrogen per acre unless fertilizer has been applied under another item in this contract to the topsoil in the sod bed. Lime, although not required on sodbed preparation, will be permitted in the sodbed if applied in a previous operation. Fertilizer applied shall be incorporated with the topsoil to a depth of at least two inches before the sod is laid, unless otherwise specified or approved. Incorporation shall be accomplished by discing, harrowing, drilling, raking or other approved means.
- C. The soil on which sod is laid shall be reasonably moist and shall be watered, if so directed. The sod shall be laid smoothly, edge to edge, and all openings shall be plugged with sod. In drainage-ways and where continuous solid sodding is called for on the plans, the sod shall be laid with their longest dimensions parallel to the contours. Such sodding shall be begun at the base of slopes or grades and the sodding progress in continuous parallel rows working upward. Vertical joints between such sod shall be staggered. All sod shall be laid to the grades formed with special care at the junction of drainage-ways. Immediately after the sod is laid, it shall be pressed firmly into contact with the sodbed by tamping, rolling, or by other approved methods so as to eliminate all air pockets, provide true and even surfaces insure knitting and protect all exposed sod edges but without displacement of the sod or deformation of the surface of the sodded areas and watered at the rate of 5 gallons per square yard of sodded area unless otherwise directed.
- D. Sod shall be held in place by stakes in all drainage-ways, on all slopes steeper than 4:1 and elsewhere where specified or as directed. Pegging shall be done immediately after tamping. At least one stake shall be driven through each sod to be staked, and the stakes shall be not more than two feet apart. Stakes shall have their flat sides against the slope and be driven flush.
- E. Excess sod or excess soil resulting from excavations or trenching shall be disposed of as approved. Excess soil shall not be left to form a ridge adjacent to the sodded area or sodded strips. No payment will be made for rejected or excess sod which is not laid.

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PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

A. Lawn Restoration

The quantity of lawn restoration, disturbed as part of installing water services, hydrants, or other appurtenances will be measured in square yards (S.Y.) based on the area of lawn restored in a manner approved by and directed by Owner in accordance with the Contract Documents.

4.2 BASIS OF PAYMENT

A. Lawn Restoration

Payment for quantity measured as specified above will be made at the unit price bid for "LOAM AND SEED RESTORATION", as listed in the Bid.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

A. Work Included:

Work under this section includes furnishing all labor, equipment, materials, and appurtenances, and performing all operations in connection with the milling or placing of temporary and permanent bituminous concrete pavement on gravel or concrete base for roadways, sidewalks, and driveways as shown on the Drawings, as specified in the Bid Proposal or as directed. All existing pavement, striping, curbing and street fixtures damaged or displaced as a result of the construction operations shall be restored in accordance with the requirements for this Section. The Contractor shall secure a blanket bond in accordance with RIDOT standards in order to perform work within State Roadways. All necessary permitting shall also be coordinated by the Contractor with the State DOT prior to any work within State roadways.

B. Related Work Specified Elsewhere:

- | | |
|--|---------------|
| 1. Cleaning | Section 01710 |
| 2. Earth Trench Excavations and Backfill | Section 02211 |
| 3. Miscellaneous Concrete Work | Section 03310 |

1.2 REFERENCES

- A. All work specified in this Section shall conform to the specifications of the “Standard Specifications for Road and Bridge Construction” Department of Transportation, Division of Public Works, State of Rhode Island, Revision of 1971, including latest supplements, hereinafter called the “Standard Specifications”. All reference to measurement and payment with said “State Standards” shall not apply.

PART 2 PRODUCTS

2.1 CRUSHED PROCESSED GRAVEL

- A. Conform to Article M.02.09, Column II, of the Standard Specifications, and to the requirements listed in Section 02211 of the Contract Specifications.

2.2 PLANT MIX BITUMINOUS CONCRETE PAVEMENT

- A. Conform to Section M.03.01 of the Standard Specifications.
- B. Surface Course

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1. Roadways Type I-1
2. Sidewalk Type I-2

2.3 ASPHALT CEMENT

- A. Conform to Section M.03.02.1 of the Standard Specifications.

2.4 AGGREGATE

- A. Plant Mix Bituminous Base
Conform to Section M.03.02.3 of the Standard Specifications.
- B. Flexible Pavements
Conform to Section M.03.02.2 of the Standard Specifications.
- C. Filler
Conform to Section M.03.02.4 of the Standard Specifications.

2.5 TACK COAT

- A. SS-1, SS-1h, CSS-1, or CSS-1h conforming to Section 403 of the Standard Specifications.
- B. Application rate of .05 gallons per square yard.

2.6 PORTLAND CEMENT CONCRETE BASE

Conform to Sections 304.02 thru 304.03.4, 601.02.1, 601.03.1 thru 601.03.5 of the Standard Specifications.

PART 3 EXECUTION

3.1 SUB-GRADE PREPARATION

- A. Prepare subgrade of trenches and such other places as field conditions require by shaping and compacting to proper grade. Remove all soft and yielding material from the subgrade and replace with suitable material, compact, and prepare. Compact thoroughly using approved types of rollers or tampers. Ensure that all areas are stable and dry.
- B. Saw cut back edges of existing pavement along even lines as necessary to obtain undisturbed, clean, and sound vertical edges for placement of gravel base course, tack coat and temporary

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pavement.

- C. Do not store or stockpile materials on the subgrade.

3.2 GRAVEL BASE PLACEMENT

- A. On the approved prepared subgrade, place approved crushed process gravel base material in successive 6" maximum compacted layers to the depth indicated on the Drawings for the full width of the disturbed cross section. Do not place fill on muddy or frozen subgrade or until subgrade is approved by the Owner.
- B. During placing and/or compacting operations upon earth, the moisture content of material in the layers being compacted shall be near optimum and shall be added in such amounts as the Owner may consider necessary to secure satisfactory compaction. In general, the moisture content of the material being placed and compacted shall be maintained at approximately optimum condition as determined in accordance with ASTM Standard D1557.
- C. Perform all compaction with approved equipment well suited to location and material being compacted. Use heavy vibratory rollers where heavy equipment is authorized.
- D. Do not operate heavy equipment closer to foundations than a horizontal distance equal to height of backfill above bottom of foundation. Compact remaining area with hand tampers suitable for material being compacted. Place and compact backfill around pipes with care to avoid damage.
- E. Compact fill materials to a minimum 90% maximum dry density.
- F. Finish surface of crushed processed gravel base course not less than 1-1/2" below and parallel to the proposed grades and cross sections of the temporary pavement.

3.3 CONCRETE BASE

All loose or broken concrete and patches in the concrete which have been made with materials other than concrete shall be removed and replaced to the depth of the existing base with concrete in accordance with the Standard Specification. All cracks in the base shall be cleaned with compressed air and filled with SS-1 liquid asphalt emulsion. Care shall be taken not to overfill the cracks. All excess liquid asphalt shall be thoroughly cleaned and a light tack coat applied at the rate herein specified.

3.4 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to commencing work under this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

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2. Verify that bituminous concrete pavement may be installed in strict conformance with the drawings and specifications, all pertinent codes and regulations, and all pertinent portions of the referenced standards.
- B. Discrepancies:
1. All discrepancies shall immediately be brought to the attention of the Owner.
 2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.5 TEMPORARY PAVEMENT PLACEMENT

- A. On the approved crushed processed gravel base course, place temporary pavement surface course of 2" minimum plant-mixed bituminous concrete (hot mix) type I-1 or I-2, on streets or sidewalks and such other places as field conditions require, as directed, to the compacted thickness and layers specified and/or detailed on the Drawings. Finish flush with the top of adjacent undisturbed pavement and conform with the cross-section of existing pavement or as directed. Maintain temporary pavement flush with adjacent undisturbed pavement as settlement of trench backfill occurs and until the permanent surface is placed. Temporary pavement shall be maintained in place for a period of not less than 90 days from the date of placement or until such time as the Engineer determines that the settlement of pavement has stopped.
- B. In highly traveled roadways, temporary pavement shall be placed on all backfilled trenches within 24 hours of backfilling. No backfilled trenches shall be left unpaved over weekends and/or holiday periods. At any one time during the construction work on any particular roadway, the length of an unpaved backfilled continuous trench shall not exceed 1,000 linear feet or 3,000 linear feet in total for the entire project.
- C. Upon approval by the Owner, cold patch may be temporarily substituted for the hot-mix bituminous concrete required for temporary pavement. No payment shall be made for the installation of cold patch. All areas that have been patched with cold-mix shall be repaved with the temporary hot-mix bituminous concrete within one week after the work. When patching the trench with hot-mix bituminous concrete, all of the cold-mix bituminous materials shall be first removed, and the gravel subgrade shall be regraded and additional gravel added as necessary.
- D. Cold-laid plant mixes shall be of the Precoated Macadam Aggregate Type of the Macadam aggregate Type conforming with Asphalt Institute Specification CL-1 and CL-2 respectively. Rapid curing (RC-3 and RC-4) and medium Curing (MC4 and MC-5) cut back asphaltic primers shall be used, mixed with an asphalt cement of 85-100 penetration and hydrated lime. Aggregate gradation shall be between the limits of 1-inch and No. 8 sieve with high percent passing 3/8-inch sieve. The mixture shall consist of from 90.0 to 93.0 percent of mineral aggregate for CL-1 and 94.5 to 96.5 percent for CL-2. Cold-laid emulsified asphalt plant-mix may also be used subject to approval of samples by the Owner. The surface of the base course shall be clean, dry and free from frost when paving operations are to start and shall be

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maintained in that condition. The surface of the temporary pavement shall conform to the existing pavement.

3.6 REMOVAL OF TEMPORARY PAVEMENT

- A. Remove all temporary pavement material in its entirety and the partial thickness of crushed processed gravel base specified and/or detailed on the Drawings. Dispose of all removed materials to an approved dumping site and maintain the adjacent pavement areas clear and clean. Use care in removing materials so as not to damage gravel base or the adjoining pavement. Maintain base course in an approved condition for placing of the permanent pavement. Saw cut back edges of existing pavement as necessary to obtain undisturbed, clean and sound vertical edges for application of permanent pavement.

3.7 PERMANENT PAVEMENT PLACEMENT

- A. Place the bituminous material prime coat of asphalt cement on the approved crushed processed gravel base course or concrete base and on the prepared and approved existing pavement edges and surface. Rate of tack coat application shall be 0.05 to 0.10 gallons per square yard.
- B. On the approved crushed processed gravel base course or concrete base, place bituminous concrete pavement consisting of 1-1/2 inches (minimum) of bituminous concrete (Hot Mix) Type I-1 surface course and a bituminous concrete binder course at a compacted minimum 1-1/2 inch thickness (3-inches total). For State roads or city roads with concrete base, an additional 5-inches of bituminous base course or replacement of the concrete road base as directed by RIDOT, shall be performed in accordance with the Standard Specification. The permanent and undisturbed pavement surface shall conform to the existing cross sections of the existing pavement or as otherwise directed. On city or town roads where directed, the permanent pavement shall be placed to the curb line and shall include the area between the trench and the curb.
- C. For Bituminous concrete sidewalks, the surface course shall be a fine "sidewalk" mix (class I-2) and a bituminous concrete binder course at a compacted minimum 2-inch thickness but shall be at least equal to the existing cross sections of the existing pavement or as otherwise directed.

3.8 REMOVING BITUMINOUS PAVEMENT BY COLD PLANING

- A. This work consists of the removal of bituminous material using cold planing or grinding methods to a depth of 1-1/2" to 3" as specified by the Engineer, all in accordance with these Specifications.
- B. The equipment for removing the bituminous pavement shall be a power operated planing machine or grinder capable of removing a layer of bituminous material. The equipment shall be capable of accurately establishing profile grades by referencing from either the existing pavement or from an independent grade control and shall have a positive means for removing excess material from the surface and for preventing any dust from the operation from escaping into the air. The equipment furnished by the Contractor shall be in good repair and

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shall be maintained so as to produce a clean cut to the pavement at all times.

- C. The cold planed surface shall conform generally to the grade and cross slope required and be free from being torn, gouged, shoved, broken or excessively grooved. The surface shall be free of imperfections of workmanship that will prevent the surface from being resurfaced with new pavement following this operation. Surface texture shall be rough grooved or as specified by the Engineer, and in all cases shall be acceptable to traffic in the event resurfacing is delayed. No asphalt cuttings shall remain on the project at the end of the day. All asphalt cuttings shall become the property of the contractor and shall be removed and legally disposed of by the contractor.

3.9 BITUMINOUS SURFACE COURSE OVERLAY 1-1/2”

- A. This work shall consist of placing a friction course on prepared, sound, dense surfaces of bituminous concrete at the locations and to the thicknesses indicated on the Plans or as directed by the Engineer, all in accordance with these Specifications and as described in section 402 of the “Standard Specifications for Road and Bridge Construction” Department of Transportation, Division of Public Works, State of Rhode Island, latest revisions.
- B. Bituminous Surface Course Overlay shall be performed in the following general manner:
 - 1. In the event that the RIDOT requires or the Engineer determines that prior to placing a Bituminous Surface Course Overlay, the surface condition requires the removal of bituminous material using cold planning or grinding methods as described above in section 3.08, the work shall be performed as described in section 3.08.
 - 2. Mechanical street sweeping and general cleaning of the area to receive the Bituminous Surface Course Overlay shall be performed as directed by and to the satisfaction of the Engineer, all as described in section 01710 – Cleaning, of these Specifications.
 - 3. Application of an Asphalt Emulsion Tack Coat – this work consists of furnishing, delivering, and placing a liquid asphalt tack coat on bituminous concrete or Portland cement concrete, prior to the placement of a bituminous concrete overlay, all in accordance with these specifications. The asphalt emulsion shall be SS-1, SS-1h, CSS-1, or CSS-1h. Application of the asphalt emulsion tack coat shall be by means of a pressure distributor capable of producing a uniform and continuous fine spray, through multiple nozzles, resulting in a uniform continuous coat over the section to be treated. Any puddles of tack coat must be squeegeed or broomed out. The application rate shall be .05 gallons per square yard. Surfaces or curbs, gutters, vertical faces of existing pavements, and all structures to be in contact with the bituminous mixture shall be given a thin, even coating of Asphalt Emulsion Tack Coat. Care shall be taken to avoid the splattering of surfaces which will not be in contact with the bituminous mixture.
 - 4. Bituminous Surface Course Overlay mixing, placing, and finishing of bituminous surface course shall conform to the applicable requirements of Section 401 of the “Standard Specifications for Road and Bridge Construction” Department of Transportation, Division of Public Works, State of Rhode Island, latest revision. The mixture of the Bituminous Surface Course 1-1/2” overlay material shall be “Class I-1” mix as specified

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in Section M.03 of the Standard Specifications for Road and Bridge Construction, Department of Transportation, Division of Public Works, State of Rhode Island, latest revision. The following additional conditions apply.

- a. Both the mixing temperature and the temperature of the friction course at the time of placement shall be 240 degrees Fahrenheit to 280 degrees Fahrenheit.
- b. The mixture shall be placed as soon as possible after completion at the plant. It shall be placed within 60 minutes from the time of its arrival at the job site, subject to the specified placement temperature range.
- c. Unless otherwise shown on the Plans, mixtures shall be spread by means of a mechanical self-powered paver capable of spreading the mixture true to line, grade, and crown set by the Engineer. When laying mixtures, the paver shall be capable of being operated at forward speeds and proper thicknesses consistent with the satisfactory laying of the mixture. Bituminous pavers shall be self-contained, power propelled units, provided with activated vibratory screed and solid vibratory screed extenders and capable of spreading and finishing courses of bituminous plant mixed material in lane widths applicable to the typical section and thickness as specified. The screed and screed extenders shall vibrate while placing the mixture and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. The screed and screed extenders shall be heated if necessary to maintain the bituminous mixture at the required placement temperature.
- d. When placed on a newly reconstructed surface, the thickness shall be 1-1/2" +1/4" unless otherwise approved by the engineer. When used to overlay and existing roadway, the thickness shall be a minimum of 1" and a maximum of 1-3/4" to accommodate for surface irregularities. Spreading of the mixture shall be performed carefully and the operation shall be as continuous as possible. Particular attention shall be given to the joints and any irregularities shall be removed before compacting.
- e. After placement, the mixture shall be thoroughly and uniformly compacted with power rollers as directed by the Engineer. Compaction of the mixture shall be accomplished immediately after lay down when the temperature of the layer is 240 degrees Fahrenheit + 20 degrees Fahrenheit. Rolling shall continue until all roller marks are eliminated and the surface is of uniform texture and is true to line and grade. Static or vibratory steel wheel rollers or pneumatic tire rollers shall be employed. They shall be in good condition, capable of reversing without backlash, and shall be operated at speeds slow enough to avoid displacement of the bituminous mixture. The weight and type of rollers shall be sufficient to compact the mixture to required density within the allowable time. The use of equipment which results in the excessive crushing of aggregate is not permitted.
- f. Pavement thickness will be considered acceptable when placed within the tolerances specified. The total tonnage delivered and placed shall not exceed the tonnage calculated from the approved areas measured from the final surface

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course width, by the project length, and the pavement thickness in the contract by more than 10-percent. A thicker pavement may be acceptable, however, no

payment shall be made for any quantity of asphalt concrete delivered which exceeds 110-percent of the final measured length, times the measured width, times specified thickness, times unit weight.

3.10 **INFRARED BITUMINOUS SURFACE REPAIRS**

- A. Upon completion and acceptance of the placement of permanent bituminous concrete pavement within the State roadways, as directed by the Engineer, the Contractor shall proceed with the final repair. The final surfaces shall match the existing surface elevations precisely and shall provide proper drainage. The area of repair shall include the entire patch extending nine (9) inches to the outside of the joints formed by the patching trench. All areas to be repaired will be rectangular in shape.
- B. The Contractor performing the work must be fully qualified and properly equipped to complete this work expeditiously and in a manner satisfactory to the R.I. Department of Transportation,
- C. All materials must conform to the R.I. Department of Transportation Standard Specifications for Road and Bridge Construction Revision of 1971 and latest addenda.
- D. Infrared bituminous surface repair work in State Highways shall be performed in the following general manner:
 - 1. Areas to be repaired shall be swept clean to remove all loose and foreign materials.
 - 2. An approved infrared heater not to exceed 15,000 BTU's per square foot per hour shall be positioned over the area to be repaired for a period of time required to soften the existing pavement to a depth of two or more inches. Oxidation of the pavement, caused by excessive heat, as determined by the Engineer, shall be avoided. The Contractor shall remove the unsuitable material in the event of oxidation and replace same with new bituminous concrete at his own expense.
 - 3. A recycling agent admixture in the amount approved by the Engineer will be added to the softened areas after scarification and shall be raked to a workable condition.
 - 4. Any necessary additional bituminous concrete mix must be obtained from a suitable infrared storage unit required to keep asphalt at near-constant temperature throughout the working day. Under no circumstances is any asphalt mix to be used that registers a temperature of under 200 degrees F.
 - 5. After the paving mixture has been properly admixed and raked to grade, compaction shall be obtained by use of a steel wheeled roller of sufficient weight to establish a uniform density comparable to that of adjacent surface within the work area. Finished patch shall be level with no depression retaining water of any of its surface.

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6. Edges of the finished area shall be sealed with a suitable asphalt emulsion RS-1 or equal, around the perimeter of the newly repaired area.
7. A cationic maltenes emulsion sealant shall then be hand spread on the patched area and adjacent edges at the approximate rate of one-tenth (0.1) gallon per square yard to seal the entire newly treated area. Sand will be spread over the newly sealed area.

3.11 **ADDITIONAL REQUIREMENTS**

- A. The repairing, replacing or restoring of driveway or sidewalk pavements damaged or disturbed as a result of the Contractor's operations shall be provided by the Contractor in accordance with the requirements specified herein for the respective type of pavement replacement and in a manner satisfactory to the Owner and the homeowner.
- B. All curbing, street fixtures, striping and such other appurtenant work damaged or disturbed as a result of the Contractor's operations, shall be satisfactorily repaired or replaced, and restored by the Contractor in accordance with the Standard Specification, at no additional expense to the Owner. Traffic detection loops must be temporarily repaired within 72 hours. Permanent repair of the traffic detector loops shall include complete replacement after the permanent pavement repairs are complete.
- C. In case of settlement or other defects in replaced pavements, the Contractor shall cut out, replace, restore, or repair the damaged pavements in a manner satisfactory to the Owner, at no additional expense to the Owner. This Contract shall not be considered as complete until the replacement, restoration and repairs of pavement have been provided in a manner satisfactory to the Owner and in accordance with the requirements specified herein.
- D. Roads that have existing (rigid) concrete base shall be replaced in matching thickness with bituminous concrete except at locations designated by the Engineer or the RIDOT which shall be replaced with concrete road base in accordance with the Standard Specification.
- E. It shall be the responsibility of the Contractor to obtain from the controlling State and municipal authorities all required permits for cutting roadway pavements and to perform the work in accordance with all customs and requirements of the controlling authorities, in addition to those specified herein, at no additional expense to the Owner. All striping, curbing, street fixtures and such other appurtenant work damaged or displaced as a result of the Contractor's operations shall be repaired or replaced and restored by the Contractor in a manner satisfactory to the Owner and to the proper State or municipal officials as the case may be, at no additional expense to the Owner. In case of settlement or other defects in replaced pavements, the Contractor shall cut out, replace, restore or repair the damaged pavements in a manner satisfactory to and at no additional expense to the Owner. This contract will not be considered as complete until the replacement, restoration and repair of pavements have been provided in a manner satisfactory to the Owner in accordance with the requirements specified herein. The Contractor shall at all times maintain the completed work in a safe and satisfactory condition; all maintenance and repairs to the completed work shall be subject to the approval of the Owner and the controlling municipal and State authorities. All maintenance and repairs of the completed work shall be provided by the Contractor at no additional expense to the Owner. Equipment used in the work will be subject to approval and

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shall be maintained in a satisfactory condition at all times. Unless otherwise permitted, compaction shall be performed by use of suitable power rollers. Finished surfaces of new asphaltic surface courses shall finish even with adjacent existing pavement surfaces and be free from surface irregularities and shall be as approved.

F. Adjusting Structures to Grade:

All frames, covers and gate boxes within the limits of this work shall be brought to finished grade utilizing materials specified under other sections of these specifications for this work. All new water gate valve boxes shall be raised plumb to finish grade without the use of risers.

Iron risers are not permitted for sewer, drainage, electric, gas, or telephone structures. Frame and covers shall be adjusted by removal of said frames and installation of bricks and mortar such that the frames and covers fit snug, flat, and flush to grade in order to prevent movements from traffic loads. All existing appurtenances damaged by the Contractor shall be replaced at no additional expense to the Owner.

G. Replacing Pavement Markings:

All existing pavement markings damaged within the limits of this work shall be replaced "in kind", as directed by the Engineer, and as specified in section T.20 of the Standard Specifications for Road and Bridge Construction" Department of Transportation, Division of Public Works, State of Rhode Island, latest revision. All existing pavement markings damaged by the Contractor shall be replaced at no additional expense to the Owner.

3.12 METHOD OF MEASUREMENT

A. Temporary Pavement:

The extent of temporary pavement will be that shown on the Drawings. Payment for Temporary Pavement will be measured and computed in square yards (S.Y.) as the product of the average actual measured width up to a maximum of six (6) feet times the actual length measured along the centerline of the trench, including: saw cutting of existing pavement, placing crushed processed gravel base; furnish, placing and maintaining bituminous concrete pavement; and all incidentals necessary or otherwise required to satisfactorily place temporary pavement. The length on house service lines and hydrant branch trenches shall be measured from the center of the main to the curb face or pavement edge and the width shall be the average actual measured width up to a maximum of six (6) feet. CRUSHED PROCESSED GRAVEL will be measured separately for payment under that item in the Bid. Cold Patch will not be measured for payment.

B. Permanent Pavement:

The extent of permanent pavement will be that shown on the Drawings. Payment for Permanent Pavement on City or State Roads will be measured and computed in tons based on approved weight slips provided by Contractor. Only permanent pavement placed within the approved payment limits as shown on the Drawings will be eligible for payment, unless otherwise authorized by Owner. Payment shall include costs of saw cutting; removal of temporary bituminous concrete; furnishing and placing bituminous concrete base courses and

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overlay; and all incidentals necessary or otherwise required to satisfactorily place permanent pavement. Crushed processed gravel will be measured for payment under the item for “Crushed Processed Gravel”.

C. Removing Bituminous Pavement By Cold Planing:

The quantity for Removing Bituminous Pavement By Cold Planing will be measured in square yards (S.Y.) based on an area that includes the total area actually removed and disposed of in a manner approved by and directed by the Engineer.

D. Bituminous Surface Course Overlay 1-1/2”:

Payment for Bituminous Surface Course Overlay 1-1/2” will be measured and computed in square yards (SY) based on the area of surface course pavement placed to a 1-1/2” thick layer of permanent pavement. Payment will also include all incidentals necessary or otherwise required to satisfactorily perform this work.

E. Mechanical Street Sweeping:

Payment for Mechanical Street Sweeping will be measured for payment as the actual number of hours (hrs.) worked in the operation of street sweeping by an approved full “size” mechanical street sweeper as described in Section 01710 – Cleaning. Only an approved type sweeper, and only when used at an approved or directed time and locations will be measured for payment.

E. Application of an Asphalt Emulsion Tack Coat:

The application of Asphalt Emulsion Tack Coat will not be measured for payment and the cost shall be included in the unit price of other items on the Bid Form.

G. Infrared Bituminous Surface Repairs:

Payment for Infrared Bituminous Surface Repairs will be measured and computed in square yards (S.Y.) based on an area that includes the entire patch extending nine (9) inches to the outside of the joints formed by the permanent patch, which will also include all incidentals necessary or otherwise required to satisfactorily perform the infrared bituminous surface repairs.

H. Concrete Base Road Repairs:

Payment for Concrete Road Base Repairs will be measured and computed in square yards (S.Y.) based on an area that includes the entire patch, which will also include all incidentals necessary or otherwise required to satisfactorily perform the Concrete Road Base Repairs including reinforcing steel dowels, Portland cement concrete and bituminous concrete (Hot-Mix) with Type I-1 surface course at a thickness to match the existing condition all in accordance with sketch no. 1 at the end of this section.

