Addendum No. 3 to IFB #25-55



CITY OF SOMERVILLE, MASSACHUSETTS Department of Procurement and Contracting Services KATJANA BALLANTYNE MAYOR

То:	All Parties on R 2025 Sewer Rel		e City of Somerv	ille as Holding IFB #25-55	5
From:	Jordan T. Rem	у			
Date:	4/17/2025				
Re:	Answers to Add	litional Questic	ons Submitted		
		Adde	endum No. 3 to	IFB #25-55	
your p	proposal packag	e. Failure to o	do so may subj	signing below and included the proposer to disquare	alification.
CITY	/STATE/ZIP:				
TELE	PHONE/FAX/E	MAIL:			
SIGN	ATURE OF AU	THORIZED I	INDIVIDUAL:		
ACKN	NOWLEDGEM	ENT OF ADD	DENDA:		
Adden	ndum #1	#2	#3	#4	

City of Somerville, MA 2025 Sewer Rehabilitations Addendum No. 3

To be considered as part of the contract drawings and specifications for the Somerville, MA 2025 Sewer Rehabilitations. Bidders are advised that this Addendum must be acknowledged in the appropriate space provided on the Form for General Bid.

QUESTIONS & ANSWERS

Question 1. There are numerous conflicts that exist between the stationing listed on the open cut point repair tables shown on sheets C101 through sheets C104, and the stationing shown on the plan & profile sheets C105 through C120. Should we assume the stationing shown on sheets C105 through C120 is correct for the proposal?

Answer 1: The stationing on the open cut repair table references each pipe individually. Due to some streets having up to three (3) sewer/combined lines in parallel and multiple repairs on the same street or same pipe, the stationing on the plan & profile sheets reference a full alignment of the street.

Both are correct. The length and location of each open cut point repair on the open cut tables match the specific pipe on the plan & profile sheet. The quantity breakdown from the plan & profile sheets matches the quantity breakdown from the open cut tables.

Question 2. Addendum #1 revised the bid form and specification section 01 22 00 Measurement & Payment. Bid Form Items 7e and 7f pertain to sidewalk replacements and the unit of measure is shown as l.f. (lineal foot). Measurement & Payment reads that both items are to be measured by the square foot, could you please clarify which unit of measure is correct?

Answer 2: The bid form is correct. Section 01 22 00 - MEASUREMENT AND PAYMENT paragraphs 1.10.B.1 and 1.10.B.2 are correct. Section 01 22 00 - MEASUREMENT AND PAYMENT paragraphs 1.10.B.3.c and 1.10.B.4.c have been updated to reflect payment by "linear' foot.

Question 3. C-122B shows (12) chimney service connections to be installed on the 24-inch PVC sewer replacement within Mount Pleasant Street. The average invert depth in the vicinity of the sewer service chimneys is 6-feet below grade making the chimney extensions between 1-2 VF. Sheet C502 Standard details call out all chimney fittings to be Ductile Iron. With the chimney being so shallow would you consider allowing the contractor to use SDR

35 PVC fittings at each chimney connection instead of Ductile Iron? There is a significant cost difference and lead time between PVC fittings and Ductile Iron fittings for 24-inch diameter pipe.

Answer 3: Yes, SDR 35 PVC wyes may be used.

Question 4. Spec. Section 33 31 13.19 – Ductile Iron Gravity Pipe & Fittings for Sewers paragraph 2.04 Lining & Coating does not mention P401 Epoxy lining, can you please confirm no interior lining will be required on DI used during sewer construction.

Answer 4: P401 epoxy lining of ductile iron pipe is not required. Ductile iron pipe shall be cement lined as specified in Section 33 31 13.19 - DUCTILE IRON GRAVITY PIPE AND FITTINGS FOR SEWERS, 2.04.C. Unlined ductile iron pipe shall not be used.

Section 33 31 13.19 has been revised to include 2.04.C stating "The inside of pipe and fittings shall be given a cement lining and asphaltic seal coat in accordance with AWWA C104. The thickness of the lining shall be double that specified in AWWA C104."

REVISIONS

- R.1 Remove Section 01 22 00 MEASUREMENT AND PAYMENT, Page 12 and replace with Attachment A Revised Section 01 22 00 MEASUREMENT AND PAYMENT, Page 12.
- R.2 Add paragraph 2.04.C to Section 33 31 13.19 DUCTILE IRON GRAVITY PIPE AND FITTINGS FOR SEWERS.

ATTACHMENTS

Attachment updates are highlighted in blue within each document.

Attachment A – Revised Section 01 22 00 – MEASUREMENT AND PAYMENT, Page 12

Attachment B – Revised Section 33 31 13.19 - DUCTILE IRON GRAVITY PIPE AND FITTINGS FOR SEWERS

END OF ADDENDUM NO. 3

Attachment A

Revised Section 01 22 00 – MEASUREMENT AND PAYMENT, Page 12

completed mainline trench.

3. Temporary Hot Mix Asphalt Sidewalks

- a. The item "Temporary hot mix asphalt sidewalks" shall include removal of existing sidewalks (by milling or saw cutting and excavation), furnishing, preparation of compacted gravel borrow sub base installed during temporary paving operations, tack coats, joint sealant, and permanent cement concrete sidewalks as specified.
- b. All sidewalks that are damaged outside of the limits of completed mainline excavation shall be considered incidental and shall not be measured separately for payment.
- c. Temporary hot mix asphalt sidewalks shall be measured per linear foot at the unit price under Item 7e.