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I. Crushed Processed Gravel Subbase:

Payment for Crushed Processed Gravel will be measured and computed in cubic yards (C.Y.) based on the actual volume of crushed processed gravel used to properly complete the installation of temporary and permanent pavement as described in this specification.

J. Adjusting Castings to Grade:

The adjusting of new water valve road boxes to grade will not be measured for payment. The adjusting of gas valve road boxes to grade will not be measured for payment.

The adjustment of sewer, drainage, electric or telephone structures, frame, and covers will be measured for payment as unit assemblies "Each" complete, in-place and accepted, as listed on the Bid under "ADJUST CASTINGS TO GRADE".

K. Application of Pavement Markings:

The applications of Pavement Markings will not be measured for payment and the cost will be included in the unit price for "PERMANENT PAVEMENT/BITUMINOUS ASPHALT" or "1-1/2" MILL AND OVERLAY" as listed in the Bid.

L. Traffic Loop Repair:

The repair of traffic loops damaged as a result of construction will be measured for payment for "Each" loop completely repaired and restored to service, as listed in the Bid under "TEMPORARY AND PERMANENT REPAIR OF TRAFFIC LOOPS".

3.13 BASIS OF PAYMENT

A. Temporary Pavement:

Payment for quantity measured as specified above will be made at the unit price bid for "TEMPORARY PAVEMENT 2- INCHES", as listed in the Bid.

B. Permanent Pavement:

Payment for quantity measured as specified above will be made at the unit price bid for "PERMANENT PAVEMENT/BITUMINOUS ASPHALT", as listed in the Bid.

C. Removing Bituminous Pavement By Cold Planing and Bituminous I-1 Surface Course Overlay 1-1/2":

Payment for quantity measured as specified above will be made at the unit price for "1-1/2" MILL AND OVERLAY", as listed in the Bid.

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D. Mechanical Street Sweeping:

Payment for Mechanical Street Sweeping as specified above will be made at the unit price bid for “MECHANICAL FULL SIZE STREET SWEEPING”, as listed in the Bid.

E. Application of an Asphalt Emulsion Tack Coat:

There will be no separate payment for the application Asphalt Emulsion Tack Coat and the cost will be included in the unit price for “PERMANENT PAVEMENT/BITUMINOUS ASPHALT” or “1-1/2” MILL AND OVERLAY”, where used, as listed in the Bid.

G. Infrared Bituminous Surface Repairs:

Payment for quantity measured as specified above will be made at the unit price bid for “INFRARED PAVEMENT REPAIR”, as listed in the Bid.

H. Concrete Base Road Repair:

Payment for quantity measured as specified above will be made at the unit price bid for “CONCRETE BASE ROAD – STATE ROADS”, as listed in the Bid.

I. Crushed Processed Gravel Subbase:

Payment for crushed processed gravel, will be made at the unit price bid for “CRUSHED PROCESS GRAVEL”, as listed in the Bid.

J. Adjusting Structures to Grade:

No separate payment will be made for adjusting of new water valve road boxes to grade but the cost will be included in the unit price for “Furnish and Install Gate Valve and Box” or “Reinstall existing valve and Box” as listed in the Bid. No separate payment will be made for adjusting of gas valve road boxes to grade but the cost will be included in the unit price for Bituminous I-1 Surface Course Overlay 1-1/2”.

The adjustment of manholes or catch basin grates will be measured for payment as specified above, and will be paid for at the unit price for “ADJUST CASTINGS TO GRADE”, as listed in the Bid, which shall constitute full compensation for adjusting all frames and all incidentals necessary to complete the work as specified above.

K. Application of Pavement Markings:

There will be no separate payment for the application of Pavement Markings and the cost will be included in the unit price for “PERMANENT PAVEMENT/BITUMINOUS ASPHALT” or “1-1/2” MILL AND OVERLAY” as listed in the Bid.

L. Traffic Loops:

Payment for quantity measured as specified above will be made at the unit price bid for

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“TEMPORARY AND PERMANENT REPAIR OF TRAFFIC LOOPS”, as listed in the Bid.

M. Price Adjustment:

Due to the volatile nature of the price of liquid asphalt, the City of East Providence will make a one-time price adjustment on the unit price bid for the permanent pavement items as listed in the Bid. The purpose of this adjustment clause is to Ensure adequate compensation for the unpredictable cost of bituminous concrete. The price adjustment clause for increase and/or decrease is also made part of this contract to assure more realistic bidding and encourage competition. This adjustment will apply only to the “PERMANENT PAVEMENT/BITUMINOUS ASPHALT” and “1-1/2” MILL AND OVERLAY” bid items. There will be no adjustment unless there is a documented increase or decrease of 10% or more in the price of asphalt at the time of commencement of permanent paving and will be a one time only adjustment. It is the responsibility of the contractor to provide documented evidence of any increase in the cost of asphalt that would warrant a price adjustment.

Base Price: The base price is defined as a fixed price determined by the City of East Providence at the time of bidding.

Adjusted Price: The adjusted price is defined as the new price as determined by the Engineer at the time of commencement of the permanent paving operation.

Contract Price: The contract price is defined as the respective item bid price as listed in the contract.

Price Adjustment: The price adjustment will be determined by the variance between the Adjusted Price and the Base Price. Price adjustment will be made at the end of the paving work and be as determined by the Engineer.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. The work covered under this section of the Specifications consists of the furnishing of all labor, equipment, materials, appurtenances, and performing all operations in connection with the installation of ductile iron water mains complete and the furnishing and installation of all other work by the contractor, including, but not limited to pipe fittings, specials and accessories, testing and disinfection, jointing, Tyton joint gaskets and jointing materials, and all other related and appurtenant work required for proper installation, in accordance with the Drawings and Specifications and as directed by the Owner. Where old pipe conflicts with new pipe, old pipe shall be cut and capped on both ends and the cap shall be secured. No fitting or pipe deflection will be allowed on new pipe to go over or under old pipe. In areas where water main is to be removed, the contractor shall disconnect each service lateral from the main at the corporation prior to removal of the main. The contractor shall be responsible for the disposal of the removed water main pipe.

B. Related Work Specified Elsewhere:

- | | |
|--|---------------|
| 1. Earth Trench Excavations and Backfill | Section 02211 |
| 2. Valves, Tapping Sleeves and Appurtenances | Section 02640 |
| 3. Fire Hydrants | Section 02644 |
| 4. Water Service Lines | Section 02650 |
| 5. Testing and Disinfecting Water Mains | Section 02710 |
| 6. Installation of Water Pipelines Systems | Section 02713 |

- C. It is not intended that the Drawings shall show every pipe, fitting, specials and accessories, etc., but the Contractor shall be required to furnish, without additional charge, all material necessary to complete the pipeline systems in accordance with the best water engineering practices and intent of the Drawings and Specifications.

- D. The Contractor shall be responsible for notifying the City of East Providence Water Division 48 hours prior to any desired valve operations required for the work of this contract. **The Contractor shall not operate any valves without the express permission of the City of East Providence Water Division.** The Owner will furnish personnel to operate all valves in the system during regular work days between 8:00 and 4:00 without cost to the Contractor.

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1.2 QUALITY ASSURANCE

- A. The Contractor shall furnish to the Owner manufacturer's notarized test reports and methods of test to show compliance with all specification requirements, and notarized Certificates of Conformance stating that all materials to be furnished under this section of the Specifications conform with all specification requirements, and each shipment of fittings, joints and gaskets and accessories meet all requirements of the Specifications.
- B. Contractor shall furnish to the Owner, when requested, manufacturer's written transcripts in accordance with Section 51-14 of AWWA Specification C151, latest revision.

1.3 SUBMITTALS

- A. Shop drawings shall be submitted for approval. They shall conform to the requirements of AWWA Specifications C153, C111 and C151, latest revision, and shall include complete dimensional, fabrication, and erection details, net weights, material lists, maintenance data and all other information required by the Owner.

1.3 PRODUCT INSPECTION, RECEIVING, HANDLING AND STORAGE

- A. The inspection, receiving, handling and storage of all materials shall conform in all respects to the requirements of AWWA Specification C600, latest revision, Section 2.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Ductile Iron Pipe to be furnished by the Contractor, shall conform in all respects to AWWA Specifications C151, latest revision, and to the following additional requirements:
 - 1. Manufactured in America, in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements.
 - 2. Thickness Class: 52
 - 3. Joint Type: Push-on Joints, must be "Tyton" joint
 - 4. Interior Surface: Cement Lined, double thickness with Bituminous material seal coat.
 - 5. Exterior Surface: Coal-Tar Base Bituminous Coating approximately 1-mil thick.
- B. Fittings for water mains to be furnished by the Contractor shall conform in all respects to AWWA Specification C153, latest revision, and to the following additional requirements:
 - 1. Manufactured in America, in accordance with American Iron and Steel (AIS) requirements.
 - 2. Joint Type: Mechanical Joints
 - 3. Pressure Rating: 350 psi
 - 4. Type of Iron: Ductile Iron
 - 5. Interior Surface: Cement Lined, double thickness with bituminous material seal

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- coat.
6. Exterior Surface: Coal Tar Base Bituminous Coating, approximately 1-mil thick.
- C. All pipe and fittings shall be American-made as stipulated in Section 200 Chapter 2.1 and in accordance with AIS requirements. This requirement shall not apply only if a waiver is granted by the EPA. In part the contractor shall demonstrate in writing that steel products are not produced in, or readily available in the United States, or that such products exceed the cost obtained internationally by more than 25%.
- D. Cement mortar lining for fittings shall conform in all respects to AWWA Specifications C104, latest revision, except that lining thickness shall be twice that specified in Section 4-10.1 of AWWA Specification C104.
- E. Tyton gasket joints for pipe and rubber gasket joint, tee head bolts and hexagonal nuts for fittings, to be furnished by the Contractor, shall conform to AWWA Specification C111, latest revision.
- F. Full body ductile iron mechanical joint C153 couplings by Tyler Union or approved equal are preferred to flexible couplings and shall be used where existing pipe OD sizes allow its use. Flexible couplings and reducer couplings to be furnished by the Contractor shall be installed where required for connection of new pipe to existing pipe, as shown on the Drawings, as directed, or as otherwise required for the complete installations of the pipeline system. Where end-to-end connections of new and existing pipe are required, couplings specifically pre-manufactured for the connection of dissimilar sizes and types of pipe will be subject to the approval of the Owner. Couplings for smaller pipe size (16" or less) shall be Romac Style 501, or approved equal, and couplings for larger pipe sizes (greater than 16") shall be Romac Style 501 (different o.d.) or approved equal. The Contractor shall be responsible for determining required types and sizes of all couplings to be used.
- G. Corporation stops to be furnished by the Contractor shall be installed where required to connect house services, replace 5/8" corporation stops, as shown on the drawings, as directed and as required to complete the work. Corporation stops are specified under Section 02650 "WATER SERVICE LINES".
- H. All pipe fittings, gaskets, accessories and appurtenances shall be new and unused.
- I. Joint restraint systems to be furnished by the Contractor when restraining, new to existing work shall be hot-dip galvanized steel, as manufactured by Star National Products or Carpenter when restraining new to new work shall be **MEGALUG** thrust restraint wedge, as manufactured by EBBA Iron, Inc.

PART 3 EXECUTION

3.1 INSPECTION

- A. Examine all pipe and fittings for cracks, flaws, or other defects. Remove defective pipe and

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fittings from the site. Pipe and fittings in which the lining has been broken or loosened shall be replaced. Where damaged areas are small and readily accessible, the Contractor may be permitted to repair the lining at the discretion of the Owner.

3.2 HANDLING PIPE AND FITTINGS

- A. Care shall be taken during loading, transporting, and unloading to prevent injury to the pipe or coating. Under no circumstances shall pipe or fittings be dropped.
- B. If any defective pipe is discovered after it has been laid, it shall be removed and replaced with sound pipe in a satisfactory manner by the Contractor, at his own expense. All pipe and fittings shall be thoroughly cleaned before laying, shall be kept clean until used and installed where work is completed, and when laid shall conform to the lines and grades shown.

3.3 PREPARATION

- A. Proper implements, tools and facilities, satisfactory to the Owner, shall be provided by the Contractor for the proper and satisfactory execution of the work.
- B. The interior of pipe and fittings shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during the laying operations.
- C. The trench bottom and bedding shall be shaped and compacted to give substantially uniform unyielding circumferential support to the lower quarter of pipe along the entire length of each pipe. Bell holes shall be excavated so that after placement only the barrel of the pipe receives bearing pressure from the trench bottom.
- D. Pipe, pipe fittings and accessories shall be handled, stored, installed, joined and protected by the Contractor in strict accordance with the printed recommendations of the manufacturer of the piping material.

3.4 INSTALLATION

- A. The Contractor shall furnish to the Owner for his use, copies of the printed recommendations of the pipe manufacturer for the handling, storing, protection and installation of pipe and fittings.
- B. Water main pipe, fittings, specials and accessories shall be installed in conformance with AWWA Specification C600, latest revision, and the additional requirements specified under Section 02713 "INSTALLATION OF WATER PIPELINE SYSTEMS", as well as herein.
- C. Each pipe shall be laid true to line and grade and in such manner as to form a close concentric joint with the adjoining pipe and to prevent sudden offsets in the grade of the line. No spalls, shims or lumps shall be used to raise the pipe to grade. All pipe shall be maintained accurately to the required line and grade. Any pipe that has the grade or joint disturbed after laying shall be re-laid.
- D. Trenches shall be kept free from water so as to prevent flotation of the pipes and pipelines

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shall be constructed “in the dry”, unless otherwise directed by the Owner, and shall not be laid when the condition of the trench or the weather is unsuitable for such work. The maintaining of pipe trenches in a dry condition shall be as specified in Section 02401 “DEWATERING, CONTROL AND DIVERSION OF WATER”, and no separate payment will be made, but the cost thereof shall be deemed to be included in the unit prices bid for other items. At times when work is not in progress, open ends of pipe and fittings shall be securely closed so that no trench water, earth or other substance will enter the pipe or fittings.

- E. All fittings shall be anchored to prevent any movement of the fittings or the adjacent pipe. In general, this anchorage shall be provided by the installation of Class B Portland Cement concrete thrust blocks, and clamps, yokes and tie rods as specified and shown on the drawings, as directed by the Owner, or as otherwise required to satisfactorily restrain all fittings and appurtenances. Hand excavation may be required to excavate for the concrete thrust blocks. The Owner may require concrete to be placed at points on the pipeline other than at fittings. All concrete used for thrust blocks shall be exposed for at least sixteen hours before being covered. Insofar as possible, thrust blocking shall be placed so that the pipe and fitting joints will be accessible for repair. Concrete for thrust blocks is specified under Section 03310 “MISCELLANEOUS CONCRETE WORK”, and will be measured separately for payment under the Item “Class B Cement Concrete Complete In-Place”, as listed in the Bid.
- F. Taps for water service corporation stops shall be made where shown on the Drawings or as directed by the Owner. The tapping machine shall be of approved design and in good operating condition. Only a clean, sharp drill-tap tool of the proper size and thread shall be used. The machine shall be firmly clamped to the pipe at an angle of about 90 degrees as indicated on the plans. Threads shall be clean and sharp and deep enough so that no more than three threads show when the stop is inserted and tightened with the operating nut on top. The stop shall be tightened only enough to make a watertight joint and not over tightened. Corporation Stops will be measured and paid for under Section 02650 “WATER SERVICE LINES”.
- G. Jointing of mechanical joint fittings, specials and valves shall be provided in accordance with the printed recommendations of the pipe manufacturer, and as specified. The mechanical joint fittings, joint restraint systems, specials and valves shall be suitable for jointing with the pipe with which they are used, and the Contractor shall provide, at no additional expense to the Owner, all necessary adapters for the proper jointing of pipe, pipe fittings, specials, and valves. The last 8 inches of the outside of the spigot end of the pipe and the inside bell of the mechanical joint shall be thoroughly cleaned to remove all oil, grit and other matter from the joint. When assembling joint, it is essential that the gland be brought into place and bolts tightened in a manner to insure the maintaining of the same space between the gland and the face of the flange at all points around the socket. The range of bolt torque in making the joints shall be as recommended by the manufacturer of the mechanical joints. Over stressing of bolts will not be permitted; if effective sealing is not obtained at the recommended maximum bolt torque, the joint shall be disassembled, thoroughly cleaned and reassembled.
- H. When saw cutting of pipe is required, the cutting shall be done by saw in a neat and workmanlike manner without damage to the pipe or cement lining. Cut ends shall be smooth and at right angles to the axis of the pipe. Pipe ends to be used with a rubber joint shall be

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beveled and filed or ground smoothly to conform to the manufactured spigot end. Cement lining shall be undamaged.

- I. At all times when pipe laying is not in progress, including lunchtime or when trench is unattended, the open ends of the pipe shall be closed by watertight plugs or other approved means.
- J. Lead jointed pipe shall be replaced with cement lined ductile iron pipe meeting the herewith specifications.

3.5 JOINTING DUCTILE IRON PIPE (Push-On-Type)

- A. Push-on joints shall be made in strict accordance with the manufacturers instructions. Pipe shall be laid with bell ends looking ahead. A rubber gasket shall be inserted in the groove of the bell end of the pipe, and the joint surfaces cleaned and lubricated. The pipe lubrication shall be ANSI/NSF approved for potable water. The plain end of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which it is to be jointed, and pushed home with a jack or other means. After jointing the pipe, a metal feeler shall be used to make certain that the rubber gasket is correctly located.
- B. Jointing by pushing the pipe home with a backhoe bucket or other heavy equipment will not be permitted. Utilizing the backhoe and a sling to suspend pipe while pushed home by bar or jack is permitted.
- C. Protect the end of the pipe from damage at all times by using a timber header between the end of pipe and the bar or jack.

3.6 JOINTING MECHANICAL JOINT VALVES

Mechanical joints at valves and where designated shall be installed in accordance with the "Notes on Method of Installation" under AWWA C111, AWWA C-600 and the instruction of manufacturer. To assemble the joints in the field, the Contractor shall thoroughly clean the joint surfaces and rubber gasket with soapy water before tightening the bolts. Bolts shall be tightened to the specified torque. Under no conditions shall extension wrenches or pipe over handle of ordinary ratchet torque wrench be used to secure greater leverage.

3.7 PIPE REMOVAL

Where old pipe conflicts with new pipe, old pipe shall be cut and capped on both ends and the cap shall be secured. No fitting or pipe deflection will be allowed on new pipe to go over or under old pipe. In areas where water main is to be removed, the contractor shall disconnect

each service lateral from the main at the corporation prior to removal of the main. The contractor shall be responsible for the disposal of the removed water main pipe.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

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- A. Ductile iron pipe for water mains and hydrant branches will be measured for payment by the linear foot (L.F.) in-place, complete, tested and disinfected, as measured along the axis of the pipe from the face of the hub forming the beginning of the work to the hub or spigot constituting the end of the line, with no deductions made for the length of fittings and valves in the line. No pipe will be measured for payment until it has been tested, disinfected, and put back in service.
- B. Ductile iron pipe fittings will be measured for payment by the unit “pound” (LB.). The number of pounds of fittings to be paid for shall be the weight stated in AWWA C153, latest revisions. The Contractor shall furnish a copy of the Manufacturer’s catalog to the Owner at the start of work, and all fitting weights shall comply with AWWA C153.
- C. Testing and disinfecting water lines will not be measured separately for payment, but no additional retention from progress payments due the Contractor shall be made as outlined below.
- D. Flexible couplings (4” through 24” nom. diameter) will not be measured separately for payment.
- E. Old water mains to be removed will be measured for payment by the unit “linear feet” and shall include the disconnection of existing service laterals from the main at the corporation prior to removal of the pipe. This will not be limited to 6-inch pipe only and shall include any size pipe required to be removed and capped.

4.2 BASIS OF PAYMENT

- A. The quantity of ductile iron pipe measured in place as provided above, will be paid for at the unit price bid for “FURNISH AND INSTALL DUCTILE IRON PIPE” of the sizes listed in the Bid, which shall constitute full compensation for furnishing and installing ductile iron pipe and furnishing and installing all materials including all excavations and backfilling, tyton gaskets, jointing accessories, and flexible couplings and reducer couplings, including labor, tools and equipment, and for performing all operations in connection with the hydrostatic testing and disinfecting, furnishing services of manufacturer’s representatives, and all other costs incidental and necessary to complete the work as specified, as indicated and as directed by the Owner.
- B. The quantity of “FURNISH AND INSTALL DUCTILE IRON FITTINGS WITH THRUST RESTRAINT”, measured as provided above, will be paid for at the unit price bid, as listed in the Bid, which shall constitute compensations for furnishing and installing all materials, jointing accessories, joint restraint systems, sleeves, gaskets, glands, nuts, bolts, and special apparatus, including labor tools and equipment, testing and disinfection, handling, hauling, furnishing services of manufacturer’s representatives and for all other specials and incidental and necessary work to complete the item as specified, indicated or directed by the Owner. Glands, bolts and nuts shall not be included in weights. No separate payment will be made for joint restraint, whether or not restraint is specifically called off on the Drawings.

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- C. No separate payment will be made for testing and disinfecting water mains, but the costs thereof shall be deemed to be included in the prices bid for other items of work under this section. See section 02710 "TESTING AND DISINFECTING WATER MAINS".

- D. Payment for removal and disposal of existing water main piping where required to install valves, hydrants, fittings and appurtenances, and new water main piping is incidental to the work of these items and shall be paid for under separate bid items. This shall constitute compensation for the removal and disposal of existing water main pipe conflicting with new water main installation or as noted on the plans. This includes the removal of service laterals at the corporation prior to removal of the pipe, providing for caps and means of securing/anchoring caps including all labor, tools and equipment, handling, hauling and all other special and incidentals necessary to complete the work item as specified.

END OF SECTION

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SECTION 02640 VALVES, TAPPING SLEEVES, & APPURTENANCES

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work:

The work covered under this section of the Specifications consists of furnishing all labor, materials, equipment and appurtenances, and performing all operations in connection with providing gate valves, butterfly valves, tapping sleeves and valves, valve boxes and accessories, and all miscellaneous and appurtenant work, in accordance with the Specifications and Drawings, and as directed by the Owner.

B. Related Work Described Elsewhere:

- | | |
|---|---------------|
| 1. Ductile Iron Water Mains and Appurtenances | Section 02615 |
| 2. Fire Hydrants | Section 02644 |
| 3. Installation of Water Pipeline | Section 02713 |

C. References:

All valve and appurtenances specified herein shall conform in all respects to AWWA Standard Specifications, latest revision, and to the additional requirements specified herein.

1.2 QUALITY ASSURANCE

A. Conformance Certificates:

1. The Contractor shall furnish to the Owner, manufacturer's notarized certificates of conformance stating that all materials to be furnished under this section of the specifications conform with all specification requirements, and each shipment of gate valves, butterfly valves, tapping sleeves and valves, valve boxes and accessories meet all requirements of the specifications.

B. Submittals:

1. Shop Drawings shall be submitted for approval in accordance with Section 01300. They shall conform to the requirements of the AWWA Standard Specifications, latest revision, and shall include complete dimensional fabrication and erection details, net weights, material lists, maintenance data and all other additional information required by the Owner. Materials shall not be manufactured prior to shop drawing approval.

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1.3 PRODUCT INSPECTION, RECEIVING, HANDLING AND STORAGE

- A. The inspection, receiving, handling and storage of all materials shall conform in all respects to the requirements of AWWA Specification C600, latest revision, Section 2.

PART 2 PRODUCTS

2.1 MATERIALS

A. Gate Valves:

1. Resilient Seated Wedge Valves (Including Tapping Valves)
 - a. Shall be American-made in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements and shall meet or exceed the minimum materials and performance requirements of AWWA Standard C-509 (latest revision). Both ends shall be mechanical joint in accordance with C-111 except tapping valves where only the outlet end shall be mechanical joint.
 - b. Valves shall have a minimum design working pressure of 200 psi and a minimum test pressure of 400 psi. The pressure rating shall be cast on the outside of the valve.
 - c. Valve body and bonnet shall be of ductile iron coated on all exterior and interior surfaces with a fusion bonded or thermo set epoxy conforming to AWWA Standard 550 (latest revision). The coating shall be applied with a minimum thickness of 8 MILS. The manufacturer shall certify that the coating is suitable for use in a potable water system and the interior coating is holiday-free. Reduced wall ductile iron valves are acceptable, however they shall be made in America per ARRA requirements. The Contractor is prohibited to field touch up the interior epoxy coating of the valves. Valves with damaged interior coatings shall not be installed on this project.
 - d. The resilient seated disc wedge shall be fully encapsulated in rubber. The rubber shall be securely bonded to the wedge including the part which houses the stem nut. The stem hole through the wedge shall be full opening top to bottom and shall also be covered in rubber. Disc wedges not 100 percent fully encapsulated in rubber shall not be acceptable.
 - e. The stem shall be non-rising design, Grade "E" bronze with a yield of not less than 3200 psi and an elongation of not less than 10 in two inches or stainless steel AISI Type 420, 304 or 316. The 3000 Series stainless steel shall be strain-hardened to meet the physical requirements referenced above.

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- f. The “O” Ring stem seal shall be replaceable with the valve under pressure in the fully open position. Valves shall open to the right (clockwise) as indicated by a directional arrow cast on a 2” square operating nut.
- g. All bonnet bolts, seal or gland plate bolts, stuffing box bolts and other bolts with threads exposed to the environment and all exposed nut shall be manufactured of Type 304 Stainless Steel.
- h. Tapping valves shall be furnished with the tapping flange having a raised face or lip designed to engage the corresponding recess in the tapping sleeve flange in accordance with MSS-SP60. Tapping valves without the raised face shall not be allowed because they do not insure the proper alignment required to prevent damage caused by a misaligned shell cutter. The interior of the waterway in the valve body shall be a full opening capable of passing a full-sized shell cutter equal to the nominal diameter of the valve.
- i. Certificate of Compliance: A certificate of compliance from the manufacturer must be submitted stating that the valve, stem and coatings meet all criteria detailed in this specification.

B. Tapping Sleeves and Valves

- 1. Shall be American made in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements and shall be cast iron mechanical joint tapping sleeves shall have confined end gaskets to resist cold flow creep, and be designed for a maximum working pressure of 200 psi. The tapping sleeve shall be shipped with small and large O.D. range gaskets clearly marked and tagged.
- 2. Tapping sleeves shall be cast iron with mechanical joints.
- 3. For tapping sleeves 12 inches or less, stainless steel sleeves are acceptable and shall be approved by the City of East Providence Water Division. Stainless steel sleeves shall be American made in accordance with ARRA requirements. The body, lugs, and branch outlet including the flange shall be all stainless steel, 18-8, Type 304. All welds shall be fully passivated to restore stainless characteristics. Bolts and nuts shall be 18-8 type 304 stainless steel with heavy hex nuts and washers coated to prevent galling. Gasket shall be full circumferential gasket compounded for water use per ASTM D2000. Gasket to be Buna-N. Sleeve to be rated for 150 psi working water pressure. Allowable stainless steel tapping sleeves shall be Ford-STSS, JCM 432, Smith Blair 665 or approved equal.
- 4. Tapping valves shall be Resilient Seated Wedge type with mechanical joint for branch main, and capable of operating at 200 psi.
- 5. Valve opening direction shall be “open-right” (clockwise).

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C. Butterfly Valves

1. Butterfly valves shall conform in all respects to AWWA Specification C-504, latest revision, Class 150B, except as otherwise specified herein. All hardware associated with butterfly valves shall be stainless steel. Butterfly valves shall be certified as suitable for contact with drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 61, Drinking Water System Components-Health Effects. Butterfly valves shall incorporate the following features:
 - a. Type of Body: Cast-iron valve body, ASTM A-126, Class B.
 - b. Type of Valve Ends: Mechanical Joint (Buried Service) ANSI A21.11 or flanged joint (above ground service). Flange drilling shall be in accordance with ANSI B16.1.
 - c. Type of Valve Disc: Cast iron ASTM A-126 Class B in sizes 20" and smaller. Sizes 24" and larger shall be built from ductile iron in conformance to ASTM A-536. Disc shall be furnished with Type 316 stainless steel seating edge to mate with the rubber seat on the body.
 - d. Valve seat shall be Buna-N rubber. In sizes 20" and smaller, valves shall have bonded seats that meet test procedures outlined in ASTM D-429 Method B. Sizes 24" and larger shall be retained in the valve body by mechanical means without use of metal retainers or other devices located in the flow stream.
 - e. Type of Valve Shaft: Type 304 or 316 stainless steel conforming to ASTM A-276. Shaft seals shall be standard self-adjusting split V packing. Shaft seals shall be of a design allowing replacement without removing the valve shaft.
 - f. Type of Bearings: Sleeve type that is corrosion resistant and self-lubricating.
 - g. Type of Actuator: Fully grease packed and has stops in the open/close position. The actuator shall have a mechanical stop which will withstand an input torque of 450 ft. lbs. against the stop. The traveling nut shall engage alignment grooves in the housing. The actuators shall have a built in packing leak bypass to eliminate possible packing leakage into the actuator housing.
 - h. Type of Operator: Torque limiting.
 - i. Direction of Operating Nut Opening Rotation: RIGHT.
2. All valves shall be provided with shaft seals designed for the use of stuffing boxes with pull-down packing. Stuffing boxes shall be of cast-iron, conforming to ASTM A126, Class B, with cast bronze gland assemblies and flax packing or split-vee chevron type.
 - a. Rated Working Pressure/Test Pressure: 150 psi/300 psi (16" to 48" sizes).
 - b. All buried butterfly valves shall be supplied with a Diviner ground level position indicator as manufactured by Henry Pratt Company.
 - c. For purposes of system standardization, butterfly valves shall be Henry Pratt Groundhog model for buried installations, Henry Pratt HP250II Bonded Seat for above ground installations.
 - d. Butterfly valves shall be equipped with sacrificial zinc anode protection caps for corrosion resistance.
 - e. All butterfly valves shall be tested at the factory prior to shipment.
3. All hardware, specifically nuts, washers and bolts, associated with butterfly valves shall be stainless steel.

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- D. Joint restraint shall be provided for all mechanical joint valves, fittings, fire hydrants and pipe. Joint restraint shall be MEGALUG.
- E. Valve Boxes
1. Shall be American-made in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements. Each gate valve shall be accompanied by a valve box. Valve boxes shall be heavy pattern ductile iron, and cast in two telescoping sections of sliding construction. Valve boxes shall be coated with coal-tar pitch enamel or other approved coating.
 2. The upper section of each box shall have a flange at the bottom having sufficient bearing area to prevent settling. The lower section shall be at least 5-1/4 inches inside diameter, belled or domed at bottom to fit over the work. Covers shall be at least 6 inches in diameter, fit flush with the top and shall have the word "WATER" cast thereon in raised letters. A centering ring shall also be provided and installed.
 3. Valve boxes shall be "Buffalo" type suitable for the size valve on which they are used and shall be as manufactured by General Foundry (GFI) or approved equal.
- F. Service Connections
1. Shall be American-made in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements. Corporation stops shall be pack joint fitting such as Ford (see detail for model number) or approved equal manufactured in America.
 2. Service connection lines shall be 3/4 or 1 inch Type K soft copper.
 3. New service to include pack joint ball valve curb stop such as Ford (see details for model number) or approved equal, manufactured in North America, with 5/8-inch rolled steel rod, 42-inches long, connected with brass or stainless steel pins.
 4. Service boxes to be provided for new service connections. Service boxes shall be cast iron "Buffalo" type or approved equal, manufactured in North America. The upper section shall be sliding type with 2-1/2 inch shaft and 24 inches long. The lower section shall have 2-1/2 inch shaft, sliding 40-inches long.
 5. Relocated services shall require a pack joint three part coupling such as Ford or approved equal at connection to existing house service.
- G. Air Release Assembly
1. Air release assembly shall be American-made in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements. Air release assembly shall be installed as shown on Detail Sheet

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Construction Plans.

2. Corporation stops shall be pack joint fitting such as Ford or approved equal, manufactured in North America.
3. Copper tubing shall be 1-inch, Type "K", soft temper.
4. Road boxes shall be cast iron. Road box rods 36" long, 5/8" rolled steel with stainless steel pins with adequate malleable iron socked or equal, all to be raised or adjusted to grade.

Roadway boxes and covers shall be cast iron top section as manufactured in America. Buffalo sliding type cover, 24" long, or equal. Cast iron bottom section Buffalo sliding type, 5 1/4" shaft, 36" long to fit top section, or equal. All roadway boxes to be raised or adjusted to grade without the use of road box risers.

H. Hydrants

1. Hydrants shall be in accordance with Section 02644 – Fire Hydrants.

PART 3 EXECUTION

3.1 INSPECTION

- A. All valves, valve boxes, and accessories shall be carefully inspected by the Contractor for defects before installation and all defective, unsound or damaged materials shall be rejected. The Owner will make such additional inspection he deems necessary and the Contractor shall furnish all necessary assistance for such inspection.
- B. Operational parts shall be operated several times to demonstrate proper operation and adjustment.

3.2 PREPARATION

- A. Proper implements, tools and facilities, satisfactory to the Owner shall be provided by the Contractor for the proper and satisfactory execution of the work.
- B. The interior of gate valves, tapping sleeves and valves, valve boxes, and accessories shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operations.
- C. Gate valves, tapping sleeves and valves, valve boxes and accessories shall be handled, stored, installed, jointed and protected by the Contractor in strict accordance with the printed recommendations of the manufacturer of the piping materials.

3.3 INSTALLATION

- A. The Contractor shall furnish to the Owner for his use, copies of the printed recommendations

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of the respective valve manufacturer(s) for the handling, storing, protection and installation of valves and accessories.

- B. Gate valves, butterfly valves, tapping sleeves and valves, valve boxes and accessories shall be installed in conformance with AWWA Specifications C 600, latest revisions, and as specified herein, and with additional requirements contained in Section 02713 "Installation of Water Pipeline Systems".
- C. Installation of valves and valve boxes shall not be made when trench or weather conditions are unsuitable for the work. All excavations and valve structures shall be kept free of water during installation of the valves and jointing operations and for such additional lengths of time as may be required to insure the satisfactory installation of the valve assemblies and appurtenant work.
- D. Valve boxes shall be provided for all valves and they shall be set plumb. Valve boxes shall be centered on the valve operating nut using a centering ring. Care shall be taken that no part of the riser section and its pad shall bear on any part of the valve. Provision shall be made to keep any stones, mud or debris from entering the riser section during and after backfilling. Any blockages of the box shall be remedied by the Contractor at his own expense. Valves and riser section shall be centered on valves and the cover shall be set flush with the finished surface. The bottom of the cover shall have a minimum clearance of three (3) inches from the top of the riser pipe.
- E. Gravel bedding shall be carefully tamped under and around the valve box riser section and pad, and compaction will extend to a distance of at least four feet in locations of continuous trenching, elsewhere to the undisturbed trench face in each direction.
- F. Jointing of mechanical joint valves and accessories shall be provided in accordance with printed recommendations of the manufacturer as specified. The mechanical joint valves shall be suitable for jointing with the pipe with which they are used and the contractor shall provide, at no additional expense to the owner, all necessary adapters for the proper jointing of the pipe, pipe fittings, specials and valves. The last eight inches of the outside of the spigot end of the pipe and the inside of the bell of the mechanical joint shall be cleaned to remove all oil, grit and other foreign matter from the joint. When assembling joint, it is essential that the gland be brought into place and bolts tightened in a manner to insure the maintaining of the same space between the gland and the face of the flange at all points around the socket. The range of bolt torque in making up joints shall be as recommended by the manufacturer of the mechanical joints. Overstressing of bolts will not be permitted; if effective sealing is not obtained at the recommended maximum bolt torque, the joint shall be disassembled, thoroughly cleaned and assembled.
- G. All materials found to be defective during the process of the work will be rejected by the Owner and the Contractor shall promptly remove such defective material from the site. All defective material shall be replaced by the contractor with new sound material at no additional expense to the Owner. The contractor shall be responsible for the safe storage off all material.
- H. Cut in valves shall be installed according to the details provided in the Drawings. Sufficient

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crushed stone will be provided for bearing under the new valve.

- I. For tapping sleeve and valves the Contractor shall determine the location of the existing main to be tapped to confirm the fact that the proposed position for the tapping sleeve will be satisfactory and no interference will be encountered. No tap will be made closer than 3 feet from a pipe joint.

3.4 REMOVAL AND DISPOSAL OF VALVE ROAD BOXES

- A. All existing valve road boxes on abandoned water main as designated by the Engineer shall be removed entirely and disposed of by the Contractor. All removed materials become the property of the Contractor. The excavation shall be properly backfilled with suitable material and compacted as specified in section 02211 – Earth Trench Excavation and Backfill. Pavement restoration shall be in accordance with section 02513 – Pavement Restoration.

3.5 SERVICES OF MANUFACTURERS' REPRESENTATIVES

- A. The Contractor shall furnish, at no additional expense to the Owner, the services of manufacturers' representatives for such lengths of time as may be necessary to properly instruct the Contractor's personnel in the proper handling installation and jointing of the valves and accessories in accordance with the printed recommendations of the manufacturer.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. Gate valves and butterfly valves with valve boxes will be measured for payment as unit assemblies "Each" complete, in-place and accepted, as listed in the Bid.
- B. Tapping sleeves and valves with valve boxes will be measured for payment as unit assemblies "Each" complete, in-place and accepted, as listed in the Bid.
- C. Cut in valves with valve boxes will be measured for payment as unit assemblies "Each" complete, in-place and accepted, as listed in the Bid. Couplings and ductile iron pipes nipples will be measured separately under the appropriate pay items.
- D. Valve road box removal and disposal on abandoned water mains will only be measured for payment if the valve box to be removed is outside of the lines of the new water main trench patch. Valve box removal and disposal will be measured as "Each", complete, as listed in the Bid. Pavement items will be paid under the unit prices as listed in the Bid.

4.2 BASIS OF PAYMENT

- A. For furnishing and installing unit assemblies of gate valves and butterfly valves with cast-iron valve boxes, complete, in-place and accepted, the Contractor will receive the contract unit price bid "each" for "FURNISH AND INSTALL VALVE AND VALVE BOX", of the sizes and type listed in the bid.

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- B. For furnishing and installing unit assemblies of tapping sleeves and valves with cast-iron valve boxes, complete, in-place and accepted, the Contractor will receive the contract unit price bid “Each” for “FURNISH AND INSTALL TAPPING SLEEVE AND VALVE”, of the size listed in the Bid.

- C. For removing and disposing abandoned water valve road boxes on abandoned water mains, the Contractor will receive the contract unit price bid “each” for “REMOVE AND DISPOSE ABANDONED ROAD BOX”, as listed in the Bid.

END OF SECTION

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SECTION 02644

FIRE HYDRANTS

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work:

The work covered under this section of the Specifications consists of furnishing all labor, materials, equipment and appurtenances, and performing all operations in connection with the installation of Fire Hydrants, at the locations and to the details indicated, and/or as directed by the Owner including removal of designated existing fire hydrants and delivery of same to the City of East Providence, Water Division, and all other related appurtenant work, complete, in-place and accepted.

B. Related Work Described Elsewhere:

- | | | |
|----|--|---------------|
| 1. | Earth Trench Excavation & Backfill | Section 02211 |
| 2. | Ductile Iron Water Mains and Appurtenances | Section 02615 |
| 3. | Valves, Tapping Sleeves, & Appurtenances | Section 02640 |
| 4. | Test and Disinfect Water Mains | Section 02710 |
| 5. | Install Water Pipeline Systems | Section 02713 |

C. References:

All fire hydrants shall conform to the requirements of AWWA Specification C502, latest revision and to the additional requirements specified herein. Manufacturer shall supply complete maintenance data drawings for approval, and certificates of compliance in accordance with Section 1 of AWWA Specifications.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All hydrants shall be American-made in accordance with Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014 requirements. Should the hydrant not meet these standards, it shall not be accepted. All hydrants shall be of the dry barrel, compression shut off type closing with pressure, with National Standard Thread. For purposes of standardization, hydrants shall be the Super Centurion 250 Model No. A423, as manufactured by Mueller Company, Decatur, Illinois, American Darling B-84-B-5 as manufactured by American Flow Control, Birmingham Alabama or AVK Series 2780 Nostalgic Style Dry Barrel, American AVK Co, Minden Nevada. The drain valve shall operate automatically when the hydrant is operated, to

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provide drainage of the barrel. Bronze to bronze seating is standard.

The valve drainway shall be all bronze. Pressure seals in the main valve area shall be o-rings. Hydrants shall conform to the additional requirements specified herein.

1. Hydrants shall be equipped with the following features:
 - a. Type of Hydrant: Traffic type with safety stem coupling and safety flange.
 - b. Bury Length: Typically 5'-6" with extension sections available in 6-inch increments to 2'-0" (Exact bury is to be determined in the field by the Contractor prior to ordering the hydrant or prior to the pre-construction meeting).
 - c. Number of hose and pumper outlets:

Two – 2 ½-inch Hose Outlets
One – 4 ½-inch Pumper Outlet
 - d. Joint Type: Mechanical Joints
 - e. Type of Outlet Nozzle Threads:

2 ½-inch Hose outlets to have National Standard Thread (Field Replaceable)
4 ½-inch Pumper Outlets to have National Standard Thread (Field Replaceable)
 - f. Type of Construction:

Upper Valve Plate – Bronze
Seat Ring – Bronze
Drain Ring – Bronze
Operating Nut – Bronze
Nozzles – Bronze
 - g. Size of Hydrant (Nominal Diameter of Main Valve opening): 5 ¼-inches
 - h. Direction of operating Nut Opening Rotation: **Left**
 - i. Stem type: Dual O-ring
2. The foot piece, or elbow design, shall have smooth transitional contours for maximum flow, and shall be coated with approved epoxy. It shall have blocking pads for easier setting, and two (2) lugs for strapping. Inlet connection shall be standard 6-inch

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mechanical joint.

3. Hydrants shall conform to the Torque requirements specified in AWWA Specification C502, latest revision, regardless of bury length.
 4. The opening between the wrench nut and top of the hydrant bonnet shall be protected from rain and dirt by an acceptable weather cap. Open left with arrow shall be on weather cap.
 5. All nozzles shall be provided with heavy cast iron caps, screwed on and attached to the upper barrel by non-kinking chains with connector ring. Chain loop shall permit free turning of the cap. All nozzles shall be fitted with gaskets. The operating nuts on nozzle caps shall be exactly the same size as that on top of the main stem. The operating nuts on nozzle caps and on top of the main stem shall be 1 ½ inch pentagonal nuts. Hose and steamer nozzles shall be secured to the upper barrel by thread or quarter turn lock-type nozzles and locked into place for easy field replacement.
 6. Hydrant top section shall receive two shop coats of primer. Finish coat to be 2 shop coats of enamel **Chrome Yellow (Caution Yellow)**.
- B. Gate Valves and Valve Boxes for Fire Hydrants are specified under Section 02640 “VALVES, TAPPING SLEEVES & APPURTENANCES” of the Specifications and separate payment will be made under that Item as listed in the Bid.
- C. Ductile iron pipe for Fire Hydrants is specified under Section 02615 “DUCTILE IRON WATER MAINS AND APPURTENANCES” of the Specifications, and separate payment will be made under that Item as listed in the Bid.
- D. Crushed processed gravel fill around Hydrants is specified in Section 02211 “EARTH TRENCH EXCAVATION AND BACKFILL” of the Specifications. One and one-half inch stone bedding for hydrant drainage shall be provided from off-site sources in the quantities required for completion of the work, shall be as approved by the Owner and shall be paid for under the Item for “Crushed Processed Gravel”. Stone Bedding shall consist of clean, sound tough, durable rock free from loam, clay, organic matter, and shall not contain more than 1 per cent crusher dust by weight. It shall, in general, be as specified by the “Standard Specifications for Road and Bridge Construction” of the State of Rhode Island, Article M.01.09, Crushed Stone. Crushed Stone shall conform to the following limits:

U.S. Standard <u>Sieve Size</u>	Percent Passing <u>By Weight</u>
2 ¼ inch	100
2 inch	90-100
1 ½ inch	30-55
1 ¼ inch	0-25
1 inch	0-5

- E. Class B Cement Concrete for thrust blocks and restraints as shown on the Drawings shall

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be as specified in Section 03310 "MISCELLANEOUS CONCRETE WORK", and separate payment will be made under that Item as listed in the Bid.

PART 3 EXECUTION

3.1 INSPECTION

- A. All hydrants shall be carefully inspected by the Contractor for defects before installation and all defective, unsound or damaged materials shall be rejected.

3.2 PREPARATION

- A. Proper implements, tools, and facilities satisfactory to the Owner shall be provided by the Contractor for the proper and satisfactory execution of the work.
- B. The interior of new hydrants shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operations.
- C. The trench bottom and bedding shall be shaped and compacted and a flat rock or block shall be placed beneath the hydrant to give substantially uniform unyielding support to the hydrant.
- D. Hydrants and accessories shall be handled, stored, installed, jointed and protected by the Contractor in strict accordance with the printed recommendations of the manufacturer.

3.3 INSTALLATION

- A. Installation of Fire Hydrants shall be in conformance with the requirements of AWWA Specification C600, latest revision, and as indicated by drawings and as directed by the Owner.
- B. Resetting of existing fire hydrants shall be accomplished by the removal of the existing hydrant, hydrant service pipe and gate valve, and removal of main branch tee, reinstallation of the existing hydrant, a new swivel hydrant tee, a new 6-inch ductile iron hydrant service pipe, a new 6-inch gate valve a new valve box, new main line tee and thrust block. The new hydrant service pipe shall be of one piece, if possible, between the hydrant and the gate valve and be restrained with Mega-Lug joint restraints. The existing hydrant shall be reconnected to the new hydrant service tee and street main according to details provided on the Drawings and as directed by the Owner. If in the event that the reset hydrant or new hydrant is in need of an extension (flange nuts below grade) the proper barrel extension will be provided by the City of East Providence Water Division and is to be properly installed by the Contractor at no additional cost to the Owner. Vertical bends will not be permitted in the hydrant branch.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. Fire Hydrants will be measured for payments as units "Each" complete, in-place, as specified, and as shown on the Drawings

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- B. Resetting of fire hydrants will be measured for payment as units “Each” complete, in-place, as specified, and as shown on the Drawings.

4.2 BASIS OF PAYMENT

- A. Fire Hydrants measured for payment as specified above, will be paid for at the unit price bid for “FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY”, as listed in the Bid, which shall constitute full compensation for furnishing and installing all hydrants, tie rods, jointing materials, anchoring, and accessories, and all incidentals necessary to complete the work as specified, indicated on the Drawings, or as directed by the Owner. Payment for pipe, fittings and valves shall be made under the appropriate pay items.
- B. Resetting of fire hydrants measured for payment as specified above, will be paid for at the unit price bid for “RESET EXISTING FIRE HYDRANT”, as listed in the Bid, which shall constitute full compensation for furnishing and installing all hydrants, tie rods, jointing materials, anchoring, and accessories, and all incidentals necessary to complete the work as specified, indicated on the Drawings, or as directed by the Owner, including installation of City of East Providence Water Division supplied barrel extensions. Payment for pipe, fittings, couplings, valves, and valve boxes shall be made under the appropriate pay items.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

A. Work Included:

This section covers the furnishing of all labor, equipment, materials, equipment and appurtenances, and performing all operations in connection with the installation of new water service connections, reconnection of existing services to new water mains, the replacement of old water services, and the installation of new air release valves, consisting of piping, goosenecks, fittings and adapters, corporation stops, hydrant stops, curb stops, curb and valve boxes, reducers/couplings to connect new curb box to existing house lateral and all appurtenant items, complete, in-place, as shown on the Drawings, as specified herein or as otherwise directed by the Owner. The work shall also include removing existing curb stops and curb boxes.

B. Related Work Described Elsewhere:

- | | | |
|----|--|---------------|
| 1. | Earth Trench Excavation & Backfill | Section 02211 |
| 2. | Ductile Iron Water Mains and Appurtenances | Section 02615 |
| 3. | Install Water Pipeline Systems | Section 02713 |

1.2 QUALITY ASSURANCE

A. Reference Standards:

1. AWWA C800: Standard for Underground Service Line Valves and Fittings.
2. ASTM B88: Seamless Copper Water Tube.

B. Submittals:

1. Shop Drawings:

Shop drawings showing type of material and construction details for pipe, fittings, joints, corporation stops, hydrant stops, curb stops, curb boxes, valve boxes and appurtenant items.

2. Conformance Certificates:

Each shipment of corporation stops, hydrant stops, curb stops, curb boxes, and valve boxes shall be accompanied with the manufacturer's notarized certification

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that materials meet specifications requirements.

1.3 PRODUCT, DELIVERY, STORAGE AND HANDLING

- A. Do not deliver water service materials to the job site until ready for installation. Water service materials shall be stored in a clean dust free environment and shall be properly handled to prevent damage to materials and crimping of copper tubing.

PART 2 PRODUCTS

2.1 CORPORATION STOPS

- A. Corporation stops for water service lines shall be bronze composition containing not less than 85 percent copper. All components of the corporation stop except for certain parts of the outlet connection, shall be manufactured in accordance with AWWA standard C-800 latest revision in the United States of America.
- B. All corporation stops for 3/4-inch copper water service lines shall be pack joint fitting such as Ford FB1000-3-NL CC taper thread or approved equal.
- C. All corporation stops for 1-inch copper water service lines shall be pack joint fitting such as Ford FB1000-4-NL CC taper thread or approved equal.
- D. All corporation stops for 2-inch copper water service lines shall be pack joint fitting such as Ford FB1000-7-NL CC taper thread or approved equal.
- E. Service connection lines shall be 3/4 or 1 inch Type K Copper.

2.2 CURB STOPS

- A. Curb stops shall be manufactured of brass, cast in conformance with AWWA Standard C-800. New service to include pack joint ball valve curb stop such as Ford or approved equal with 5/8-inch rolled steel rod, 40-inches long with stainless steel pins.
- B. All curb stops for 3/4-inch copper water service lines shall be Ford B44-333 or approved equal.
- C. All curb stops for 1-inch copper water service lines shall be Ford B44-444 or approved equal.
- D. All curb stops for 2-inch copper water service lines shall be Ford B44-777 or approved equal.

2.3 CURB BOXES

- A. Curb boxes for curb stops shall be a rod type service box with a plug cover, 30-inch rod

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and centering ring. Service boxes shall be cast iron "Buffalo" type or approved equal. The upper section shall be sliding type with 2-1/2 inch shaft and 24 inches long. The lower section shall have 2-1/2 inch shaft, sliding 40-inches long. The covers for curb boxes shall be screwed to the top section and shall have a brass plug, and shall have the word "WATER" cast in them. Curb Stops to be placed on a bedding of 1-inch crushed stone or gravel to provide adequate drainage. Curb boxes shall be by General Foundry (GFI) or approved equal.

- B. Curb boxes for 2-inch service shall be 5 ¼" roadway box slip type as specified in Section 02640 of these specifications.

2.4 FITTINGS

- A. All necessary fittings and adapters shall be provided for the complete and proper fitting and installation of all water service lines. Fittings and adapters for flared pipe ends, shall be I.P. threaded brass fittings, bearing the trademark of maker, and shall be tested for casting defects. Fittings and adapters shall be as manufactured by Ford or approved equal. Conductive compression fittings will be permitted. Where the type of fittings or adapters is not indicated they shall conform to the standards of the City of East Providence, and they shall be of approved types.

2.5 WATER SERVICE PIPE

- A. All water service piping and goosenecks shall be either ¾, 1 or 2 inch ASTM B88-96, Type K, soft temper copper water tubing. Copper tubing shall be manufactured in the United States of America.
- B. New water service corporation shall be installed for each existing house service where shown on the drawings, or as otherwise directed by the Owner. Any non-copper water service line shall be replaced. The new water service line shall extend from the water main to the meter. Service pipe shall be laid to the depth and configuration shown on the Drawings. After the new main has been placed in operation, service to the homes shall be transferred by connecting the new service to the existing service at the property line.

2.6 AIR RELEASE VALVES

- A. Corporation and Curb stops for air release valves shall be 1-inch and shall be Ford F1000-4 CC corporation stop and Ford B44-333 curb stop and drain, or approved equal, installed with all nipples and fittings as shown on the Contract Drawings.
- B. Air release valves will be furnished with 1-inch brass pipe riser tubes to lengths required, and 1-inch brass caps, corporation stops and close nipples, as shown on the Contract Drawings. Ductile iron pipe will be drilled and tapped to accept the approved 1-inch corporation stop.
- C. Valve boxes for air release valves shall be of tough even-grained cast iron and of the adjustable, slip, heavy pattern type. The upper section of the box shall be provided with a flange having sufficient bearing area to prevent under settlement. The length of the top

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section shall be at least 26-inch and the length of the bottom section shall be at least 36-inch for a 5-foot box. The inside diameter of the box shall be at least 5 ¼-inches. The lower section of the box shall be designed with a bell to enclose the nut and the air release valve assemblies as shown on the Contract Drawings. Covers shall be tight-fitting and essentially dirt-tight, shall be flush with top of the box, and shall be marked as noted on the Contract Drawings "WATER". Valve boxes shall be suitable for the size valve on which they are used and shall be as manufactured by Ford or Mueller Model H-10334, or approved equal.

2.7 BLOW-OFF VALVES

- A. Blow-off valve assemblies shall be 2" Ford Blow-off System with a 2" stop & drain valve, 2" copper riser pipe to the length required, as manufactured by Ford, or approved equal, installed as shown on the Contract Drawings.
- B. Valve boxes for blow-off assemblies shall be of tough even-grained cast iron and of the adjustable, two piece slip type, heavy pattern valve box. The upper section of the box shall be provided with a flange having sufficient bearing area to prevent under settlement. Valve boxes shall be thoroughly coated with two coats of asphalt varnish. The inside diameter of the box shall be at least 5 ¼ inches. Covers shall be tight-fitting and essentially dirt-tight, shall be flush with top of the box, and shall be marked as noted on the Contract Drawings "WATER". Valve boxes shall be suitable for the size blow-off assembly on which they are used and shall be as manufactured by Ford or approved equal.

PART 3 EXECUTION

3.1 WATER SERVICE AND AIR RELEASE VALVE LOCATIONS

- A. Exact locations of corporation stops, service lines and curb stops and boxes will be as shown on the Drawings or designated in the field by the Engineer. Air release valves will be installed at high points along the limits of the water main installation, as shown on the Drawings or designated in the field by the Owner to permit the future release of air which may become entrapped in the water mains.

3.2 INSPECTION

- A. Examine the copper tubing and brass pipe, and fittings, corporation stops, hydrant stops, curb stops and boxes for cracks, flaws or other defects. Remove all defective material from the job site.

3.3 INSTALLATION

- A. Workmanship

All copper service water pipe and brass pipe, and fittings, corporation stops, hydrants, curb stops, and curb and valve boxes shall be installed by skilled workmen in an approved manner,

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and shall conform to the requirements of the East Providence Water Department. All services are to be installed perpendicular to the center line of the street and as straight and bend free as possible.

B. Jointing:

Jointing of copper tubing, brass pipe and fittings, corporation stops, hydrant stops and curb stops shall be in strict accordance with the printed recommendations of the respective manufacturers and as approved.

C. Corporation Stops:

For the purpose of installing corporation stops, the pipeline shall be tapped in strict accordance with the pipe manufacturer's printed recommendations and as approved. Corporation stops shall be tightened with a torsion wrench to the torque specified by the manufacturer and to ensure a watertight connection. Taps for the corporation stops shall be made adjacent to the existing service lines or as directed by the Owner. The tapping machine shall be of approved design and in good operating condition. Only a clean, sharp drill-tap tool of the proper size and thread shall be used. The machine shall be firmly clamped to the pipe at an angle of about 90 degrees. The drill-tap tool shall not be forced through the pipe wall. Threads shall be clean and sharp and deep enough so that no more than three threads show when the stop is inserted and tightened with the operating nut on top. The stop shall be tightened only enough to make a water tight joint and not over tightened.

Corporation stops ¾" and larger may be reused with owners approval where the water main is not being replaced and the corporation is undamaged. All corporations to be reused as such shall be redrilled to remove any accumulated material within them. The drilling tool shall be one consistent with the design of water main drilling tools such as the Mueller E-5.

D. Curb stops and boxes:

The new curb stops and curb boxes shall be installed on the end of the new service line and shall be tested for leakage and disinfected along with the new main and service pipe. The curb stop shall be firmly bedded in the bottom of the service pipe trench with the key in the vertical position. All curbstops, where possible, are to be installed 18 inches back from the face of curb or edge of pavement, in the sidewalk area.

Before backfilling, curb boxes shall be centered over the curb stop on a firm foundation and shall be placed perfectly plumb so that the operating wrench can be placed in position easily. Special care shall be taken by the Contractor that no earth, stones or other obstructions enter the curb boxes during backfilling and that the earth is firmly tamped around the box so that it will remain centered and in a vertical position. The top section of the box shall be adjusted so that the cover is flush with the sidewalk or ground surface.

E. Air Release or Blow-Off Valves:

For the purpose of installing corporation stops for air release or blow-off valves, the pipeline shall be tapped in strict accordance with the pipe manufacturer's printed recommendations

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and as specified above for corporation stops.

Hydrant or curb stops, and brass riser tubes and fittings for air release or blow-off valve will be installed as shown on the Contract Drawings and the complete assembly shall be tested for leakage and disinfected along with the new main. Before backfilling, air release or blow-off valves boxes shall be placed on a concrete foundation as shown on the Drawings, and arranged so that the tee handle can be opened and closed using a standard curb stop wrench. Special care shall be taken by the Contractor that no earth, stone or other obstructions enter the air release or blow-off valve boxes during backfilling, and that the earth is firmly tamped around the box so that it will remain in the vertical, proper position. The top section of the box shall be adjusted so that the cover is flush with the pavement or ground surface.

F. Testing Disinfection:

Hydrostatic and leakage tests and disinfection shall be performed in accordance with Section 02710 "TESTING AND DISINFECTING OF WATER MAINS". No separate payment will be made for testing and disinfection, and the cost thereof shall be deemed to be included in the work required herein, but an additional retention from progress payments due the Contractor shall be made as outlined below.

G. Remove and Dispose Existing Water Service:

Existing unused water services shall be shut off at the corporation stop and the existing water service pipe, curb stop and curb box shall be removed and disposed. Leaking corporation stops shall be tightened, capped, or replaced with plugs if necessary to stop the leakage.

H. Remove and Replace Existing Corporation Stop:

Existing corporation stops that are less than 3/4-inch in size or damaged and that are attached to water mains that will not be replaced shall be removed UNDER PRESSURE using an approved wet tapping machine and the appropriate extraction and insertion tools. Sizes and types of outlet threads on existing corporation stops shall be determined in the field by the Contractor. The existing under sized tap will then be redrilled and tapped for a 1-inch corporation stop to be installed as previously specified.

3.4 LEAD SERVICE REPLACEMENT

- A. Lead services shall be completely replaced from water main to the meter, where called for in the Contract Documents or when directed by Owner where discovered during construction. No partial replacement of lead service lines shall be allowed. Where access to private property for service replacement is not authorized, no part of the water service shall be replaced in accordance with RI Department of Health requirements.
- B. Contractor shall coordinate with City to obtain access to private property for replacing lead services. Contractor's employees performing this work may be subject to background checks at the City's discretion.
- C. All existing lead services shall be replaced with new 1-inch copper tubing and curb stop with

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1-inch corporation stop on water main. Contractor shall furnish and installer reducer as required to connect to water meter in each residence where lead service is replaced.

- D. Contractor shall use the services of a licensed plumber to perform all work inside and within 10 feet of the exterior of each residence where lead service replacement is performed.
- E. Contractor shall furnish and distribute RIDOH-approved water pitcher filter and 12-month supply of replacement filter cartridges to each household where lead service is replaced, along with guidance documentation provided by the City, to conform with RIDOH regulations and the Lead and Copper Rule Revisions.
- F. Known lead services that are called to be replaced as part of this Contract shall be completed within 45 days of Notice to Proceed date issued to Contractor.

3.5 OTHER WATER SERVICE REPLACEMENT

- A. Existing water services (iron pipe, red brass pipe, and unknown pipe material) and curb stops that require replacement in the project area along Willett Avenue are attached and follow this specification. Service replacement shall be within the City's right-of-way, up to and including curb stop, unless an unknown lead service is found. Lead services require complete replacement, as previously indicated.
- B. Existing water services and/or curb stops that require replacement in other areas of the project are tabulated separately from the above, which follows this specification. Service replacement shall be within the City's right-of-way, up to and including curb stop, unless an unknown lead service is found. Lead services require complete replacement, as previously indicated.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. Water Service Pipe:

Copper tubing for water services including gooseneck and fittings, will be measured for payment by the unit linear foot (L.F.), complete in-place, and measured as the actual number of linear feet of service pipe installed as ordered by the Engineer from the corporation to the connection coupling union in a straight line, parallel with the roadway surface.

- B. Corporation Stops:

Corporation stops will be measured for payment by the unit "Each".

- C. Curb Stops and Curb Boxes:

Curb stops and curb boxes will be measured for payment by the unit "Each".

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D. Air Release or Blow-Off Valves:

Air release or blow-off valves will be measured for payment by the unit “Each”, which shall include hydrant/curb stop, corporation stop, brass riser tube and fittings, and valve box per each air release or blow-off valve.

E. Remove and Replace Existing Corporation Stop:

Removal and replacement of existing corporation stops will be measured for payment by the unit “Each”, which shall include all corporation stops, tools, equipment, plugs, and all other related incidental items per each removed and replaced corporation stop.

F. Lead Service Replacement

Removal and replacement of existing lead services will be measured for payment by the unit “Each” in addition to measurement for payment under the unit “REMOVE AND REPLACE or FURNISH AND INSTALL COPPER WATER SERVICE” of various size.

4.2 BASIS OF PAYMENT

A. Water Service Pipe:

Payment for water service pipe, as specified above, will be made at the unit price bid for “REMOVE AND REPLACE or FURNISH AND INSTALL COPPER WATER SERVICE” of various size, as listed in the Bid which shall include full compensation for removing, if necessary, the old water service pipe, installing and connecting the water service pipe complete with gooseneck, fittings, adapters and coupling unions; and performing all incidental work necessary to complete the work in accordance with the Drawings and Specifications, and as directed by the Owner. An additional retention from progress payment due the Contractor shall be made for testing and disinfecting, as outlined below.

B. Corporation Stops:

Payment for corporation stops as specified above will be made at the unit price bid for “REMOVE AND REPLACE or FURNISH AND INSTALL CORPORATION STOP” of various sizes, as listed in the Bid, which shall include full compensation for all materials, tools, equipment and work necessary and required to install new corporation stops.

C. Curb Stops and Curb Boxes:

Payment for curb stops and curb boxes as specified above will be made at the unit price bid for “REMOVE AND REPLACE or FURNISH AND INSTALL CURB STOP AND CURB BOX” of various size, as listed in the Bid, which shall include full compensation for all materials, tools, equipment and work necessary and required to remove, if necessary the old curb stop and curb box, and to install new curb stops and curb boxes

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including connection to existing service lateral.

D. Air Release or Blow-Off Valves:

Payment for air release or blow-off valves as specified above, will be made at the unit price bid for “FURNISH AND INSTALL AIR RELEASE or BLOW-OFF VALVES AND VALVE BOX”, as listed in the Bid, which shall include full compensation for all materials, tools, equipment and work necessary and required to install new hydrant stops, corporation stops, brass riser tubes and fittings, and valve boxes.

E. Furnish and Install or Remove and Replace Existing Corporation Stop:

Payment for removing and replacing existing corporation stops as specified above will be made at the unit price bid for “REMOVE AND REPLACE EXISTING or FURNISH AND INSTALL CORPORATION STOP” of various size, as listed in the Bid, which shall include full compensation for all materials, tools, equipment and work necessary and required to remove and replace existing corporation stops.

F. Lead Service Replacement

Payment for added costs (i.e, furnishing and distributing pitcher filters with 12-month supply of replacement cartridges, distributing guidance documentation, services of a licensed plumber, etc.) associated with replacing lead services will be made by the unit “Each”, in addition to payment for new service pipe under the unit “REMOVE AND REPLACE or FURNISH AND INSTALL COPPER WATER SERVICE” of various size.

END OF SECTION

East Providence Cleaning & Lining Phase V Rebid - September 2024

Willett Avenue

Street Name	Street Number	Service Size	Service Material	Svc. Length (ft)	Replace Service	Replace Curb Stop
Willett Avenue	10	2"	Iron	10	Yes	Yes
Willett Avenue	50	3/4"	Copper	22		
Willett Avenue	60	3/4"	Copper	28		
Willett Avenue	73	1"	Red Brass	5	Yes	Yes
Willett Avenue	76	3/4"	Copper	34		
Willett Avenue	80	3/4"	Copper	33		
Willett Avenue	85-87	1"	Red Brass	7	Yes	Yes
Willett Avenue	90	3/4"	Copper	10		
Willett Avenue	99	3/4"	Copper	8		
Willett Avenue	102	Unknown	Unknown	Unknown	Yes	Yes
Willett Avenue	103	3/4"	Copper	7		
Willett Avenue	106	3/4"	Copper	30		
Willett Avenue	123	3/4"	Copper	12		
Willett Avenue	126	3/4"	Copper	19		
Willett Avenue	139	Unknown	Unknown	Unknown	Yes	Yes
Willett Avenue	181	2"	Iron	3	Yes	Yes
Willett Avenue	191	1"	Copper	4		
Willett Avenue	198-220	2"	Iron	76	Yes	Yes
Willett Avenue	215	3/4"	Copper	9		
Willett Avenue	217-223	3/4"	Copper	12		
Willett Avenue	316	Unknown	Unknown	Unknown	Yes	
Willett Avenue	343	3/4"	Copper	4		
Willett Avenue	362	1"	Red Brass	40	Yes	Yes
Willett Avenue	351	1"	Red Brass	4	Yes	Yes
Willett Avenue	378	1"	Poly	32		
Willett Avenue	386	Unknown	Unknown	Unknown	Yes	
Willett Avenue	387	1"	Red Brass	3	Yes	Yes
Willett Avenue	398	1"	Red Brass	20	Yes	Yes
Willett Avenue	398	3/4"	Copper	12		
Willett Avenue	401	3/4"	Copper	10		
Willett Avenue	405	3/4"	Copper	11		
Willett Avenue	409-413	3/4"	Copper	10		
Willett Avenue	412	3/4"	Copper	11		
Willett Avenue	421-425	3/4"	Copper	10		
Willett Avenue	431	3/4"	Copper	15		
Willett Avenue	434	3/4"	Copper	25		
Willett Avenue	443	3/4"	Copper	10		
Willett Avenue	444	2"	Iron	36	Yes	Yes
Willett Avenue	459	3/4"	Copper	14		
Willett Avenue	467	3/4"	Copper	21		
Willett Avenue	479	3/4"	Copper	7		
Willett Avenue	483	3/4"	Copper	17		
Willett Avenue	487	3/4"	Copper	20		
Willett Avenue	493	1"	Copper	23		
Willett Avenue	506	3/4"	Copper	24		
Willett Avenue	521	3/4"	Copper	23		
Willett Avenue	524	3/4"	Copper	14		
Willett Avenue	525	3/4"	Copper	24		
Willett Avenue	529	3/4"	Copper	12		
Willett Avenue	532	3/4"	Copper	12		
Willett Avenue	540	3/4"	Copper	18		
Willett Avenue	553	3/4"	Copper	18		
Willett Avenue	591	Unknown	Unknown	Unknown	Yes	Yes
Willett Avenue	595	Unknown	Unknown	Unknown	Yes	Yes
Willett Avenue	614	3/4"	Copper	21		
Willett Avenue	623	3/4"	Copper	11		
Willett Avenue	630	3/4"	Copper	28		
Willett Avenue	660	1"	Red Brass	30	Yes	Yes
Willett Avenue	663	3/4"	Copper	4		
Willett Avenue	665	3/4"	Copper	6		
Willett Avenue	677	3/4"	Copper	4		
Willett Avenue	678	3/4"	Copper	44		
Willett Avenue	679	3/4"	Copper	9		

East Providence Cleaning & Lining Phase V Rebid - September 2024

Willett Avenue

Street Name	Street Number	Service Size	Service Material	Svc. Length (ft)	Replace Service	Replace Curb Stop
Willett Avenue	682	1"	Red Brass	38	Yes	Yes
Willett Avenue	685	1"	Red Brass	10	Yes	Yes
Willett Avenue	694	1"	Red Brass	38	Yes	Yes
Willett Avenue	697 Rear	1"	Red Brass	8	Yes	Yes
Willett Avenue	708	1"	Red Brass	32	Yes	Yes
Willett Avenue	714	1"	Red Brass	32	Yes	Yes
Willett Avenue	718	3/4"	Copper	36		
Willett Avenue	732	Unknown	Unknown	Unknown	Yes	
Willett Avenue	740	1"	Red Brass	12	Yes	Yes
Willett Avenue	741	2"	Iron	7	Yes	Yes
Willett Avenue	748	1"	Red Brass	17	Yes	Yes
Willett Avenue	756	1"	Red Brass	31	Yes	Yes
Willett Avenue	760	1"	Red Brass	32	Yes	Yes
Willett Avenue	761	3/4"	Copper	10		
Willett Avenue	765	3/4"	Copper	8		
Willett Avenue	770	3/4"	Copper	36		
Willett Avenue	779	3/4"	Copper	6		
Willett Avenue	780	3/4"	Copper	35		
Willett Avenue	784	3/4"	Copper	12		
Willett Avenue	787	1"	Red Brass	9	Yes	Yes
Willett Avenue	803	1"	Red Brass	23	Yes	Yes
Willett Avenue	830	1"	Poly	36		
Willett Avenue	833	3/4"	Copper	10		
Willett Avenue	850	3/4"	Copper	38		
Willett Avenue	855	3/4"	Copper	7		
Willett Avenue	860	1"	Red Brass	31	Yes	Yes
Willett Avenue	862	3/4"	Copper	33		
Willett Avenue	865	3/4"	Copper	5		
Willett Avenue	876	3/4"	Copper	34		
Willett Avenue	879	1"	Red Brass	8	Yes	Yes
Willett Avenue	880	3/4"	Copper	34		
Willett Avenue	884	3/4"	Copper	30		
Willett Avenue	886	1"	Red Brass	31	Yes	Yes
Willett Avenue	887	1"	Red Brass	7	Yes	Yes
Willett Avenue	894	1"	Red Brass	32	Yes	Yes
Willett Avenue	895	3/4"	Copper	10		
Willett Avenue	898-900	1"	Copper	34		
Willett Avenue	917	3/4"	Copper	10		
Willett Avenue	925	Unknown	Unknown	Unknown	Yes	Yes
Willett Avenue	945-949	3/4"	Copper	6		
Willett Avenue	973	3/4"	Copper	12		
Willett Avenue	982	Unknown	Unknown	Unknown	Yes	Yes
Willett Avenue	987	3/4"	Copper	12		
Willett Avenue	994	3/4"	Copper	12		
Willett Avenue	996	2"	Iron	23	Yes	Yes
Willett Avenue	1001	3/4"	Copper	15		
Willett Avenue	1009	3/4"	Copper	13		
Willett Avenue	1010	2"	Copper	10		
Willett Avenue	1013-1015	3/4"	Copper	13		
Willett Avenue	1032	3/4"	Copper	80		
Willett Avenue	1050	2"	Iron	70	Yes	Yes
Willett Avenue	1075	3/4"	Copper	9		

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Valley St	62-78	3/4"	No	Yes
Valley St	65	3/4"	Yes	Yes
Valley St	84	3/4"	Yes	Yes
Valley St	114-118	3/4"	Yes	Yes
Valley St	213	2"	Yes	Yes
Warren Ave	29 (First St)	3/4"	No	Yes
Warren Ave	31-35	1"	No	Yes
Warren Ave	39	1"	Yes	No
Warren Ave	150-156	3/4"	No	Yes
Warren Ave	211-213	1"	Yes	Yes
Warren Ave	216	3/4"	Yes	No
Warren Ave	217	3/4"	Yes	Yes
Warren Ave	218-220	1"	Yes	Yes
Warren Ave	221 (Arlington)	3/4"	Yes	Yes
Warren Ave	222 (So Carpenter)	3/4"	Yes	Yes
Warren Ave	227	3/4"	Yes	Yes
Warren Ave	229-233	3/4"	No	Yes
Warren Ave	230 (So Carpenter)	3/4"	No	Yes
Warren Ave	236	3/4"	Yes	Yes
Warren Ave	250	2"	Yes	Yes
Warren Ave	254	3/4"	Yes	Yes
Warren Ave	256-258	1"	Yes	Yes
Warren Ave	257	3/4"	Yes	Yes
Warren Ave	260	3/4"	No	Yes
Warren Ave	261 (Bentley)	3/4"	No	Yes
Warren Ave	264	3/4"	Yes	Yes
Warren Ave	267	3/4"	No	Yes
Warren Ave	271	3/4"	Yes	Yes
Warren Ave	275 (Follett St)	3/4"	Yes	Yes
Warren Ave	278	3/4"	Yes	Yes
Warren Ave	281 (Follett St)	3/4"	No	Yes
Warren Ave	289	3/4"	Yes	Yes
Warren Ave	301	3/4"	Yes	Yes
Warren Ave	304	3/4"	Yes	Yes
Warren Ave	312	3/4"	Yes	Yes
Warren Ave	321-323(S Broadway)	3/4"	No	Yes
Warren Ave	324-332 (Broadway)	1"	Yes	Yes
Warren Ave	327-329 (S Broadway)	1"	No	Yes
Water St	54	3/4"	Yes	Yes
Water St	100	3/4"	Yes	Yes
Water St	200	3/4"	Yes	Yes
First St	15	2"	Yes	Yes
First St	25	3/4"	No	Yes

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
First St	29	3/4"	No	Yes
First St	102	3/4"	No	Yes
First St	108	3/4"	No	Yes
First St	133	3/4"	No	Yes
First St	141	3/4"	No	Yes
First St	145	3/4"	No	Yes
First St	149 (Tangent St)	3/4"	No	Yes
First St	155 (Tangent St)	3/4"	No	Yes
First St	157	3/4"	No	Yes
First St	160	3/4"	No	Yes
First St	166 (Schuyler)	3/4"	No	Yes
Second St	66-68	1"	Yes	Yes
Second St	69	3/4"	No	Yes
Second St	94 (Juniper St)	3/4"	No	Yes
Second St	121	3/4"	No	Yes
Second St	135	3/4"	No	Yes
Second St	136	3/4"	No	Yes
Second St	144	3/4"	No	Yes
Second St	175	3/4"	No	Yes
Second St	181	3/4"	No	Yes
Second St	222	3/4"	No	Yes
Burgess Ave	12	3/4"	Yes	No
Burgess Ave	69	3/4"	Yes	Yes
Burgess Ave	73	3/4"	No	Yes
Burgess Ave	88	3/4"	No	Yes
Burgess Ave	90	3/4"	No	Yes
Burgess Ave	102-104	3/4"	No	Yes
Burgess Ave	105 (Quarry)	3/4"	No	Yes
Burgess Ave	106-108 (Quarry)	3/4"	No	Yes
Burgess Ave	117-119	3/4"	No	Yes
Burgess Ave	126	3/4"	No	Yes
Burgess Ave	137 (Mercer)	3/4"	No	Yes
Burgess Ave	158	3/4"	No	Yes
Burgess Ave	161	3/4"	No	Yes
Burgess Ave	166	3/4"	No	Yes
Burgess Ave	169	3/4"	No	Yes
Burgess Ave	176	3/4"	No	Yes
Burgess Ave	177	3/4"	No	Yes
Burgess Ave	178	3/4"	No	Yes
Burgess Ave	181	3/4"	No	Yes
Burgess Ave	185	3/4"	No	Yes
Burgess Ave	186	3/4"	No	Yes
Burgess Ave	189	3/4"	No	Yes

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Burgess Ave	194-196	3/4"	No	Yes
Burgess Ave	198	3/4"	No	Yes
Burgess Ave	199	3/4"	No	Yes
Burgess Ave	201	3/4"	No	Yes
Burgess Ave	204	3/4"	No	Yes
Burgess Ave	205	3/4"	No	Yes
Burgess Ave	206	3/4"	No	Yes
Burgess Ave	209	3/4"	No	Yes
Burgess Ave	211	3/4"	No	Yes
Burgess Ave	212	3/4"	No	Yes
Burgess Ave	218	3/4"	No	Yes
Burgess Ave	228	3/4"	No	Yes
Burgess Ave	232	3/4"	No	Yes
Forth St	30-32	3/4"	No	Yes
Forth St	54-56	3/4"	No	Yes
Forth St	57-59	3/4"	No	Yes
Forth St	66	3/4"	Yes	Yes
Fifth St	9	3/4"	No	Yes
Fifth St	10	3/4"	No	Yes
Fifth St	13	3/4"	No	Yes
Fifth St	17	3/4"	No	Yes
Fifth St	21-23	3/4"	No	Yes
Fifth St	22	3/4"	No	Yes
Fifth St	30	3/4"	No	Yes
Fifth St	53-55	3/4"	No	Yes
Fifth St	54	3/4"	No	Yes
Fifth St	57	3/4"	No	Yes
Fifth St	58	3/4"	No	Yes
Fifth St	62	3/4"	No	Yes
Fifth St	70	3/4"	No	Yes
Fifth St	171	3/4"	No	Yes
Fifth St	197 (Hamilton)	3/4"	No	Yes
Fifth St	205 (Hamilton)	3/4"	No	Yes
Fifth St	235	3/4"	No	Yes
Fifth St	241	3/4"	No	Yes
Fifth St	245	3/4"	No	Yes
Juniper St	38	3/4"	Yes	No
Juniper St	112-116 (First St)	1"	Yes	Yes
Juniper St	115-117	1"	Yes	Yes
Juniper St	120	3/4"	No	Yes
Juniper St	183-185	1"	Yes	Yes
Juniper St	353	3/4"	No	Yes
Juniper St	368 (Fraser St)	3/4"	No	Yes

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Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Quarry St	94	3/4"	No	Yes
Quarry St	114-116	3/4"	No	Yes
Quarry St	150	3/4"	No	Yes
Quarry St	156-158	3/4"	No	Yes
Quarry St	157	3/4"	No	Yes
Quarry St	171	3/4"	Yes	Yes
Quarry St	199-201	1"	No	Yes
Quarry St	200	3/4"	Yes	Yes
Quarry St	218	3/4"	No	Yes
Quarry St	224	3/4"	No	Yes
Quarry St	254	3/4"	No	Yes
Quarry St	255	3/4"	No	Yes
Quarry St	256	3/4"	No	Yes
Quarry St	257	1"	No	Yes
Quarry St	258	3/4"	No	Yes
Quarry St	259	3/4"	No	Yes
Quarry St	260	3/4"	No	Yes
Fort St	66	3/4"	No	Yes
Fort St	112	3/4"	No	Yes
Fort St	116	3/4"	No	Yes
Fort St	120	3/4"	No	Yes
Fort St	131-133	1"	No	Yes
Fort St	132	3/4"	No	Yes
Fort St	134	3/4"	No	Yes
Fort St	135	3/4"	No	Yes
Fort St	139	3/4"	No	Yes
Fort St	140-142	3/4"	No	Yes
Fort St	144	3/4"	No	Yes
Fort St	149	3/4"	No	Yes
Fort St	160	3/4"	No	Yes
Fort St	176	3/4"	No	Yes
Fort St	300	3/4"	No	Yes
Fort St	350	3/4"	Yes	Yes
Fort St	351	3/4"	No	Yes
Fort St	365	3/4"	No	Yes
Tangent St	29	3/4"	No	Yes
Tangent St	30 (First St)	3/4"	No	Yes
Tangent St	46	3/4"	Yes	Yes
Tangent St	154	3/4"	No	Yes
Tangent St	160-162	1"	Yes	Yes
Tangent St	164	3/4"	Yes	No
Tangent St	168 (Fifth St)	3/4"	Yes	No
Tangent St	171 (Fifth St)	3/4"	No	Yes

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Mauran Ave	10 (Water St)	3/4"	Yes	Yes
Mauran Ave	104	3/4"	Yes	Yes
Mauran Ave	110 (First St)	3/4"	No	Yes
Mauran Ave	117	3/4"	No	Yes
Mauran Ave	145-147	1"	Yes	Yes
Mauran Ave	146-148	3/4"	No	Yes
Mauran Ave	149-151	1"	Yes	Yes
Mauran Ave	150-152	1"	Yes	Yes
Mauran Ave	153-155	3/4"	No	Yes
Mauran Ave	154-156	3/4"	No	Yes
Mauran Ave	157	3/4"	Yes	Yes
Mauran Ave	158	3/4"	Yes	Yes
Mauran Ave	161-163	1"	Yes	Yes
Mauran Ave	169 (Fifth St)	3/4"	No	Yes
Mauran Ave	173 (Fifth St)	3/4"	No	Yes
Mauran Ave	192 (Sixth St)	3/4"	No	Yes
Mauran Ave	214-216	3/4"	No	Yes
Mauran Ave	215	3/4"	Yes	Yes
Mauran Ave	219	3/4"	No	Yes
Mauran Ave	226	3/4"	Yes	Yes
Mauran Ave	248	3/4"	Yes	Yes
Mauran Ave	250 (Tenth St)	3/4"	No	Yes
Mauran Ave	253-255	3/4"	No	Yes
Mauran Ave	282	3/4"	Yes	Yes
Mauran Ave	394	3/4"	Yes	No
Schuyler St	150	3/4"	No	Yes
Schuyler St	151	3/4"	No	Yes
Schuyler St	154	3/4"	No	Yes
Schuyler St	158	3/4"	No	Yes
Schuyler St	161	3/4"	No	Yes
Schuyler St	162	3/4"	No	Yes
Schuyler St	166	3/4"	No	Yes
Schuyler St	174	3/4"	No	Yes
Putnam St	50	3/4"	No	Yes
Putnam St	159	3/4"	No	Yes
Hamilton St	4 (Second St)	3/4"	No	Yes
Hamilton St	152	3/4"	No	Yes
Hamilton St	153	3/4"	No	Yes
Hamilton St	155	3/4"	No	Yes
Hamilton St	156	3/4"	No	Yes
Hamilton St	158	3/4"	No	Yes
Hamilton St	161	3/4"	No	Yes
Hamilton St	162	3/4"	No	Yes

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Hamilton St	166	3/4"	No	Yes
Empire Dr	48	3/4"	Yes	Yes
Empire Dr	54	3/4"	Yes	No
Empire Dr	60	3/4"	Yes	Yes
Empire Dr	64	3/4"	Yes	Yes
Empire Dr	70	3/4"	Yes	Yes
Randolph St	17	3/4"	No	Yes
Randolph St	20	2"	Yes	Yes
Mercer St	66	3/4"	Yes	No
Mercer St	68	3/4"	No	Yes
Mercer St	145	3/4"	No	Yes
Mercer St	216	3/4"	No	Yes
Mercer St	222	3/4"	No	Yes
Mercer St	234	3/4"	No	Yes
Mercer St	240	3/4"	No	Yes
Mercer St	246	3/4"	No	Yes
Mercer St	258	3/4"	No	Yes
Mercer St	260-262	3/4"	No	Yes
Lyon Ave	49-51	1"	Yes	Yes
Lyon Ave	76	3/4"	No	Yes
Lyon Ave	81-83	1"	Yes	Yes
Lyon Ave	85-87	3/4"	No	Yes
Lyon Ave	100	3/4"	No	Yes
Lyon Ave	105-107	3/4"	No	Yes
Lyon Ave	113	3/4"	No	Yes
Lyon Ave	119	3/4"	No	Yes
Lyon Ave	122	3/4"	No	Yes
Lyon Ave	123	3/4"	Yes	Yes
Lyon Ave	128	3/4"	Yes	Yes
Lyon Ave	131	3/4"	No	Yes
Lyon Ave	135	3/4"	No	Yes
Lyon Ave	149	3/4"	No	Yes
Lyon Ave	158	3/4"	No	Yes
Lyon Ave	160	3/4"	Yes	Yes
Lyon Ave	162-164	3/4"	No	Yes
Lyon Ave	166-168	3/4"	No	Yes
Lyon Ave	174	3/4"	No	Yes
Lyon Ave	175	3/4"	No	Yes
Lyon Ave	183	3/4"	No	Yes
Lyon Ave	187	3/4"	No	Yes
Lyon Ave	192	3/4"	No	Yes
Lyon Ave	195-197	3/4"	No	Yes
Lyon Ave	204-206	3/4"	No	Yes

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Lyon Ave	209	3/4"	No	Yes
Lyon Ave	212	3/4"	Yes	Yes
Lyon Ave	213	3/4"	No	Yes
School St	49 (Potter St)	3/4"	No	Yes
School St	53-55	3/4"	No	Yes
School St	61-63	3/4"	No	Yes
School St	85	3/4"	No	Yes
Sixth St	#6-#8	3/4"	No	Yes
Sixth St	#9-#11	3/4"	No	Yes
Sixth St	12	3/4"	No	Yes
Sixth St	14	3/4"	No	Yes
Sixth St	17	3/4"	No	Yes
Sixth St	28	3/4"	No	Yes
Sixth St	43 (Mauran)	3/4"	No	Yes
Sixth St	50	3/4"	No	Yes
Sixth St	58	3/4"	No	Yes
Sixth St	61	3/4"	No	Yes
Sixth St	65	3/4"	No	Yes
Sixth St	68	3/4"	No	Yes
Sixth St	73	3/4"	No	Yes
Sixth St	77-79	3/4"	No	Yes
Sixth St	78	3/4"	No	Yes
Seventh St	10	3/4"	No	Yes
Seventh St	20	3/4"	No	Yes
Seventh St	24	3/4"	No	Yes
Seventh St	35 (Mauran Ave)	3/4"	Yes	Yes
Seventh St	62	3/4"	No	Yes
Seventh St	65-67	3/4"	No	Yes
Seventh St	99-101	3/4"	No	Yes
Seventh St	105	3/4"	No	Yes
Seventh St	109	3/4"	No	Yes
Seventh St	110	3/4"	No	Yes
Seventh St	115	3/4"	No	Yes
Eighth St	21	3/4"	No	Yes
Eighth St	50	3/4"	No	Yes
Eighth St	51	3/4"	No	Yes
Eighth St	52	3/4"	No	Yes
Eighth St	53	3/4"	No	Yes
Eighth St	62	3/4"	No	Yes
Eighth St	66	3/4"	No	Yes
Eighth St	69	3/4"	No	Yes
Eighth St	73	3/4"	No	Yes
Eighth St	78-80	1"	Yes	Yes

East Providence Cleaning & Lining Phase V Rebid - September 2024

Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Ninth St	14	3/4"	No	Yes
Ninth St	25	3/4"	No	Yes
Ninth St	49 (From Eighth?)			
Ninth St	57 (From Eighth?)			
Ninth St	75	3/4"	No	Yes
Arlington St	17	3/4"	No	Yes
Arlington St	18	3/4"	No	Yes
Arlington St	21	3/4"	No	Yes
Arlington St	25	3/4"	No	Yes
Arlington St	26	3/4"	No	Yes
Arlington St	30-32	3/4"	No	Yes
Arlington St	33	3/4"	No	Yes
Arlington St	43	3/4"	No	Yes
Arlington St	53	3/4"	No	Yes
Arlington St	54	3/4"	No	Yes
Arlington St	59	3/4"	No	Yes
Arlington St	65	3/4"	No	Yes
Arlington St	76	3/4"	No	Yes
Arlington St	100	3/4"	No	Yes
Arlington St	104	3/4"	No	Yes
Arlington St	109	3/4"	No	Yes
Arlington St	119	3/4"	No	Yes
Arlington St	124	3/4"	No	Yes
Seth St	5	3/4"	No	Yes
Seth St	9	3/4"	No	Yes
Seth St	14	3/4"	No	Yes
Seth St	15	3/4"	No	Yes
Fisher St	14	3/4"	No	Yes
Fisher St	15	3/4"	No	Yes
Fisher St	21	3/4"	No	Yes
Fisher St	25	3/4"	No	Yes
Fisher St	27	3/4"	No	Yes
Fisher St	29	3/4"	No	Yes
Fisher St	37	3/4"	No	Yes
Mason St	20	3/4"	No	Yes
Mason St	27	3/4"	No	Yes
Fleming St	17	3/4"	Yes	Yes
Fleming St	20	3/4"	No	Yes
Fleming St	21	3/4"	Yes	No
Fleming St	44	3/4"	Yes	Yes
Fleming St	45	3/4"	Yes	Yes
S Broadway	998	3/4"	No	Yes

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Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
S Broadway	1015	3/4"	No	Yes
S Broadway	1019-1021	3/4"	No	Yes
S Broadway	1022	3/4"	No	Yes
S Broadway	1024	3/4"	No	Yes
S Broadway	1027	3/4"	Yes	Yes
S Broadway	1055	3/4"	No	Yes
S Broadway	1057-1059	3/4"	No	Yes
S Broadway	1072	3/4"	Yes	Yes
S Broadway	1077	3/4"	No	Yes
S Broadway	1089-1091	1"	Yes	Yes
S Broadway	1104	3/4"	No	Yes
S Broadway	1106	3/4"	No	Yes
S Broadway	1115	3/4"	Yes	Yes
S Broadway	1123	3/4"	Yes	Yes
S Broadway	1129	3/4"	Yes	Yes
S Broadway	1140	3/4"	Yes	Yes
S Broadway	1187	3/4"	Yes	Yes
S Broadway	1200	3/4"	Yes	Yes
S Broadway	1249	3/4"	No	Yes
S Broadway	1253	3/4"	No	Yes
S Broadway	1266	3/4"	No	Yes
S Broadway	1281	3/4"	No	Yes
S Broadway	1283-1285	3/4"	No	Yes
S Broadway	1287	3/4"	No	Yes
S Broadway	1317	3/4"	Yes	Yes
S Broadway	1327	3/4"	Yes	Yes
S Broadway	1340	3/4"	Yes	Yes
S Broadway	1355	3/4"	No	Yes
S Broadway	1366	3/4"	No	Yes
S Broadway	1367	3/4"	Yes	Yes
S Broadway	1375	3/4"	No	Yes
S Broadway	1391	3/4"	No	Yes
S Broadway	1408	3/4"	No	Yes
S Broadway	1411	3/4"	Yes	Yes
S Broadway	1416	3/4"	No	Yes
S Broadway	1426	3/4"	Yes	Yes
S Broadway	1459	3/4"	No	Yes
Ingraham St	5	3/4"	No	Yes
Ingraham St	53-55	3/4"	No	Yes
Ingraham St	94	3/4"	No	Yes
Fraser St	21	3/4"	No	Yes
Fraser St	31-33	3/4"	No	Yes
Fraser St	60	3/4"	No	Yes
Fraser St	63	3/4"	No	Yes

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Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Fraser St	70	3/4"	No	Yes
Fraser St	73-75	3/4"	No	Yes
Fraser St	77-79	3/4"	No	Yes
Fraser St	82	3/4"	No	Yes
Fraser St	91 (owners side plas.)	3/4"	No	Yes
Fraser St	95	3/4"	No	Yes
Fraser St	96	3/4"	No	Yes
Follett St	10	3/4"	Yes	Yes
Follett St	13-15	3/4"	No	Yes
Follett St	20-22	1"	Yes	Yes
Follett St	34-36	3/4"	No	Yes
Follett St	54	3/4"	No	Yes
Follett St	58	3/4"	No	Yes
Follett St	59	3/4"	Yes	Yes
Follett St	65	3/4"	No	Yes
Follett St	70	3/4"	No	Yes
Follett St	73	3/4"	Yes	Yes
Follett St	74	3/4"	Yes	Yes
Follett St	86	3/4"	No	Yes
Follett St	91-93	1"	Yes	Yes
Follett St	100	3/4"	No	Yes
Bentley St	10	3/4"	No	Yes
Bentley St	15	3/4"	No	Yes
Bentley St	29	3/4"	No	Yes
Bentley St	35	3/4"	Yes	Yes
Bentley St	53	3/4"	No	Yes
Bentley St	66	3/4"	No	Yes
Bentley St	71	3/4"	No	Yes
Bentley St	73	3/4"	No	Yes
Bentley St	80	3/4"	No	Yes
Bentley St	87	3/4"	No	Yes
Bentley St	90	3/4"	No	Yes
Bentley St	93	3/4"	No	Yes
Bentley St	114	3/4"	No	Yes
Bentley St	117	3/4"	No	Yes
Bentley St	127	3/4"	Yes	No
Bentley St	130	3/4"	No	Yes
Bentley St	141	3/4"	Yes	No
Bentley St	149	3/4"	No	Yes
Bentley St	150	3/4"	No	Yes
Bentley St	158	3/4"	No	Yes
Bentley St	162	3/4"	No	Yes
Bentley St	166	3/4"	No	Yes

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Street Name	Street Number	Service Size	Replace Service	Replace Curb Stop
Berkeley St	#5 - #7	3/4"	No	Yes
Berkeley St	#9-#11	3/4"	No	Yes
Berkeley St	10	3/4"	No	Yes
Berkeley St	14	3/4"	No	Yes
Berkeley St	17	3/4"	No	Yes
Berkeley St	18	3/4"	No	Yes
Berkeley St	25	3/4"	No	Yes
Berkeley St	29	3/4"	No	Yes
Berkeley St	65	3/4"	No	Yes
Berkeley St	85	3/4"	No	Yes
Berkeley St	91	3/4"	No	Yes
Berkeley St	103	3/4"	No	Yes
Berkeley St	115	3/4"	No	Yes
Berkeley St	118	3/4"	No	Yes
Berkeley St	125	3/4"	No	Yes
Berkeley St	126	3/4"	No	Yes
Berkeley St	134	3/4"	No	Yes
Berkeley St	135	3/4"	No	Yes
Berkeley St	144	3/4"	No	Yes
Berkeley St	151	3/4"	No	Yes
Potter St	11	3/4"	No	Yes
Purchase St	9	3/4"	No	Yes
Purchase St	12	3/4"	Yes	Yes
Purchase St	15	3/4"	No	Yes
Purchase St	43	3/4"	No	Yes
Purchase St	47	3/4"	Yes	Yes
Purchase St	49	3/4"	Yes	Yes
Purchase St	59	3/4"	No	Yes
Purchase St	60	3/4"	Yes	Yes
Purchase St	63	3/4"	No	Yes
Larch St	25	3/4"	No	Yes
Larch St	45	3/4"	No	Yes
Larch St	72	3/4"	No	Yes
Oakley St	7	3/4"	Yes	Yes
Oakley St	17-19	1"	Yes	Yes
Oakley St	23	3/4"	No	Yes
Oakley St	35	3/4"	No	Yes
Public St	37	3/4"	No	Yes
Public St	45	3/4"	No	Yes

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SECTION 02700

CLEANING AND LINING WATER MAINS

PART 1 GENERAL

1.1 DESCRIPTION

A. Scope of Work

1. The work covered by this section of the specifications includes the furnishing of all labor, equipment, tools, appliances and materials and performing all operations in connection with providing the cleaning and cement-mortar lining of cast-iron water pipelines, including excavation, sheeting, shoring, cutting pipe openings, dewatering pipelines and excavations, cleaning and inspecting pipelines, cement lining pipelines, video recorder inspection of cement lining, closing pipe openings, uncovering existing valves, removing existing mainline valves, removing and replacing piping, fittings and valves where obstructions occur, removing inoperative valves, clearing service connections, testing and disinfecting pipelines, backfilling, protection of existing structures, properties, and utilities, and all other appurtenant and related work required to satisfactorily complete the cleaning and cement-mortar lining of the existing cast-iron piping, complete and in strict accordance with the specifications and the applicable drawings, and as directed.
2. The work covered by this section of the specifications also includes the above associated with cleaning and video inspection of the pipeline.
3. The work included in this Section shall be performed in strict accordance with the requirements of AWWA Standard for Cement-Mortar Lining of Water Pipelines – 4 inches and larger – In Place (AWWA C602), latest edition except as modified or otherwise specified.

B. Related Work Described Elsewhere

- | | | |
|----|--|---------------|
| 1. | Earth Trench Excavation and Backfill | Section 02211 |
| 2. | Excavation Support System | Section 02377 |
| 3. | Dewatering, Control and Diversion of Water | Section 02401 |
| 4. | Pavement Restoration | Section 02513 |
| 5. | Ductile Iron Water Main and Appurtenances | Section 02615 |
| 6. | Valves, Tapping Sleeves, and Appurtenances | Section 02640 |
| 7. | Installation of Water Pipeline System | Section 02713 |

C. Work Described Elsewhere Included Under this Specification

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1. It is the intent of this specification to include for payment under this section all work necessary and incidental to complete the cleaning and cement-mortar lining of the water mains, as described elsewhere under separate sections of these specifications and not listed for separate payment in the Bid Proposal. Included are such items as dewatering, control and diversion of water, excavation, backfill, bedding, sheeting, restoration of lawns and right-of-way areas, curbing, cleaning and all other incidental items necessary to complete the work and not listed for separate payment elsewhere in the bid.

1.2 CONTRACT DRAWINGS

- A. The Contract Drawings have been prepared from plans of record provided at the City of East Providence, Water Division. The Contract Drawings have been generated with the best available information and no warranty is expressed regarding the accuracy of the information. The Contractor shall be responsible for locating in the field all house connections, connecting pipelines, valves, blow-offs, utilities, and related items as shown on the drawings or as identified in the field, as necessary to complete the work. No extra payment will be made for additional work required by the Contractor to locate connecting pipelines, valves, and related items that are not shown on the Drawings.

PART 2 PRODUCTS

2.1 MORTAR AND LINING

- A. All cement-mortar or pipe linings shall be composed of Portland cement, sand and water. It shall be the proportion of one part of cement and one to one and one-half parts screened sand by volume. The exact proportion shall be designed to create the proper consistency to provide a dense, homogenous pipe lining which shall adhere firmly to the pipe interior surfaces.
- B. Portland cement shall meet the requirements of ASTM.
Designation: C 150, Type II, with latest amendment.
- C. Sand shall be clean and well graded, having clean, hard, durable, uncoated grains, free from organic matter, clay lumps, shale, soft or flaky particles and other unsound or deleterious substances. All sand shall be washed, if required, and shall pass a No. 16 mesh sieve with not more than 5 percent in weight passing a No. 100 sieve. Samples of sand to be used shall be furnished to the Owner for test and approval at least 10 days prior to the time when it is to be used. Tests of sand will be made in accordance with the latest ASTM Standard Methods. Test results shall meet the approval of the Owner.
- D. Water shall be clean, free from injurious ingredients and shall be obtained from the Owner's water supply.
- E. The mortar shall be well-mixed and the water-cement ratio shall be carefully controlled and kept to a minimum. No mortar which has attained its initial set shall be used for pipe lining.

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2.2 MECHANICAL COUPLINGS

- A. All joints of cut sections of pipe shall be made up by using flexible mechanical couplings for cast iron or ductile iron pipe as required. Couplings for smaller pipe size (16" or less) shall be Smith-Blair Style 441, or approved equal, and couplings for larger pipe sizes (greater than 16") shall be Smith-Blair Style 413 (different o.d.) or approved equal. The Contractor shall be responsible for determining required sizes of all couplings to be used.

2.3 TELEVISION EQUIPMENT

- A. Closed Circuit Television
 - 1. Television camera used for inspection shall be one specifically designed and constructed for such utilization. Lighting for camera shall be suitable to allow a clear color picture of the entire periphery of the pipe. Camera shall be operative in 100% humidity conditions. Camera, television monitor and other components of video system shall be capable of producing a minimum 500-line resolution video picture. Picture quality and definition shall be to satisfaction of the Engineer and if unsatisfactory, equipment shall be removed and replaced, with no payment made for unsatisfactory inspection.

PART 3 EXECUTION

3.1 ACCESS PITS FOR CLEANING AND LINING

- A. The Contractor shall open the water main at each end of the section to be cleaned and lined, at all main line valves, bends, fittings, and obstructions shown on the Contract Drawing or identified by the Owner, and at other locations to install new valves or relocate existing valves, and as necessary to permit satisfactory cleaning and lining. Additional openings may be required due to obstructions which prevent the passage of cleaning and lining equipment; payment for the removal of obstructions shall be made as provided elsewhere in this Section for the conditions defined as "Remove Obstructions".
- B. Prior to construction, a plan showing all proposed access pit locations shall be submitted to the Owner for review and approval.
- C. Openings in the pipes shall be made by guillotine saw cuts, with an approved power-operated pipe cutter, removing existing couplings or other approved methods for cutting the pipe square and true by hand or machine. Any material not reused shall become the property of the Contractor and shall be disposed of by the Contractor to a site approved by the Owner.
- D. At openings adjacent to sections under pressure or in service, the Contractor shall install adequate blocking to prevent movement during the time the pipe is open. The Contractor shall be responsible for the design and adequacy of all blocking required and the design of the blocking and adequacy of all blocking required and the design of the blocking shall be submitted to the Owner for review. The Contractor shall include in his unit prices, the cost of all access openings, especially in locations at or adjacent to valves and water main

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intersections; hand cleaning and lining; and bracing of existing or replaced valves as may be required to facilitate cleaning and lining of all portions of a main to the limits shown on the plans. Additional new valves shall be added to the pipeline as shown on the Contract Drawings and elsewhere as required by the Owner.

- E. At no time shall there be more than 5,000 linear feet of water main out of service at one time, provided that no customer is on temporary bypass for longer than 90 days. Should the Contractor request an increase in this limit during construction, it will be subject to review and approval by the City.

3.2 DEWATERING PIPELINES

- A. The Contractor shall dewater all pipelines prior to the start of cleaning, lining and such other work; drain all low spots; plug or close all services; close valves or otherwise isolate the work area. The Contractor shall be responsible for taking all necessary and special precautions to prevent the possibility of any water entering the sections where men are working. The Contractor shall insert bulkheads at the terminals of dewatered sections. Water shall be disposed of in a manner and to a location meeting the approval of the Owner.
- B. Due to the age of the distribution system, the City of East Providence makes no warranty as to the completeness of water shutdowns from open pipes during the work. It is the contractor's responsibility to provide an adequate number and proper type of pumps to dewater the excavations to prosecute the work. There will be no extra payments to the contractor for delays as a result of inadequate dewatering.

3.3 CLEANING OF WATER MAINS

- A. Prior to proceeding with the cleaning of pipelines all work shall be provided to determine existence of and to locate any conditions which might prevent free passage of cleaning or lining equipment. Conditions which constitute obstructions as described herein under paragraph entitled "OBSTRUCTIONS", shall be remedied by the Contractor and the work will be paid for in the manner herein specified under paragraph entitled "OBSTRUCTIONS". All other conditions encountered, which in the opinion of the Owner, do not constitute obstructions within the scope of the criteria specified herein under paragraph entitled "OBSTRUCTIONS", shall be remedied by the Contractor in an approved manner to provide conditions satisfactory for the performance of the work of the contract, at no additional expense to the Owner.
- B. All rust, tubercles, deposits, loose materials, and all other foreign materials which might affect adversely the bonding of the mortar to the pipe surfaces shall be removed from the interior of the pipelines by use of the dry dragline (or "drag") method, except for locations where hand cleaning is warranted or is the only feasible method. The Contractor shall provide the necessary measures to uncover all mainline valves and either remove all operating parts of valves or entirely remove existing mainline valves, as shown on the Contract Drawings and as specified herein under paragraph "CEMENT-MORTAR LINING OF PIPELINES", to prevent damages to valves and similar water line appurtenances. The Contractor shall pass the machine through the mains as many times

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as may be necessary and shall employ such other supplementary means as may be required to clean the pipe surfaces and to remove all foreign matter, rust and dirt from the pipe surfaces. It shall be the responsibility of the Contractor to employ approved methods and to do all work necessary to obtain clean pipe surfaces and to insure the satisfactory bonding of the cement-mortar lining to the pipe surfaces.

- C. Cleaning water and the residue from cleaning the mains by use of a vactor truck shall be disposed of off-site by Contractor. Backhoe removal and on-site disposal is not allowed. All work shall be performed in a manner as approved by governing City and State agencies and in accordance with NPDES requirements. Contractor shall examine the location where cuts are to be made and make adequate preparations to avoid the flooding of streets and adjacent structures or private property. Precaution shall be taken to prevent cleaning wastes from being deposited in drains, sewers or waterways by use of sandbags stacked to trap the cleaning residue. Immediately following cleaning, streets and affected areas shall be hosed and swept clean of tuberculation residue.
- D. The Contractor shall take precautions to prevent obstruction of any lateral, hydrant or service connection by deposit of cleaning debris. Branch connections and service connections shall be back flushed by the Contractor before closure of the pipe access openings to remove all sediment, loose and foreign materials which have entered the branch lines during cleaning operations. Precautionary measures shall be provided to protect valves and other appurtenances against the entrance of dirt, sediment and other foreign materials and any other damage. All damage to valves, pipes or other pipeline appurtenances and fittings as a result of the Contractor's operations shall be made good or replaced by the Contractor in a manner satisfactory to the Owner, at no additional expense to the Owner; defective parts not the result of the Contractor's operations will be repaired at the discretion of the Owner under the appropriate items in the Bid.
- E. After the cleaning operations, the Owner and the Contractor shall make an examination of the interior of the pipes, in a satisfactory manner, to determine whether the pipes have been sufficiently and properly cleaned; that all other conditions are such as to insure the proper bonding and placing of the cement-mortar lining; and to determine whether any repairs to the pipes are required prior to the application of the cement-mortar lining. The Contractor shall provide such facilities as may be required for inspection of pipes by the Owner. If the examination and inspection reveal that the cleaning operations have not been satisfactorily performed, the Contractor, at no additional expense to the Owner, shall provide all other additional cleaning and other work as may be necessary for the proper installation of cement-mortar lining. No defective sections or part of the piping shall be cement-mortar-lined until repairs have been made by the Contractor in a manner satisfactory to the Owner.

3.4 CEMENT-MORTAR LINING OF PIPELINES

- A. Cement-mortar lining of pipelines shall not be started until all cleaning operations have been satisfactorily completed and approved by the Owner.
- B. The cement-mortar lining in the pipelines shall be continuous, dense, smooth and without variations in quality, and free from noticeable change in thickness. The cement-mortar-

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lining of the pipelines shall be provided in strict accordance with the requirements of the American Water Works Association (AWWA) Standard Specifications for “Cement-Mortar Lining of Water Pipelines in Place”. Designation: AWWA C602, with latest amendments, except as modified herein, and in accordance with additional requirements specified herein.

- C. The cement-mortar lining thickness for the various diameter pipelines shall be in accordance with the following table, with an allowable plus tolerance of 1/8 inch. No minus tolerances in the cement-mortar lining thickness specified will be permitted.

Nominal Lining Pipe Diameter (inches)	Thickness (inches)
4 – 10	1/8
12 – 36	3/16
Greater Than 36	¼

- D. Placing cement-mortar pipe lining: Immediately prior to running the lining machine through the pipeline, all sand, water, loose material and other foreign material that has accumulated in the pipeline shall be satisfactorily removed. All preparatory work shall be provided by the Contractor in a manner that shall insure the proper and satisfactory completion of the contract work.

In conjunction with the mortar lining work, the Contractor shall install the new valves, as indicated on the Contract Drawings, and shall demonstrate to the Owner that the valves are in satisfactory operating condition prior to proceeding with backfilling operations. The Contractor shall provide all other measures necessary for preventing any damages to or fouling of valves or other pipeline appurtenances, and shall be responsible for the proper handling and storage of valves and appurtenances and for making good all damages to valves and other pipeline appurtenances in a manner satisfactory to the Owner, and at no additional expense to the Owner. It shall be the responsibility of the Contractor to clean branch connections, pitometer taps, air valves, blow-off, and services of any mortar or debris which enter the connections in the process of cement lining by blowing back or flushing the connections at no additional expense to the Owner.

The cement-mortar pipe lining shall consist of a one course application of a premixed cement-mortar which shall be continuously placed by a machine projecting the mortar against the wall of the pipe by centrifugal force, without injurious rebound, and with sufficient velocity to cause the mortar to be densely packed and to satisfactorily adhere in place. The machine used for cement-mortar lining all pipelines shall be provided with an attachment for mechanically troweling or drag troweling the mortar so as to produce a smooth surface finish, and shall travel ahead of the lining so that the freshly placed and troweled mortar will not be touched until it has set; the design of the trowel attachment shall be such as to permit operation in pipes which may be found out of round, and produce a smooth surface without spiral shoulder. The finish surface shall be smooth and shall not have a sand finish.

Mortar which does not provide a dense, homogenous lining satisfactorily adhered to the

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pipe surfaces, mortar lining containing sand pockets, voids, oversanded and cracked areas, areas of unsatisfactory surface finish and such other defective areas and materials shall be removed from the pipe wall. These areas shall be repaired by hand application or other approved method to the full required thickness of the mortar lining and as approved. All spatter and loose material shall be removed from the pipelines.

Faulty sections of pipe-lining such as sections of pipe lining which fail, or show evidence of failure, or show unusual or undue irregularity, or which will require an excessive amount of patching shall be removed by the Contractor before the lining has reached its initial set to the extent directed by the Owner. The pipe shall then be recleaned and the lining shall be replaced by the Contractor to conform to the requirements specified herein, and as approved. Defective lining rejected after initial set shall be repaired by the most practical method as determined by the Owner, in consultation with the contractor.

- E. Curing of cement-mortar lining: Immediately upon completion of the cement-mortar lining of pipeline between pipe openings or upon the completion of a day's run of the machine, the section of the pipeline shall be closed at each end and maintained in a moist condition by approved methods. As soon as practicable after placing the cement-mortar lining, water shall be introduced into the mortar-lined section between closed ends of pipe in order to create a moist atmosphere and keep the cement-mortar lining damp, but not under pressure, until the mortar lining has been in-place not less than 48 hours. The Contractor shall be responsible for the proper curing of the cement-mortar linings.
- F. Hand mortar work: Cement-mortar lining shall be done by hand at sharp bends, specials, areas adjacent to valves or other areas where machine placing is impracticable, and where correcting defective areas is required. Hand-placed mortar shall have uniformly smooth finished surfaces and smooth transitions adjacent to machine lining. Prior to placing of hand mortar work, all areas to be lined shall be thoroughly cleaned in an approved manner with all loose and foreign materials removed, and if required surfaces shall be dampened before placing the mortar. Steel trowels shall be used for finishing where practicable. Hand mortar work shall be completed within 24 hours after machine application in that particular section of pipeline has been completed. Machine application of mortar lining shall be slowed down, or stopped if necessary, to assure hand mortar work is being placed in accordance with the requirements specified or directed.
- G. Protection of lining: The Contractor shall be solely responsible for taking every precaution necessary to prevent injury to the pipe lining. All damage to pipe linings shall be satisfactorily repaired, or damaged portions removed and replaced by the Contractor to the satisfaction of the Owner, at no additional expense to the Owner.

3.5 INSPECTION AND TESTING

- A. The machine for placing the cement-mortar lining shall be so operated and controlled as to produce pipe linings conforming to the requirements specified herein. The operation and control for the equipment shall be constantly checked while the machine is in operation.
- B. To identify defective areas in the lining and determine compliance with this specification,

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the Contractor shall provide the Owner with a video on disc which shall be made by the travel of a television/video recorder through the interior of the entire length of newly lined pipe. The video tape of the pipeline shall be submitted to the Owner for review prior to closure of the pipe access openings for that pipeline. Separate payment per linear foot will be made for video recorder inspection under this section of the Specifications.

- C. The thickness of the cement-mortar lining for various pipe diameters shall be checked at each entrance/exit pit by the Owner and the Contractor and at other inspection points as directed by the owner. If the cement-mortar lining is found to be defective at any random inspection point, the Owner may require the Contractor to provide additional inspection pits to determine the extent of the defective lining, and the Contractor shall repair the cement-mortar lining found to be defective as required by subsection 3.04.D of this section, at no additional expense to the Owner. The Contractor shall make the necessary excavations, at locations as directed, cut out a three-foot section of cleaned and cement lined pipe for visual inspection, patch the lining as required at pipe cuts, reinsert the section using approved pipe couplings as specified in paragraph "REPLACING PIPING" below, backfill excavations and place gravel base and temporary and permanent pavements. No separate payment will be made for inspection pit and related work, although compensation for such work as required, shall be considered to be included in the prices bid for the applicable items of work under this contract such as F&I Pipe, couplings, Temporary and Permanent Pavements.

3.6 GUARANTEE OF CEMENT – MORTAR LINING

- A. General requirements: The Contractor shall guarantee materials and workmanship furnished under this contract against deterioration and failure for a period of one year after final acceptance of all the work under this contract. Any portion of the cement-mortar lining found to be deteriorated or have failed shall be made good by the Contractor in a satisfactory manner by patching or by removal and replacement of the cement-mortar lining, as required by the Owner, to provide a sound, durable cement-mortar lining. Repairs and/or replacements shall be made in accordance with AWWA Standard C602 (latest edition) and with the requirements specified herein, including removal of defective lining, cleaning the pipe, cutting and repairing or replacing access openings and all other incidental work. Repairs or replacements of defective cement-mortar lining and incidental work shall be provided in a satisfactory manner by the Contractor, at no additional expense to the Owner.

3.7 REPLACING PIPING

- A. After all tests have been satisfactorily completed, and the cement-mortar lining approved by the Owner, the access opening in the pipeline shall be closed. Unless otherwise directed, the sections removed from the pipelines shall be disposed of and replaced with new D.I. pipe in the completed pipeline. If so directed by the Engineer, the Contractor shall reinsert sections of hand C&L pipe into the access opening instead of replacing the removed section with new pipe. Hand C&L sections of pipe shall be provided in accordance with "Section 02700 – Cleaning and Lining Water Mains" and be paid for under the corresponding item for "C&L C.I. Pipe" as listed in the Bid. At those locations where existing mainline valves have been removed and relocated elsewhere on the

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mainline, the Contractor shall provide a new section of pipe for the closure. New sections of pipe shall be provided in accordance with Section 02615 – “Ductile Iron Pipe” and be paid for under the item for “F&I New D.I. Pipe”, as listed in the Bid. The cut sections of pipe shall be fitted into the pipeline in as close to the original position as practicable so as to maintain true alignment. All joints of cut sections of pipe shall be made up using mechanical couplings. All exposed exterior surfaces of pipelines, couplings, bolts and nuts shall be cleaned and given a coating of coal tar, Koppers Bitumastic 50, Tnemec 46-449, or equal approved by the Owner.

3.8 OBSTRUCTIONS

- A. Horizontal or vertical pipeline bends, pipeline specials, or other physical obstructions within the pipelines which will not permit the passage of pipe cleaning or cement-mortar lining devices, and which are not shown on the drawings or other plans made available to the Contractor; are not made known to the Contractor prior to the pipe cleaning operations at the respective section; or are not obviously implied by the layout on the drawings will be considered as “OBSTRUCTIONS” for purposes of payment. When an obstruction is encountered in the pipe cleaning operations which may not permit the passage of pipe cleaning and cement-mortar lining equipment, the Contractor shall provide all work necessary to permit the satisfactory passage of the equipment as directed by the Engineer.

3.9 LEAKAGE

- A. If any leaks in the water main at locations where sections have been removed for access and later replaced by the contractor, or if leaks occur at any other locations which are directly attributable to the operations of the contractor in the cleaning and lining of mains, he shall uncover and satisfactorily repair such leaks at no additional expense to the owner for a period of one year after final acceptance under this contract. Refer to the General Conditions (Section 721), Article 63 titled “General Guaranty”.

3.10 CHLORINATION

- A. Chlorination shall be performed in accordance with the disinfection requirements set forth in Section 02710, TESTING AND DISINFECTION OF WATER MAINS, of these Specifications, and the CITY OF EAST PROVIDENCE, WATER MAIN DISINFECTION PROCEDURE, in Appendix A of these Specifications.

3.11 PROTECTION OF WORK

- A. Existing pipelines, utilities and structures, as well as work installed under this contract, shall be protected by the Contractor from damage during construction, backfilling and other contract operations; and if damaged, shall be satisfactorily replaced or repaired by the Contractor, at no additional expense to the Owner.
- B. At locations where existing pipelines are cut and open and sections temporarily removed, the Contractor shall keep the open ends covered and plugged at all times, utilizing approved methods as directed by the Engineer, to prevent any run-off or foreign matter

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from entering the pipeline until such time as the existing pipeline has been permanently closed. No flexible fabrics, plastics or tape will be acceptable as bulkheads or caps.

3.12 EARTHWORK

- A. All earthwork including excavation, refill, borrow and appurtenant work required in connection with the installation and construction of the work under this Section of the Specifications shall be performed in accordance with the requirements specified under the appropriate sections of these specifications, and to additional requirements specified herein. The Contractor shall perform all excavations of whatever substances are encountered including earth, rock or ledge, boulders, pavements, and other materials from within the limits, lines and grades as required for the satisfactory completion of the work specified under this Section of the Specifications and as directed. Excavation operations adjacent to or around existing structures, pipelines and utilities shall be done manually and in a manner to prevent disturbance of or damage to the existing structures, pipelines and utilities, at no additional expense to the Owner. If rock or ledge or boulders are encountered within the limits of excavations required for the satisfactory completion of the work, the Contractor shall excavate the rock or ledge to the lines, grades and limits, as specified and as directed, and where boulders are exposed in the sides of or in the bottoms of excavations they shall be wholly or partially removed, as specified and as directed. No blasting will be permitted in the performance of the work of this contract and rock or ledge, if encountered, shall be removed by drilling and splitting mechanically or by hand, or by other approved method not requiring the use of explosives in accordance with Section 02211, "ROCK REMOVAL", of these Specifications.

3.13 TELEVISION INSPECTION

- A. Camera shall be moved through the line in either direction at a uniform rate, stopping when necessary to insure proper documentation of the water main's condition, but in no case will television camera be pulled at a speed greater than 30 feet per minute. Manual winches, power winches, TV cable and powered rewinds, or other devices that do not obstruct the camera view or interfere with proper documentation of water main conditions shall be used to move the camera through the line. If, during the inspection operation, the television camera will not pass through an entire section, Contractor shall re-set up his equipment in a manner so inspection can be performed from the opposite access point. If, again, the camera fails to pass through the entire section, the Engineer may order additional cleaning.
1. Whenever non-remote powered and controlled winches are used to pull television camera through the line, telephones or other suitable means of communication shall be set up between the two access points of section being inspected to insure good communications between members of the crew.
 2. One color digital video disk (DVD) shall be submitted to the Owner for post lining television inspection, with accompanying log.

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PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. The “CLEANING”, “LINING OF WATER MAINS” and “CCTV INSPECTION” of various sizes of cast-iron water mains will be measured for payment by the linear foot (L.F.) along the centerline of the water mains that were actually cleaned and lined with cement-mortar to thicknesses specified and/or cleaned and TV inspected. At locations where the installation of new valves, piping, or fittings (such as tees for new lateral installations or connections) is indicated or required within the limits of a pipeline to be cleaned and lined, a deduction will be made from the payment measurement for the cleaning and lining work equal to the linear footage of newly lined pipe cut and removed to accommodate the new work (i.e.: one or the other).
- B. No pipe will be measured for payment until it has been video-taped and the cement lining finish approved, tested, disinfected, and put back in service.
- C. “OBSTRUCTIONS” will be measured for payment by the unit “Each”.

4.2 BASIS OF PAYMENT

- A. The quantity of cleaned and cement lined water mains measured as described above, will be paid for at the unit price bid for “CLEANING (6-inch to 12-inch)”, “LINING WATER MAINS”, various sizes, and “CCTV INSPECTION” of the various sizes of cast-iron water mains listed in the Bid, which shall constitute full compensation for the furnishing of all labor, equipment, tools, appliances and materials and performing all operations in connection with providing the cleaning and cement-mortar lining of cast-iron water pipelines, including excavation, sheeting, complete shoring, cutting pipe opening, dewatering pipelines and excavations, cleaning and inspecting pipelines, cement lining pipelines, video recorder inspection of cement lining, closing pipe openings, uncovering existing valves, removing existing mainline valves, removing and replacing piping, fittings and valves where obstructions occur, removing inoperative valves, clearing service connections, testing and disinfecting pipelines, backfilling, protection of existing structures, properties, and utilities, and all other appurtenant and related work required to satisfactorily complete the cleaning and cement-mortar lining of the existing cast-iron piping, complete and in strict accordance with the specifications and the applicable drawings, and as directed.
- B. The quantity to be paid for under the item “OBSTRUCTIONS” shall be the actual number, each, of obstructions encountered and removed from the water main as defined under “OBSTRUCTIONS” section of these specifications as approved for payment by the Owner.

END OF SECTION

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SECTION 02710

TESTING AND DISINFECTING WATER MAINS

PART 1 GENERAL

1.1 DESCRIPTION

- A. Scope of Work: The work covered under this section of the Specifications includes furnishing all labor, equipment, tools, appliances, appurtenances and materials and performing all operations in connection with testing and disinfecting all temporary bypass piping, completed water pipelines, service connections and hydrant assemblies, and appurtenances, in accordance with this section of the Specifications and as directed by the Owner.

- B. At no time is there to be a physical connection between the existing distribution system and the newly installed main, until final approval is given by the City of East Providence. The complete Pressure Testing, Flushing, and Disinfecting Procedures must be completed before the final approval is given and the Contractor is allowed to make any connections to the existing distribution system. The Contractor shall utilize a separate, temporary piping system, conforming to the requirements of Section 02750 "TEMPORARY BYPASS PIPING AND SERVICES", for flushing, filling, testing and chlorination of various sized water mains. The temporary piping system shall consist of corporation stops or valves on the supply line and the main to be filled. A reduced pressure zone device (relief valve between two check valves) shall be installed in the temporary piping system to insure that no water is allowed to return to the supply line.

- C. Fire hydrants may **not** be used for sampling points but may be utilized as a feed source if properly flushed and the above temporary piping system installed.

- D. Main line valves SHALL NOT be utilized to fill, flush, test or chlorine water mains unless authorized and supervised by the Engineer.

- E. Related Work Described Elsewhere
 - 1. Ductile Iron Water Mains and Appurtenances Section 02615
 - 2. Fire Hydrants Section 02644
 - 3. Water Service Lines Section 02650
 - 4. Cleaning and Lining Water Mains Section 02700
 - 5. Temporary Bypass Piping and Services Section 02750

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PART 2 PRODUCTS

2.1 MATERIALS

- A. Chlorine for disinfection shall be provided and used by the Contractor, Shall be NFS 60 Certified and shall conform to AWWA Specification B300 and C651, latest revisions. The Contractor shall furnish the Owner a certificate of compliance that the disinfection specified above conforms to the AWWA standards.

PART 3 EXECUTION

3.1 HYDROSTATIC TESTING

- A. Tests for leakage shall be conducted on all portions of completed water pipelines and appurtenances, and all methods and procedures for performing the testing of water mains shall be subject to the approval of the Owner. Interiors of all pipe shall be cleaned of all dirt and foreign materials prior to testing.
- B. Testing of watermains shall conform to the requirements of Section 4 of the AWWA Specification C 600, latest revision, except as herein specified.
- C. After the pipe has been laid and the trench has been backfilled, and before the work is accepted, each section of pipe shall be flushed, tested and disinfected. Water for testing and disinfection will be furnished by the Owner at no expense to the Contractor. The Contractor shall do all work and shall furnish all means and apparatus necessary for admitting water to the mains for disinfection and testing, including pumps, calibrated gages and metering devices. In sections where there are high points in the line that cannot be otherwise vented (where permanent air release valves and boxes have not been provided), at dead ends and at valved branch connections to existing mains, the Contractor shall install temporary 1-inch corporation stops and temporary suitable blowoff pipes as required, so that air can be expelled. He shall also install any riser pipes required to discharge the water used for flushing and disinfecting the mains. After the tests are completed, plug all temporary taps and remove all temporary riser pipes and other apparatus.
- D. In general, testing shall be carried out with as few permanently made-up connections to the existing water system as possible; with as many joints as practical uncovered and exposed; and in an approved manner. Pressure testing shall consist of completely filling each section from valve to valve with water from the distribution system and maintaining a hydrostatic test pressure of 150 psi, measured at the highest point in the section, and shall be required to hold the pressure for **at least 2 hours**.
- E. Testing of watermains shall be performed by the Contractor at his expense and in the presence of the Engineer. The Engineer shall witness every test and rule on its acceptance. All samples will be taken by the City of East Providence Water Division staff.
- F. If the specified pressure cannot be held for the required time (See app. A – Pressure and

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Disinfection Procedure), the Contractor shall locate and repair the leaks and the pipelines shall be retested, repeatedly if necessary, by the Contractor, until the pressure test requirements are met, at no additional expense to the Owner.

3.2 DISINFECTING WATERMAINS AND APPURTENANCES

- A. All portions of completed watermains and appurtenances are to be disinfected before acceptance for operation by the Owner. The entire Testing and Disinfection procedure requires that the Contractor work closely under the direction of the Engineer who will coordinate the entire procedure with the City of East Providence Laboratory and the Contractor.
- B. Watermains shall be disinfected by the Contractor in conformance with the City of East Providence, Water Division Procedure for Disinfecting Water Mains (see Appendix A) and shall be witnessed and approved by the Engineer.
- C. To prevent possible back flow or siphonage of contaminants into the water distribution system which is in service, the Contractor shall be required to provide a reduced pressure zone device (relief valve between two check valves) installed from the distribution system to the water main being treated and to provide such other safety and control measures as directed by the Engineer.
- D. Before disinfection, water mains and services shall be thoroughly flushed. A turbidity reading of below five (5) shall be monitored by the Contractor, witnessed and approved by the Engineer before flushing is discontinued and chlorination may begin. Flushing shall be at a rate sufficient to create a water velocity of at least 2.5 feet per second through the pipe.
- E. A corporation stop (s) shall be provided at a location(s) for feeding of the liquid chlorine solution within five (5) feet of one end, and at locations designated by the Engineer for sampling points. All sampling points shall be within 10 feet of the end points of the new main to be tested and chlorinated, all as determined by the Engineer. Copper or plastic tubing shall be used for all chlorination and sampling pipe. Chlorine shall be continuously fed in a liquid solution, made from crystalline sodium hypochlorite or sodium hypochlorite with a concentration between 5-15%. All samples shall be taken at the same sampling points (copper or plastic tubing) for the entire procedure and shall follow the same flow pattern throughout the testing procedure (point A to point B).
- F. The initial chlorine concentration in the pipe shall be at least 25 mg/l when tested by the City of East Providence. The treated water will remain in the water main for at least twenty-four (24) hours. After the twenty-four hour retention period the chlorine concentration in the pipe shall not be less than 10 mg/l when test by the City of East Providence. If the chlorine concentration when tested is less than 10 mg/l, this procedure shall be repeated. If, after the applicable retention period, the chlorine concentration is at least 10 mg/l the heavily chlorinated water shall be flushed from the main until the chlorine concentration in the water leaving the main when tested is no higher than 1 mg/l, and the turbidity is less than 1.0.

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- G. Bacteriological testing shall be done by the City of East Providence, Water Division after the final flushing and before the water main is put into service. The sample or samples shall be collected immediately after final flushing and again, if necessary, at least twenty-four (24) hours after final flushing. These samples usually require a forty-eight (48) hour period to insure that no coliform organisms exist. If coliforms are determined to be present, the procedure shall be repeated. No water main shall be put into service without the written permission of the Owner.
- H. Under certain conditions, an emergency type chlorination may be conducted with the written approval of the Owner.
- I. Chlorination of valves, fittings and short lengths of main (less than 20 ft) that will not be included in the normal chlorination procedure shall be thoroughly disinfected by contact swabbing and/or brushing with a high strength sodium or calcium hypochlorite solution in the concentration of 500 milligrams of available chlorine per liter of water.
- J. The Contractor shall be responsible for the satisfactory disposal of all flushing water and chlorinated water at no additional expense to the Owner.
- K. The Contractor shall submit, to the Owner for approval, the type of chlorine to be used, the disinfection experience of the workers, and the procedures and equipment to be used by the Contractor.
- L. The Contractor is hereby warned that water main disinfection shall only be accomplished by specially trained personnel, and that the project's water mains are vital to the safety and wellbeing of the municipality.
- M. The Contractor's workers who are responsible for the water main work should be aware of the potential health hazards with chlorine and must be trained to observe carefully the prescribed construction practices and disinfection procedures. The effectiveness of disinfection depends in large measure on maintaining clean pipes and avoiding major contamination during construction.
- N. The Contractor shall give thorough consideration to the impact of highly chlorinated water flushed to the receiving environment. If there is any question that damage may be caused by a chlorinated waste discharge (to fish life, plant life, physical installations, or other downstream water uses of any pipe), then an adequate amount of reducing agent should be applied by the Contractor to water being disposed of, in order to neutralize thoroughly the chlorine residual remaining in the water. This procedure shall meet all State Stormwater Regulations. Chlorinated waters may also be directed into the sanitary sewer system.
- O. A City of East Providence Pressure and Disinfection Procedure and a short Summary is included in these Specifications as Appendix "A".

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PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. The work and materials required by this section of the Specifications including the temporary corporation stops and temporary piping systems, will not be measured separately for payment.

4.2 BASIS OF PAYMENT

- A. No separate payment will be made under this section of the Specifications for testing and disinfection of water mains and related work. Compensation for such work as required, shall be considered to be included in the prices bid for other applicable items of work under this contract.

END OF SECTION

SECTION 02713

INSTALLATION OF WATER PIPELINE SYSTEMS

PART 1 GENERAL

1.1 DESCRIPTION

A. Work Included:

This section covers the installation of water pipeline systems, complete, including pipe, fittings, valves, hydrants, blowoff, water service lines, and all appurtenant items. Where applicable, water mains shall also be removed and disposed of in accordance with all local, state and federal regulations. Removal of pipes shall occur in locations where new pipe conflicts with existing pipe. In this case the old pipe shall be cut and plugged at both ends and properly secured by either mechanical connection or concrete.

B. Related Work Described Elsewhere

- | | | |
|----|--|---------------|
| 1. | Earth Trench Excavation and Backfill | Section 02211 |
| 2. | Ductile Iron Water Mains and Appurtenances | Section 02615 |
| 3. | Fire Hydrants | Section 02644 |
| 4. | Water Service Lines | Section 02650 |

1.2 QUALITY ASSURANCE

A. Conformance:

1. The Contractor shall furnish to the Owner manufacturer's notarized test reports and methods of test to show compliance with all specification requirements; and notarized certificates of conformance stating that all pipe, valves, hydrants, corporation stops, curb stops and appurtenant materials to be shipped and installed conform with all specification requirements.
2. Installation of pipe, valves, hydrants, corporation stops, curb stops and appurtenant materials shall be performed in conformance with AWWA Specification C600, latest revisions, for the various materials listed, and to the requirements of the City of East Providence Water Division.

1.3 JOB CONDITIONS

A. Protection:

1. Prevent foreign material from entering the pipe, fittings, valves and hydrant during installation. Whenever pipe installation is stopped, seal the open end of the pipe with a watertight plug to prevent trench water, debris or other material from entering the pipe.

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Take adequate measures to prevent flotation.

2. Pipe delivery shall be closely coordinated with installation. No debris, tools, clothing or other materials shall be placed in the pipe.
3. Pipe shall be installed in dry excavations. If water is present in the trench after installation, then the seal shall be left in place until the trench has been pumped dry.

B. Unsuitable Conditions:

No pipe shall be installed when, in the opinion of the Engineer, trench or weather conditions are unsuitable.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All pipe, fittings, valves, hydrants and appurtenances shall be carefully handled, stored and protected in such a manner as to prevent damage to materials and protective coating and linings. Under no circumstances shall such materials be dropped or dumped into the trench. Remove any broken or damaged materials from the construction site and do not use in any portion of the construction. Any broken, damaged, or otherwise defective materials which are included in the construction shall be removed and replaced at no additional expense to the Owner.

PART 2 PRODUCTS

2.1 DUCTILE IRON WATER MAINS AND APPURTENANCES

- A. As shown on the Drawings. Refer to Section 02615 for Specifications.

2.2 GATE VALVES, BUTTERFLY VALVES, TAPPING SLEEVES AND VALVES, VALVE BOXES AND APPURTENANCES

- A. As shown on the Drawings. Refer to Section 02640 for Specifications.

2.3 FIRE HYDRANTS

- A. As shown on the Drawings. Refer to Section 02644 for Specifications.

2.4 WATER SERVICE LINES

- A. As shown on the Drawings. Refer to Section 02650 for Specifications.

2.5 CORPORATION STOPS, CURB STOPS AND CURB BOXES

- A. As shown on the Drawings. Refer to Section 02650 for Specifications

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2.6 CONCRETE FOR THRUST BLOCKS AND ENCASEMENT

- A. Cement concrete for thrust blocks and encasements shall be Class B cement concrete and shall have a minimum compressive strength of 3,000 psi after 28 days. Refer to Section 03310 for Specifications.

PART 3 EXECUTION

3.1 PREPARATION

- A. Excavation

Perform excavation in accordance with the requirements of Section 02211 "EARTH TRENCH EXCAVATION AND BACKFILL".

- B. Dewatering:

Perform dewatering as necessary to install pipeline in the dry, in accordance with the requirements of Section 02401 "DEWATERING, CONTROL AND DIVERSION OF WATER".

- C. Cleaning and Inspection:

1. The interior of all pipe, fittings, valves and hydrants shall be thoroughly cleaned of all foreign material, and inspected for cracks, flaws or other defects before installation, and shall be kept clean until the work is accepted. All joint contact surfaces shall be kept clean until the joint is complete. Mark all defective, damaged, or unsound materials with bright marking crayon or paint and remove from job site.
2. Before lowering into the trench and while suspended, each pipe and fitting shall be carefully examined for defects and no pipe or fitting shall be laid which is known to be defective. All pipe or fittings found to be defective before being laid shall be clearly marked and removed from the job, as stated above. If any pipe or fitting shall be found to be defective after being laid, it shall be removed and replaced with a sound pipe or fitting by the Contractor at his expense.

- D. Excavation of Existing Facilities:

When connections are to be made to existing pipe or appurtenances, the actual elevation of which cannot be determined without excavation, the Contractor shall excavate for and expose the existing facility before laying any pipe or conduit. The Owner will inspect the existing facility and will make any necessary adjustments in the line or grade of the proposed pipe to accomplish the connection. Where old pipe conflicts with new pipe, old pipe shall be cut and capped on both ends and the cap shall be secured. No fitting or pipe deflection will be allowed on new pipe to go over or under old pipe.

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3.2 INSTALLATION OF PIPELINE

A. General

1. Install pipelines and other equipment appurtenant to the pipeline, at the locations indicated on the Drawings or as otherwise designated by the Owner to accommodate field conditions. At no time is there to be a physical connection between the existing distribution system and the newly installed main, until final approval is given by the City of East Providence, Water Division. This involves the completion of the City of East Providence, Water Division Pressure Testing, Flushing, and Disinfecting Procedures. The Contractor shall utilize a separate, temporary piping system for flushing, filling, testing and chlorination of various sized water mains (refer to Section 02710 "TESTING AND DISINFECTING WATER MAINS"). All pipelines shall be installed as specified herein and in accordance with additional requirements specified in Section 02615 "DUCTILE IRON WATER MAINS AND APPURTENANCES".
2. As each length of pipe is placed in the trench, the joint shall be completed in accordance with the applicable sections of the pipe material specifications, and the pipe shall be brought to the correct line and grade. Secure the pipe in- place with the specified bedding material tamped under and around the pipe, except at the joints. Care shall be taken to prevent dirt and water from entering the joints. No pipe shall be laid in water. All rock, stones or other material likely to damage the pipe or protective coatings and lining shall be moved.
3. In addition to the requirements specified herein, the piping, fittings, valves, hydrants and water service lines shall be provided in accordance with the printed recommendations of the respective manufacturers and as approved.
4. Where old pipe conflicts with new pipe, old pipe shall be cut and capped on both ends and the cap shall be secured. No fitting or pipe deflection will be allowed on new pipe to go over or under old pipe. In areas where water main is to be removed, the contractor shall disconnect each service lateral from the main at the corporation prior to removal of the main. Contractor shall be responsible for the disposal of the removed water main pipe.

B. Pipe Laying:

1. Pipe shall be laid true to line and grade and joined in such a manner that the offset of the inside of the pipe at any joint is held to a minimum. Deflections from straight line or grade, as required by vertical curves, horizontal curves, or offsets, shall be made using fittings or specials, as indicated and/or as directed. Deflections shall not exceed those recommended for that type of pipe or joint used.
2. Unless specifically authorized otherwise by the Owner in writing, the pipeline shall be installed so that a positive or negative grade is maintained between high and low points to avoid air pocket. If permanent air release valves are not provided, record locations of all high points so they may be readily located.

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3. Install pipe with bell ends facing the direction of laying, unless directed otherwise by the Owner. Where pipe is laid on a grade of 10 percent or greater, the installation shall proceed uphill with the bell ends facing uphill.
 4. Cutting of pipe for inserting valves, fittings and closure pieces shall be done in a neat and careful manner without damage to the pipe. Cuts shall be made by approved methods to produce clean square cuts, and in accordance with the manufacturer's instructions. Pipe damaged by the Contractor by improper or careless methods of cutting, shall be replaced at his expense.
 5. All open ends of the pipe shall be securely closed with a watertight plug at the end of each day's work and whenever work is not in progress, so as to prevent the entry of water, foreign material, or other substance.
- C. Reaction Anchorage and Blocking – Pressure Flow Pipelines:
1. Provide thrust blocks, anchors, joint harnesses, or other approved means for preventing pipe movement, at all push-on or mechanical joint plugs, caps, tees, and crosses; bends deflecting 11-1/4 degrees or more; and reducers and valves installed in piping subjected to internal hydrostatic pressure in excess of 13 psi.
 2. Construct thrust blocks in accordance with details shown on the Drawings, sized to accommodate the specified test pressure of the pipeline. Thrust blocks shall extend from the fitting to solid undisturbed earth, and shall be constructed so the joints are accessible for repair. If adequate support against earth cannot be obtained, provide joint harnesses, as approved by the Owner. All hydrants, however, shall be harnessed as shown on the Drawings.
 3. Where bends turn down and the resulting thrust will be upward, provision to restrain the thrust shall be made with either lock type pipe and fittings, concrete anchors, joint harnesses or a combination thereof.
 4. Provide joint harnesses or other supports for fittings installed in fills or other unstable soil, above grade, or exposed within structures, as required by the Drawings, as specified in other sections of the Specifications, or as necessary to prevent movement.
- D. Installation of Concrete for Thrust Blocks and Encasements:
1. Installation of concrete for thrust blocks and encasements shall be in accordance with Section 600 "Portland Cement Concrete" of the State of Rhode Island Standard Specifications for Road and Bridge Construction; and to the additional requirements specified in Section 03310 "MISCELLANEOUS CONCRETE WORK".
 2. Insofar as possible, thrust blocking anchorage shall be so placed that the pipe and fitting joints will be accessible for repair.

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E. Connections to Existing Pipelines:

1. Make connections between new work and existing piping using couplings and fittings suitable for the conditions encountered. Make each connection at a time and in a manner authorized by the Owner. At no time is there to be a physical connection between the existing distribution system and the newly installed main, until final approval is given by the East Providence Water Division. The complete Pressure Testing, Flushing, and Disinfecting Procedures must be completed before final approval is given. Provide facilities for excavations without damage to adjacent property.
2. Take all precautions to prevent contamination when making connections to existing potable water lines. No trench water, mud or other contaminating substances shall be permitted to enter the pipeline.

F. Valve Operations:

The Owner will furnish personnel to operate all valves in the water system without cost to the Contractor. The Contractor shall notify the Owner at least 48 hours in advance of any desired valve operation. Under no circumstances shall the Contractor operate any valve controlling flow of water in the water system.

G. Concrete Encasement:

Install concrete encasement where indicated on the Drawings or where required by other sections of the specifications. Block all pipe in place to prevent flotation. Where required shall be included in the cost of water main installation.

H. Protection of Metal Surfaces:

Protect all ferrous metal rods, clamps, bolts, and other accessories subject to submergence or contact with earth or fill material and not encased in concrete, with two coats of coal tar paint. Apply the first coat to clean, dry metal surfaces and allow to dry before applying the second coat.

3.3 INSTALLATION OF PIPELINE APPURTENANCES

A. Install all valves, hydrants, air release valves, water service lines and other equipment appurtenant to the pipeline, at the locations indicated on the Drawings or as otherwise designated by the Owner to accommodate field conditions.

1. Installation of Valves: Install valves in the pipeline in the same manner specified for laying and jointing the pipe in accordance with additional requirements specified in Section 02640 "VALVES, TAPPING SLEEVES, AND APPURTENANCES".
2. Valve Boxes: Except where specified otherwise, install valve boxes on all buried valves. Install boxes such that no stress is transmitted to the valves. Set boxes plumb and directly over the valve with the top of the box placed flush with the finished grade.

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Backfill and thoroughly compact around each box. Provide extended stems on valves where required such that the operating nut is not lower than 4 feet below finished grade.

3. Installation of Fire Hydrants: Install fire hydrants in the same manner specified for laying and jointing pipe and as detailed on the Drawing, and to additional requirements specified in Section 02644 "FIRE HYDRANTS".
4. Installation of Air Release/Blowoff Valve: Air release/blowoff valves shall be provided as shown on the drawings or as directed by the Owner. Payment will be made at the unit price bid for "FURNISH AND INSTALL AIR RELEASE/BLOWOFF VALVE AND VALVE BOX", as listed in the Bid.
5. Installation of Water Service Lines: Install water service lines in the same manner specified for laying and jointing pipe and as detailed on the Drawing, and to additional requirements specified in Section 02650 "WATER SERVICE LINES".

3.4 FIELD QUALITY CONTROL

- A. Cooperation with City of East Providence Water Division: Installation of water pipeline systems shall be done at the convenience and with the authorization of the City of East Providence to enable the City to meet such peak demands as are imposed upon the distribution system.

Before proceeding with the connection to the existing main, the Contractor shall have completed all necessary excavation, and have all necessary materials for connections ready, together with suitable equipment for cutting and removing the pipe, removing water from the trench, disinfecting and placing fittings and pipe. Where shutting down of a main is required for the making of a connection, the Contractor shall carry on his work continuously to completion, so that the water can be turned on as soon as possible.

- B. Notification of Customers: Before any mains are shutdown, the Contractor shall ascertain the customers to be affected by the shutdown and shall notify each at least 24 hours in advance and again just prior to the shutdown. The City of East Providence Water Division shall furnish the Contractor with a list of customers to be affected by the shutdown.
- C. Accuracy of Work: The Contractor shall be responsible for making careful measurements and for providing proper lengths and fittings at the proper locations, so that the required connections will properly fit into the existing mains. All pipe will be cut in a manner acceptable to the Owner.
- D. Alignment Tests:

Each section of pipe will be checked by the Owner in order to determine whether any displacement of the pipe has occurred. The Contractor shall provide suitable assistance to the Owner. The Contractor shall repair any poor alignment, displaced pipe, or other defects discovered, as directed by the Owner, at no additional expense.

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- E. Pipe Deflection Tests:
1. Whenever pipe is installed, each section shall be measured for vertical ring deflection after installation prior to final backfill. Maximum allowable ring deflection of the pipeline shall be as required in the pipe materials section of the specifications.
 2. The Contractor shall provide all necessary equipment to conduct the tests.

3.5 PIPE PRESSURE AND LEAKAGE TESTS

- A. Each section of pipe shall be subjected to hydrostatic tests as specified in Part 3.02, Section 02710 "TESTING AND DISINFECTING WATER MAINS", of the Specifications. Pressure and leakage tests shall conform to the requirements of AWWA Specification C 600, latest revision.

3.6 DISINFECTION OF POTABLE WATERLINES

- A. Disinfection of water mains and appurtenances shall be performed in accordance with the procedure set forth in AWWA C 651 – Disinfecting Water Mains, and to the additional requirements specified in Part 3.02, Section 02710 "TESTING AND DISINFECTING WATER MAINS", of the specifications.

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

- A. The work required to install pipeline systems as described by this section of the Specifications will not be measured separately for payment. Payment will be made under the items for Furnish and Install as listed in the Bid.

4.2 BASIS OF PAYMENT

- A. No separate payment will be made under this section of the Specifications for installation of water pipeline systems, but the costs thereof shall be deemed to be included in the prices bid for the various items to be furnished and installed under this contract, as listed in the Bid.

END OF SECTION

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SECTION 02750

TEMPORARY BYPASS PIPING AND SERVICES

PART 1 GENERAL

1.1 DESCRIPTION

- A. Scope of Work: The Contractor shall stage his work to minimize disruption of water service to abutters. However, the Contractor will not be permitted to temporarily interconnect the system until all required procedures for chlorination, disinfection and testing of the new water mains, as specified in Section 02710 “TESTING AND DISINFECTING WATER MAINS” have been performed, and the procedure approved in writing by the Owner. A testable backflow prevention device between the potable water system and the temporary by-pass water system as well as a water meter is required to charge the by-pass system. Any and all temporary materials and work required to provide for the interconnection and disconnection of the system will not be considered temporary bypass piping but shall be considered to be included in the process bid for the applicable items for work under this contract.

- B. Prior to any connection to the existing water system, a testable back flow prevention device shall be installed between the potable water system and the hose used to convey water for construction.

- C. Prior to installation, the Contractor shall prepare a plan (2 copies) showing all proposed bypass piping locations and shall submit this plan to the Owner for review. Upon receipt of written approval by the Owner, the Contractor will proceed to install and be compensated for the temporary bypass piping and services, as outlined in Section 02750 “TEMPORARY BYPASS PIPING AND SERVICES”. Should it be determined at any time during the construction, that the proposed bypass system piping cannot be installed as shown on the temporary bypass piping plan or in alternate locations approved by the Owner, without extensive disruption of service of the existing water system, the Contractor will immediately notify the Owner. The Owner shall have the final approval on the layout and pipe sizes of the proposed bypass piping system.

- D. The work covered under this section of the Specifications includes the furnishing of all labor, equipment, tools, appurtenances and, materials, and performing all operations in connection with providing, maintaining, repairing, and removing all temporary bypass piping and service connections, as specified. Use of temporary bypass piping includes testable back flow prevention devices, water meters, temporary building service piping and connections, valves, fittings, piping, hydrants, connections to other piping and facilities, disinfection of temporary bypass line and service piping, excavations and backfills, restoration or replacement of all disturbed existing work, crossings over traveled ways, and all other incidental and appurtenant work required to satisfactorily provide temporary water service to consumers, including domestic and fire protection uses, complete, in strict accordance with the Specifications and Drawings, and as directed. When fire hydrants are by-passed, a 4-inch bypass line shall be used and a 4 ½ -inch outlet complete with valve and attachment capable of accommodating a 5-inch Storz connection may be required, or as directed by the Fire Department shall serve as a

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temporary hydrant. The temporary hydrant shall be on the same side of the street and within 25 feet of the existing fire hydrant wherever possible. Temporary hydrants may be located on the opposite side of the street where they would otherwise conflict with work pits or other construction activities, if depicted on Contractor's temporary bypass plans issued for review and approval.

- E. All temporary bypass piping and building service connections shall be provided in such a manner that all public health and safety requirements of the State and Owner shall be strictly adhered to at all times. It shall be the responsibility of the Contractor to familiarize himself with all State and City of East Providence public health and safety requirements as they may affect the work under this contract. All temporary bypass service piping and building services shall be provided, kept in repair, and maintained in such a manner so as to prevent injury to persons, or damage to the work or public and private property.
- F. The Contractor shall provide a list of three contacts that are available 24 hours a day for emergency bypass repair. The Contractor shall respond within one hour to repair the damaged or leaking bypass piping and the Owner/Engineer shall be notified whenever these events occur.

1.2 RELATED WORK DESCRIBED ELSEWHERE

1.	Earth Trench Excavation and Backfill	Section 02211
2.	Restoration of Lawns and Right-of-Way Areas	Section 02486
3.	Pavement Restoration	Section 02513
4.	Ductile Iron Water Mains and Appurtenances	Section 02615
5.	Testing and Disinfecting Water Mains	Section 02710
6.	Installation of Water Pipeline Systems	Section 02713

PART 2 PRODUCTS

2.1 MATERIALS – PIPING, VALVES, AND HYDRANTS

- A. All piping and or hose must be designated for potable/residential water use and be certified for use in contact with potable water. Service connections shall be made with piping that has NSF Standard 61 certification.
- B. All pipe and appurtenances used in providing the temporary bypass service piping shall be in good condition and adequate to withstand at least 1-1/2 times the normal water working pressures and all other conditions of use or a minimum of 160 psi for 2 inch to 4 inch or 130 psi for 6 inch. The pipe and other materials shall provide adequate watertightness. Temporary hydrants shall meet the approval of the City of East

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Providence prior to installation. In general, any bypass piping including a temporary hydrant shall be 4-inch minimum.

- C. Piping shall be High Density Polyethylene (HDPE) SDR – 11, NSF 61 certified. The pipe shall be DriscoPlex PE 3408 or approved equal HDPE, butt-fusion welded, each joint being restrained. Service hose/tubing shall be NSF 61 certified and shall be a high purity street to home potable water hose with a PVC tube and blue PVC compound cover.

PART 3 EXECUTION

3.1 TEMPORARY BYPASS PIPING AND SERVICES

- A. The Contractor shall provide temporary valved bypass piping and services as required and approved to satisfactorily provide adequate fire protection and serve all water customers serviced by the section of water main that is out of service during the performance of the work under this contract. In general, bypass pipe shall be 4-inch diameter for temporary fire hydrant and commercial service supplies. Residential service supply piping shall be 2-inch. In the instance of higher demand or locations where multiple feeds are not available 6-inch bypass pipe may be required. Road crossings with 1" hose will not be permitted. Dead-end bypass lines shall be provided with valves and piping for blowoffs and bleeding. The Contractor shall provide temporary building service connections to every building served by the section of water main taken out of service. Temporary building service connections shall extend from the bypass pipe and shall be of adequate size to satisfactorily provide adequate water for the building being serviced. Temporary service connections for fire services will be paid for using the appropriate unit prices included in the bid. Otherwise, there will be no separate payment made for building service connections, but the cost thereof shall be deemed to be included in the unit price bid for furnishing and installing temporary bypass pipe and services.
- B. In general, all temporary piping and service shall be provided in such a manner as to protect it from damage and to ensure uninterrupted supply and shall be located out of traveled ways where practicable, in locations where it will cause the least obstruction and inconvenience, and where it will be least subject to damage. The piping shall be adequately anchored to assure no movement due to expansion or contraction.
- C. The bypass pipe shall be supplied from connections made to hydrants or existing water mains that are to remain in service. Wherever possible, each bypass piping section shall have a minimum of two (2) feeds. The Contractor shall furnish all work and fittings including meters and make all necessary connections required to supply the bypass pipes (including services) with water from hydrants or existing water mains including testable back flow prevention devices. Procedures for connecting bypass pipes to existing watermains that are to remain in service are specified elsewhere in this Section.
- D. All temporary building service connections, with the exception of fire services greater than 2-inch in size, shall extend from the bypass pipe and terminate at the connection to the building plumbing. For fire services, temporary connection can be made at the

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property line by cutting out the existing service pipe, connecting temporary polyethylene service to existing service with appropriate coupling, and reconnecting existing fire service with new ductile iron and couplings. The limits of the new ductile iron fire service pipe shall be determined in the field and paid for using the appropriate bid items for “Furnishing and Installing New Ductile Iron Water Main”. A list of fire services in the project area is included as Attachment A of this specification section.

- E. Temporary building services shall include all necessary hoses, pipes, valves, and fittings, of approved size, required to service consumers. The Contractor shall make the actual connection and disconnection to the consumer’s building plumbing and shall coordinate his work with the Owner of any building to be serviced so that there will be the least amount of inconvenience to the owners. In general, the Contractor may connect temporary service hose or piping to the consumer’s plumbing by any means acceptable to the East Providence Water Division and the property owner, including either inside or outside connections to temporarily disassembled water system components, or direct connections to hose bibs, standpipes or other acceptable connection points. The locations of connections and methods used must be acceptable to the City of East Providence Water Division and the owners. At the request of the property owner, outside connections to hose bibs shall include a “y” type hose connection fittings at no additional cost to the City of East Providence, Water Division.

- F. In the event that the Contractor deems it necessary to “drop” meters in customer’s homes for connection to the bypass, he shall provide advance notice to the Water Division meter department personnel and provide them the opportunity to be present when the meters are reinstalled or replaced. Arrangements are to be made with the Water Division meter department supervisor and require a minimum of 24 hours prior notice. All meters will be inspected and resealed by the Water Division at this time. No meters are to be reinstalled without the presence of a Water Division meter department official. The Contractor is responsible for all scheduling and notifications for the affected customers.

- G. Once put in use, all temporary piping and services shall be maintained by the Contractor until the new water main is placed in service. Any interruptions, whether caused by frost, physical damage, or otherwise, shall be immediately corrected by the Contractor, and the service restored or replaced without additional payment.

3.2 PIPING CROSSING TRAVELED WAYS

- A. The Contractor shall layout temporary bypass piping in such a manner as to minimize the number of street crossings required. Where temporary bypass pipes and service lines are permitted to cross streets, driveways or sidewalks, the Contractor shall provide all necessary and required construction to protect and prevent injury to persons, property, vehicles and the pipelines. At street crossings, narrow trenches shall be excavated and the pipe shall be installed below the roadway surface with bituminous concrete placed around and above the pipe flush with the existing roadway surface. At driveways, provisions shall be made, as approved by the City, to permit vehicles to drive over the temporary pipe by the use of ramps constructed of bituminous concrete, wood or other acceptable material on each side of the pipe; by depressing the pipe as at street crossings;

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or by such other methods that may be acceptable and suitable for the purpose intended.

- B. The Contractor shall provide watchmen, lights, barriers, signs and such other methods as may be necessary or required to maintain and direct traffic through the project and to prevent injury to persons and property and to comply will all State and City safety codes, ordinances and regulations. Separate payment will not be made for the furnishing of watchmen, lights, barriers, signs, etc. for protection of traffic and to prevent injury to persons and property, as specified under Section 01576 “PROTECTION OF TRAFFIC, PERSONS AND PROPERTY”; however, separate payment will be made for the furnishing of uniformed policemen for direction of traffic, as specified under Section 01570 “TRAFFIC REGULATION”.
- C. All cutting of pavements shall be made using mechanical pavement cutters; trenches shall be straight and all cut edges shall be clean vertical faces. Temporary and permanent pavement require to restore pavement, sidewalks, and driveways damaged or displaced as a result of the work under this section, is specified under Section 02513 “PAVEMENT RESTORATION”; and payment will be made for such work, under the applicable items, as listed in the Bid.

3.3 DISINFECTION

- A. All temporary bypass lines, services and connections shall be disinfected (according to AWWA standards) just before being placed into service. Disinfection of service lines shall be done as part of the work included under this section of the specifications and in accordance with the requirements specified under Section 02710 “TESTING AND DISINFECTING WATER MAINS”. No separate payment will be made for such work, but the cost thereof shall be deemed to be included in the work required herein.

3.4 DISCONNECTION AND REMOVAL OF TEMPORARY PIPING

- A. After the new water main is accepted and placed in service, and permanent service to consumers has been restored, and when approved, the Contractor shall remove all temporary bypass piping and building service connections, and all other temporary work, as directed; place temporary paving as required; restore to their original conditions all walks, drives, curbs, grassed areas and such other parts which have been disturbed as a result of the Contractor’s operations; and do all other work as necessary and directed to leave all work and property in a clean and acceptable condition, at no additional expense to the Owner. Where bypass is to be retained for service to adjacent sections or streets, the work shall be so scheduled to minimize overall “in-place” time.

3.5 PROTECTION

- A. The Contractor shall be responsible for taking and providing all necessary and required precautionary measures at all times during the installation and removal of the temporary bypass service piping and building service connections, to prevent any contamination of the water supply, City of East Providence mains and service piping, and for the protection of public health and safety.

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3.6 TEMPORARY CONNECTIONS TO EXISTING WATER MAINS

- A. At some locations, as directed or approved by the Owner, it may be necessary to install tees or corporation stops in existing water mains in order to supply the temporary bypass piping with water service. The types of connections made shall be determined by the water service requirements and shall be as approved or directed by the Owner.

- B. At locations, as approved or directed by the Owner, where connections for temporary bypass piping are to be made underground to the existing water mains with corporation stops, the Contractor shall make the necessary excavations at the locations and to the limits as necessary to uncover the existing underground water lines and permit the installation of corporation stops thereto. The Contractor shall furnish and install a 2" corporation stop, a pipe nipple or gooseneck and a shutoff valve at the connection to the existing water line; connect the temporary bypass piping to the shutoff valve and, where directed by the Owner, backfill the excavation and install temporary bituminous pavement. When the need for the service piping has ceased, the Contractor shall re-excavate, where necessary, remove the corporation stop; install a threaded plug, disconnect and remove the service piping, shutoff valve, and pipe nipple or gooseneck; backfill the excavations; and provide the gravel base course and temporary and permanent pavements over the excavated and disturbed areas in accordance with the requirements specified and as directed. Payment for corporation stops and accessories, and all labor for connecting the temporary bypass pipe to the existing water main will be included in the unit price bid for "FURNISH AND INSTALL 2" BYPASS PIPE" as listed in the Bid.

3.7 TEMPORARY FIRE HYDRANTS

Where fire hydrants are by-passed, the Contractor shall furnish, install, maintain and remove temporary hydrants. The temporary hydrant shall be placed within 25 ft. and on the same side of the street of the hydrant to be out of service. A 4-inch bypass line shall be used and a 4 ½ -inch outlet complete with valve and attachment capable of accommodating a 5-inch Storz connection, or as directed by the Fire Department shall serve as a temporary hydrant. Temporary hydrants shall meet the approval of the City and the Fire Department, and shall be set in such a manner that the Fire Department will have no difficulty making a connection with a fire hose, and where they will cause the least obstruction to vehicular and pedestrian traffic, and will be least likely to be damaged. Nozzles shall be threaded for cap and grooved for fire hose attachment, using National Standard Thread. Before permanently shutting off the water main that is to be replaced, the Contractor shall test all temporary hydrants and valves to be sure that they are in proper working order. Once put into use, the temporary hydrants shall be maintained until existing hydrants and/or new hydrants are restored to service. Any existing hydrants that are out of service shall be "bagged" by the contractor and reported to the fire department as being out of service. No separate payment will be made for temporary hydrants, but the cost thereof shall be deemed to be included in the unit price bid for furnishing and installing temporary bypass piping and services.

3.8 EARTHWORK

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- A. All earthwork including excavation, refill, backfill and appurtenant work required in connection with providing, installing, maintaining, repairing and removing temporary bypass service piping shall be performed in accordance with Section 02211 "EARTH TRENCH EXCAVATION AND BACKFILL" of these Specifications, and to additional requirements the cost thereof shall be deemed to be included in the work required under this section of the specifications

PART 4 MEASUREMENT AND PAYMENT

4.1 METHOD OF MEASUREMENT

1. "FURNISH AND INSTALL BYPASS PIPE" shall be measured for payment at the unit linear foot (L.F.), as the actual laid length of bypass piping of various size. With the exception of fire services, no separate payment will be made for piping for building services of any size. Any temporary bypass piping smaller than 2-inches in diameter will not be paid for. The unit price bid shall include full compensation for furnishing, installing, maintaining and removing, all temporary bypass piping and building service connections in complete conformance with these Specifications and accepted by the Owner.
2. "TEMPORARY FIRE SERVICE CONNECTION" shall be measured for payment at the unit price for each fire service connected to temporary bypass piping. The unit price bid shall include full compensation for furnishing, installing, maintaining, and removing all temporary fire service connections in complete conformance with these Specifications and accepted by the Owner.
3. Corporation Stops and connections to existing mains, where necessary, will not be measured separately for payment.
4. Temporary and permanent pavement required in connection with the repair of bypass piping trenches will be measured for payment in square yards (S.Y.) under the appropriate items. Measurement will be the actual length of trench and a maximum payment width of one (1) foot.

4.2 BASIS OF PAYMENT

1. "TEMPORARY BYPASS PIPING AND SERVICES" will be paid for as specified above, at the unit prices bid, which shall constitute full compensation for the furnishing of all labor, equipment, tools, supplies, appurtenances, materials and all work incidental and necessary for satisfactorily installing, maintaining, repairing and removing all temporary service piping, temporary hydrants, building service connections and connections to other piping and facilities; performing all earthwork including excavations, backfilling and borrow; compacting; restoring or replacing of all disturbed existing work; restoring disturbed curbing, sidewalks, drives, lawns and such other parts; providing all protective and safety measures; and performing all incidental work necessary to complete the items in accordance with the Drawings and Specifications, and as directed.

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2. Temporary and permanent pavement required in connection with the providing of temporary by-pass piping and services will be paid for under the applicable items, as listed in the Bid.
3. Separate payment will be made for furnishing and installing 2” Corporation Stops and accessories for connection of temporary bypass piping to existing DEAD END water mains or feed points on existing water mains for purposes of providing adequate water supply. The cost thereof, including all labor and necessary accessories shall be included in the unit price bid for FURNISHING AND INSTALLING 2” BYPASS FEED as listed in the Bid. Each tap location shall be regarded as one regardless of how many taps are needed to adequately supply water to or from the bypass. This item shall not include feeds for temporary bypass piping for building fire or domestic service connections.
4. Separate payment will not be made for temporary service to buildings, extending from the temporary bypass pipe and terminating at the connection to the building plumbing or connection to building underground service piping, or for temporary building service connections which run from building to building; all costs in connection with furnishing, installing, maintaining and removing temporary building service connections will be included in the unit price bid for FURNISH AND INSTALL BYPASS PIPE as listed in the Bid.
5. Separate payment will not be made for pipe, fittings, valves or such other accessories and appurtenances incorporated in the temporary bypass piping and services, unless otherwise directed, and all costs thereof shall be included under the unit price bid for FURNISH AND INSTALL BYPASS PIPE as listed in the Bid.

END OF SECTION

Section 02750 – Temporary Bypass Piping and Services
Attachment A - Fire Services

Fire Service Location	Fire Service Size
999 South Broadway	6"
305 Lyon Avenue	4"
1050 Willette Avenue	8"
66 Crescent View Avenue	6"
444 Willette Avenue	6"
336 Willette Avenue	6"
386 Willette Avenue	6"
803 Willette Avenue	6"
127 Valley Street	2"
1075 South Broadway	2"
1080 – 1086 Willette Avenue	6"
39 Warren Avenue	6"
1098 Pawtucket Avenue	6"
286 – 288 Warren Avenue	6"
179 Newport Avenue	6"
30 Veteran's Memorial Parkway	6"
62 – 78 Valley Street	4"
89 Valley Street	6"
29 Burgess Avenue	4"
75 Newport Avenue	6"
28 – 34 Water Street	6"
80 Newport Avenue	6"
210 – 230 Newport Avenue	6"
45 Newport Avenue	6"
63 Newport Avenue	6"
100 Newman Avenue	6"
150 – 156 Warren Avenue	6"
156 Valley Street	6"
65 Newport Avenue	6"
1240 Pawtucket Avenue	6"
376 Newport Avenue	6"
1275 South Broadway	8"

DIVISION 3

CONCRETE



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SECTION 03310

MISCELLANEOUS CONCRETE WORK

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. The work covered under this section of the specifications consists of furnishing all labor, equipment, appurtenances and materials, and performing all operations in connection with providing the construction of all Class B concrete work for pipe cradles, encasements, and thrust blocks, and all Class A concrete work for walks, curbs, driveways and pavement, complete, in-place and accepted, in accordance with the Drawings and Specifications and as directed by the Owner.

1.2 QUALITY ASSURANCE

- A. Class A concrete and Class B concrete shall have a compressive strength at the end of 28 days of not less than 3,500 and 3,000 pounds per square inch, respectively.
- B. Portland cement may be tested by the Owner.
- C. Aggregates may be tested by the Owner.
- D. Tests of Portland cement-concrete test specimens may be made by the Owner. When required by the Owner, 6-inch by 12-inch test cylinders shall be made in accordance with the requirements of ASTM Designation: C 192, latest revision. Test cylinders will be tested in accordance with the requirements of ASTM Designation: C 39, latest revision. The cost of making laboratory tests for concrete work will be at the expense of the Owner, but the Contractor shall furnish the Owner the necessary labor, assistance and facilities for making, protecting, caring for and transporting the test specimens.
- E. The Owner shall have free access at all times to the batching and mixing plant for sampling of all material and inspection of work performed for this project.

1.3 STORAGE OF MATERIALS

- A. Cement shall be stored immediately upon receipt at the site of the work. Cement in sacks shall be stored in a suitable weatherproof structure which shall be as airtight as practicable; floors shall be elevated above the ground a distance sufficient to prevent the absorption of moisture. Sacks shall be stacked close together to reduce circulation of air, but shall not be stacked against outside walls; the manner of storage shall permit easy access for inspection and identifications of each shipment. Bulk cement shall be transferred to elevated airtight and weatherproof bins. At the time of use, all cement shall be freeflowing and free from lumps. Cement that has hardened or partially set shall be removed from the site and not used in the work.
- B. Aggregates shall be stored on areas covered with tightly laid wood planks, sheet metal or other

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hard and clean surface, and in a manner that will preclude the inclusions of foreign material. Aggregate of different sizes shall be stored in separate piles. Stockpiles of coarse aggregate shall be built in horizontal layers not exceeding 4 feet in depth to avoid segregation. Should the coarse aggregate become segregated, it shall be remixed to conform to the grading requirements given herein.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Cement shall conform to the standard specifications for Portland cement of ASTM Designation: C 150 latest revision, Type 1, unless otherwise directed. Whenever directed by the Owner, a quick-setting cement shall be used for any purpose, at no additional expense to the Owner.
- B. Fine aggregate shall consist of washed sand having clean, hard, durable, uncoated grains free from deleterious substances and shall range in size from coarse to fine within the following percentages by weight.

Passing No. 4. sieve-----95-100%
Passing No. 16 sieve-----45-70%
Passing No. 50 sieve-----15-30%
Passing No. 100 sieve-----3-8%

Volume removed by sedimentation not more than 3%.

Fine aggregate shall conform in all other respects to ASTM Designation: C 33, latest revision.

- C. Coarse aggregate shall consist of crushed traprock, gravel or hard ledge stone, having clean, hard, durable, uncoated particles free from deleterious matter. The grading shall be within the following percentages by weight.

Passing 1-1/2" sieve-----100%
Passing 1" sieve-----95-100%
Passing 1/2" sieve-----25-60%
Passing No. 4 sieve-----0-10%

Coarse aggregate shall comply in all other respects to standards of ASTM Designation: C 33, latest revision.

- D. Mixing water for concrete shall be clean and shall be obtained from the municipal supply.

2.2 MIXES

- A. The proportioning of concrete materials shall be based on the requirements for a plastic and workable mix. Not less than six sacks (94 pounds per sack) of Portland cement per cubic yard, and not more than 6 gallons of water per sack of cement for Class A concrete and 6-1/2 gallons

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of water per sack of cement for class B concrete shall be used in the mix. The surface water contained in the aggregates shall be included in the total water used. Slump shall not exceed 3 inches. Class A and Class B concrete shall attain a 28-day compressive strength of not less than 3,500 and 3,000 pounds per square inch, respectively, as determined by the "Standard Method of Making Compression Tests of Concrete", ASTM Designation: C 39, latest revision. The design of the concrete mix to be used in the work shall be subject to the approval of the Owner.

2.3 FABRICATION

- A. Concrete shall be mixed until there is a uniform distribution of the materials, and shall be discharged completely before the mixer is recharged. It shall be transported in water-tight containers which will prevent segregation of the material. When placing the concrete, it shall be uniform throughout the mass. Concrete mixing shall conform to all requirements of ASTM Designation: C 94, latest revision, except as modified herein.
- B. The batching plant and mixing equipment shall have a capacity as required to perform the work within the specified time. Either a manual or semi-automatic plant may be used, subject to the approval of the Owner. A manual plant is defined as one in which batch weights are set manually and materials are batched manually. A semi-automatic plant is defined as one in which batching weights are set manually, mixes are charged manually and materials are batched automatically. All concrete shall be mixed in a control mixing plant unless the Owner specifically authorizes in writing job mixed or truck mixed concrete.
- C. Job-mixed concrete shall be mixed in a batch mixer for not less than one minute after all the material is in the mixer drum and until there is a uniform distribution of the material and the mass is uniform in color and is homogeneous. The mixer shall rotate at a peripheral speed of about 2000 feet per minute and shall not be loaded above its rated capacity.

PART 3 EXECUTION

3.1 METHOD OF CONSTRUCTION

- A. Prior to placing the concrete, the Contractor shall be responsible for checking and maintaining the proper position of all parts to be embedded in Portland cement concrete.
- B. The placing of concrete shall be such that the concrete for each structure shall be placed in one continuous operation, except that where construction joints are indicated the concrete shall be placed in one continuous operation between construction joints. Construction joints in addition to those indicated or changes in location of construction joints indicated will not be permitted except upon written permission of the Owner.
- C. Water shall be removed from excavations before concrete is deposited. Any flow of water shall be diverted through proper side drains and shall be removed without washing over the freshly deposited concrete. Hardened concrete, debris and foreign materials shall be removed from the interior of forms and from inner surfaces of mixing and conveying equipment. The subgrade for concrete work placed on gravel bedding shall be maintained in an approved,

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smooth and thoroughly compacted condition in conformity with the required section and grade until the concrete is in place. The subgrade shall be thoroughly moistened, but not muddy, at the time the concrete is deposited. No concrete shall be placed until forms and all work to be built into concrete have been satisfactorily installed and inspected.

- D. Concrete shall not be placed when the ambient temperature is below 35° F nor when the concrete without special protection is likely to be subjected to freezing temperature before the expiration of the specified curing period. If it is necessary to place concrete under conditions of low temperature, placement shall be approved by the Owner. The temperature of the concrete, when placed, shall be not less than 50°F nor more than 70°F. Heating of the mixing and/or aggregates will be required, as necessary, to maintain the minimum temperature of 50°F, and all methods and equipment for heating shall be satisfactory to the Owner. Materials shall be free from ice, snow and frozen lumps before entering the mixer. Suitable covering and other means shall be provided for maintaining the concrete to prevent freezing. Any concrete damaged by freezing shall be removed and replaced by the Contractor at no additional expense to the Owner.
- E. The gravel bedding on which concrete is placed shall be clean, damp, free from frost, ice and standing or running water and shall be thoroughly compacted in a satisfactory manner. Concrete shall be transferred from mixer to transport vehicle to place of final deposit in a continuous manner, as rapidly as practicable, and without segregation or loss of ingredients until the unit of construction is completed. Concrete that has attained its initial set or has contained its mixing water for more than 30 minutes shall not be placed in the work. Placing will not be permitted when, in the opinion of the Owner, the sun, heat, wind, temperature or limitations of facilities furnished by the Contractor prevent proper finishing and curing of the concrete. Forms shall not be splashed with concrete in advance of pouring. When placing concrete for encasements, precautionary measures shall be taken to prevent the displacement of piping or disturbing of joints of the piping; displaced or disturbed joints shall be corrected by the Contractor in a manner satisfactory to the Owner, at no additional expense to the Owner. Concrete shall be placed in the forms in uniform layers as nearly as practicable in final position.
- F. Crushed processed gravel bedding on which concrete is placed shall be as specified in Section 02211 "EARTH TRENCH EXCAVATION AND BACKFILL". Prior to placing concrete the gravel bedding shall be satisfactorily compacted.
- G. Immediately after removal of the forms, all fine and loose material shall be removed; honeycomb, aggregate pockets, voids and holes over ½ inch in diameter shall be cut out to solid concrete, thoroughly wetted, brush-coated with neat cement-grout and filled with cement-mortar composed of one part cement to two parts of fine aggregate. Patching of any surface irregularities, especially those resulting from honeycombing, shall be done only after inspection by the Owner for his determination as to whether or not the work is satisfactory enough to remain in the same plane as adjacent surfaces. Patchwork shall be damp-cured for 72 hours.
- H. Unformed exposed surfaces to receive masonry or mortar setting beds shall be finished by tamping the concrete with special tools to force aggregate away from the surface, then screeding and floating to bring surfaces to the required finished levels and form, wood-floated

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to true even surfaces and then given a broom finish for the proper bonding of masonry or mortar. Other unformed surfaces shall be finished as directed. Formed surfaces to receive masonry shall be free from loose material, laitance or any other conditions which would impair the bonding of the masonry to the concrete.

- I. Curing shall be accomplished by preventing loss of moisture, rapid temperature change and mechanical injury or injury from rain or flowing water, and kept moist for a period of at least 7 days after placing. During this period, concrete shall be maintained at 70°F for at least 4 days or above 50°F for at least 7 days, unless otherwise directed. All concrete shall be damp-cured in a suitable and approved manner and curing shall be started as soon after placing and finishing as practicable.

3.2 PATCHING

- A. Any concrete which is not formed to the details as shown on the drawings or for any reason is out of alignment or level or shown a defective surface shall be considered as not conforming with the intent of these specifications and shall be removed from the job by the Contractor at no additional expense to the Owner, unless the Owner grants permission to patch the defective area. Careful attention shall be given by the Contractor to provide proper protection to newly placed sidewalks in order to guard against vandalism or any other acts that may result in damage to the finished concrete surface. The Contractor shall furnish and maintain this protection until the concrete is in a hardened state.
- B. Permission to patch defective work will not be considered a waiver of the right of the Owner to require complete removal of the defective work, if, in the opinion of the Owner, the patching does not satisfactorily restore the quality and appearance of the surface.

3.3 METHOD OF MEASUREMENT

- A. Class A concrete for walks, curbs, driveways and pavement work will be measured for payment by the square yard (S.Y.) in-place to the depth specified, under the item "REMOVE AND REPLACE EXISTING CONCRETE SIDEWALK", as listed on the Bid Form.
- B. Class B concrete for pipe encasements, pipe cradles, thrust blocks and appurtenant work is incidental to the work and shall be paid for under other bid items.

3.4 BASIS OF PAYMENT

- A. The quantity of Class A concrete determined as provided in the preceding paragraphs will be paid for at the unit price bid as listed on the Bid Form, which shall constitute full compensation for all equipment, tools, materials forms, bracing, mixing, delivering, placing, compacting, furnishing, curing, protecting, installing miscellaneous materials to be embedded in concrete, and for all labor, and incidentals necessary to complete the items in accordance with the Specifications and Drawings, and as directed by the Owner. No payment will be made for concrete until it has been satisfactorily cured and approved by the Engineer.

END OF SECTION

APPENDIX A

City of East Providence Water Main Disinfection Procedures



APPENDIX A

CITY OF EAST PROVIDENCE WATER MAIN DISINFECTION PROCEDURE

The following procedures shall be strictly adhered to after the installation of new water mains, the cleaning and lining of existing water mains, or as directed by the City of East Providence Water Utilities Division.

DISINFECTION PREPARATIONS

- a. The CONTRACTOR shall utilize a by-pass piping system for flushing, filling, testing and chlorination of various sized water mains. The by-pass piping shall consist of corporation stops or valves on the supply line and the main to be filled. Two (2) or more check valves shall be installed in the by-pass line to insure that no water is allowed to return to the supply line. Fire hydrants may be utilized for feed points only if properly flushed and the above by-pass piping is installed. Fire hydrants SHALL NOT be used as sample points. Line valves SHALL NOT be used under any circumstances to fill, flush, test or chlorinate water mains. Newly installed water mains SHALL NOT be physically connected to an existing distribution system water main until all flushing, disinfection and testing has been completed.
- b. During construction or cleaning water main sections, joints and valves must be kept as CLEAN and DRY as possible.
- c. A corporation stop shall be provided within 5 feet of the beginning of the main for feeding of the liquid chlorine, and at sampling locations along the main as designated by the City of East Providence Water Utilities Division as specified. A sampling point will be located within 5 feet of the end of the section of main to be chlorinated. Hydrants shall not be used for sampling points but may be used as a water supply feed point for the chlorination procedure. Plastic or copper tubing shall be used for all chlorination and sampling pipe.

- d. Chlorination of valves, fittings and short lengths (under 20 feet long), of main shall be disinfected by contact swabbing and brushing with a minimum 4-percent liquid sodium hypochlorite solution.
- e. Mains shall be pressured tested to 1.5 times the system working pressure or 150 psi, whichever is greater,, and shall be required to hold pressure for at least two hours. This shall be verified by a member of the City of East Providence Water Utilities Division.

DISINFECTION OF WATER MAINS, TEMPORARY MAINS AND SERVICES

All mains and appurtenances shall be disinfected with chlorine in accordance with provisions of the American Water Works Association Standard C651-05, or latest revision thereof, and as follows:

- a. Water mains and services shall be thoroughly flushed. Flushing shall be at a rate sufficient to create a water velocity of at least 2.5 feet per second through the pipe. A turbidity reading of less than 5.00 NTU and a color of less than 15 Hazen units must be verified by the City of East Providence Water Utilities Division prior to introduction of chlorine.
- b. Chlorine in a liquid solution made from either crystalline sodium hypochlorite or liquid chlorine in the form of sodium hypochlorite with a concentration between 5-15% shall be continuously fed into the main(s) to be tested. The chlorine solution must come into contact with ALL sections of the main that is to be disinfected. The whole main must be filled with chlorinated water (no air), and the concentration of such water must not be less than 25 milligrams Cl₂ per liter as verified by a representative of the City of East Providence Water Utilities Division.
- c. The super-chlorinated water must stand isolated in the main for at least twenty-four (24) hours. After this MINIMUM retention time, a

laboratory representative will re-test the concentration of chlorine in the main at all the sampling points. The concentration must be at least 10mg/L. If concentration is below this level, step (b) must be repeated.

- d. Once the concentration is verified, the super-chlorinated water must be flushed from the main through the various sampling points until the concentration of residual chlorine at each sampling point reached a level of no higher than the typical distribution system residual that day and turbidity of less than 1.00 NTU as verified by the City of East Providence Water Utilities Division.
- e. Microbiological testing will be done 24 hours after step (d) has been completed, and BEFORE the main is put into service. A representative of the City of East Providence Water Utilities Division will obtain samples at all sampling points along the main for analysis to determine if coliform bacteria is present. Within 48 hours the results will be made available by the City of East Providence Water Utilities Division. If sample results indicate the presence of coliform bacteria, repeat disinfection process and sampling procedures outlined above. Once the main has been certified by the City of East Providence Water Utilities Division, the main may be place into service with permission of the City of East Providence Water Utilities Division.
- f. Under certain conditions, an emergency chlorination procedure may be conducted with the written approval of the City of East Providence Water Utilities Division.

DISPOSING OF HEAVILY CHLORINATED WATER

FINAL FLUSHING - Disposal of heavily chlorinated water shall be in accordance with provisions of the American Water Works Association Standard C651-05, or latest revision thereof, as well as all requirements from the

Clean Water Act and State and Local Stormwater Management regulations and as follows:

All heavily chlorinated water that possibly may discharge as runoff to any body of water, river or stream shall be neutralized by treating with sulfur dioxide. Such locations shall be determined by a representative of the City of East Providence Water Utilities Division. The primary choice of neutralizing agent is sulfur dioxide but the Contractor may use, if requested, an approved substitute as listed in AWWA Std. C651-05, Appendix C. The chlorine residual of the discharge flow shall be continuously monitored to allow the adjustment of the sulfur dioxide feed to thoroughly neutralize the water discharge. Dechlorinated water will not be allowed to be discharged to the sanitary sewer system.

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WATER MAIN DISINFECTION PROCEDURE SUMMARY

A. PRESSURE TEST:

NOTIFY CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION THAT MAIN IS READY FOR TESTING & DISINFECTION. 1.5 TIMES THE SYSTEM WORKING PRESSURE or 150 PSI, WHICHEVER IS HIGHER, FOR 2 HOURS. COMPLIANCE CHECKED BY THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION.

B. FLUSHING:

FLUSH AT VELOCITY OF AT LEAST 2.5 FEET PER SECOND. TURBIDITY AND COLOR WILL BE VERIFIED BY CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION. TURBIDITY MUST BE LESS THAN 5.00 NTU AND COLOR LESS THAN 15 UNITS BEFORE CHLORINE CAN BE ADDED.

C. CHLORINATION:

ADD LIQUID CHLORINE TO OBTAIN A MINIMUM CONCENTRATION OF 25 mg/L. THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION WILL TEST FOR COMPLIANCE. ALLOW TO STAND FOR 24 HOURS. RESIDUAL MUST BE NOT LESS THAN 10mg/L. THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION WILL TEST FOR COMPLIANCE.

D. MICROBIOLOGICAL SAMPLING:

FLUSH HEAVILY CHLORINATED WATER FROM MAIN, UNTIL CHLORINE IS NO HIGHER THAN SYSTEM RESIDUAL AND TURBIDITY IS LESS THAN 1.00 NTU. THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION WILL TAKE SAMPLE(S) FOR COLIFORM BACTERIAL TESTS AFTER 24 HOURS. THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION WILL ADVISE OF COMPLIANCE UPON COMPLETION OF SAMPLE ANALYSIS.

E. COMPLIANCE AND CERTIFICATION:

THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION WILL SEND DISINFECTION CERTIFICATE TO THE CONTRACTOR.

THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION WILL ADVISE CONTRACTOR TO TIE IN AND PLACE MAIN IN SERVICE.

NO MAIN SHALL BE TURNED ON WITHOUT THE CITY OF EAST PROVIDENCE WATER UTILITIES DIVISION CERTIFICATE OF COMPLIANCE.

NOTE: IF COLIFORM TESTING IS POSITIVE, STEPS C. AND D. MUST BE REPEATED.