4. Permanent Concrete Sidewalks:

- a. The item "Permanent concrete sidewalks" shall include removal of temporary sidewalks (by milling or saw cutting and excavation), furnishing, preparation of compacted gravel borrow sub base installed during temporary paving operations, and permanent cement concrete sidewalks as specified.
- b. All sidewalks that are damaged outside of the limits of completed mainline excavation shall be considered incidental and shall not be measured separately for payment.
- c. Permanent concrete sidewalks shall be measured per linear foot at the unit price under Item 7f.

1.11 WATER AND DRAIN RECONSTRUCTION

- A. Reconstruction of water mains, water service connections, and drains shall be measured per water main, water service connection, or drain reconstructed and shall be paid at the contract unit price under Items 8a, 19a, 31a, and 45a.
- B. Only pipe which is not shown on the drawings or not located for the Contractor in the field shall be considered for payment.
- C. Pipes damaged by the Contractor which pass below the proposed pipeline or are outside the specified trench limits shall be repaired by the Contractor at no cost to the Owner.

1.12 CHEMICAL ROOT TREATMENT:

A. SEWER LINE CHEMICAL ROOT TREATMENT:

07/05/2023 01 22 00-12

Attachment B

Revised Section 33 31 13.19 - DUCTILE IRON GRAVITY PIPE AND FITTINGS FOR SEWERS

SECTION 33 31 13.19

DUCTILE IRON GRAVITY PIPE AND FITTINGS FOR SEWERS

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers the furnishing, handling, hauling, laying, jointing, and testing of ductile iron pipe used for gravity sewer construction, including fittings and appurtenant work as indicated on the drawings and as specified.

1.02 RELATED WORK:

- A. Section 31 50 00, SUPPORT OF EXCAVATION
- B. Section 31 00 00, EARTHWORK
- C. Section 33 39 13, PRECAST MANHOLES

1.03 QUALITY ASSURANCE

- A. All pipe and fittings shall be inspected and tested at the foundry as required by the standard specifications to which the material is manufactured. The Contractor shall furnish in duplicate to the Engineer sworn certificates of such tests.
- B. In addition, the Owner reserves the right to have any or all pipe, fittings and special castings inspected and/or tested by an independent service at either the manufacturer's plant or elsewhere. Such inspection and/or tests shall be at the Owner's expense.

1.04 REFERENCES:

A. The following standards form a part of these specifications as referenced:

American Water Works Association

AWWA	C104	Cement-Mortar Lining for Ductile- Iron Pipe and Fittings for Water
AWWA	C110	Ductile-Iron and Gray-Iron Fittings
AWWA	C111	Rubber-Gasket Joints for Ductile- Iron Pressure Pipe and Fittings
AWWA	C116	Protective Fusion-Bonded Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service

AWWA C150 Thickness Design of Ductile-Iron Pipe

AWWA C151 Ductile-Iron Pipe, Centrifugally Cast, for Water

AWWA C153 Ductile-Iron Compact Fittings

AWWA C600 Installation of Ductile-Iron Water Mains and Their Appurtenances

- 1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01 33 23 SUBMITTALS, SUBMIT THE FOLLOWING:
 - A. Manufacturer's literature of the materials of this section.
 - B. Shop drawings consisting of manufacturer's scale drawings, cuts or catalogs including descriptive literature and complete characteristics and specifications, and code requirements. Shop drawings shall be submitted for the ductile iron pipe, type of joint, fittings, couplings, filling rings, and lining and coating in accordance with specifications.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. The Contractor shall use push-on joint type ductile iron pipe unless otherwise indicated on the plans or specified herein.
- B. All ductile iron pipe shall be designed in accordance with AWWA C150 and shall be manufactured in accordance with AWWA C151.
- C. Unless otherwise indicated or specified, ductile iron pipe shall be Thickness Class 52.
- D. All pipe delivered to the job site shall be accompanied by independent testing laboratory reports certifying that the pipe and fittings conform to the above-mentioned specifications. In addition, the pipe shall be subject to thorough inspection and tests, the right being reserved for the Engineer to apply such of the tests specified, as it may from time to time deem necessary.
- E. All cutting of pipe shall be done with a machine suitable for cutting DI pipe. Cut ends shall be beveled when recommended by the pipe manufacturer.

2.02 FITTINGS:

- A. Fittings shall conform to the requirements of AWWA C110 or C153 as appropriate and shall be of a pressure classification at least equal to that of the pipe with which they are used.
- B. The Contractor shall use ductile iron fittings. Cast-iron, Class 250 fittings may be substituted, upon approval of the Engineer, for ductile iron fittings.
- C. Unless otherwise indicated, fittings shall have all bell mechanical joint ends.

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2.03 GASKETS, GLANDS, NUTS AND BOLTS:

- A. Gaskets, glands, nuts, bolts and accessories shall conform to AWWA C111 or C153 as appropriate.
- B. Gaskets shall be of plain tipped rubber, suitable for exposure to the liquid within the pipe.
- C. Glands shall be ductile or cast iron.
- D. Bolts and nuts shall be high strength alloy.

2.04 LINING AND COATING:

- A. The outside of pipe and fittings shall be coated with the standard asphaltic coating specified under the appropriate AWWA Standard Specification for pipe and fittings.
- B. Machined surfaces shall be cleaned and coated with a suitable rust preventative coating at the shop immediately after being machined.
- C. The inside of pipe and fittings shall be given a cement lining and asphaltic seal coat in accordance with AWWA C104. The thickness of the lining shall be double that specified in AWWA C104.

2.05 FLEXIBLE COUPLINGS:

- A. All sleeve-type couplings and accessories shall be of a pressure rating at least equal to that of the pipeline in which they are to be installed.
- B. Couplings shall be cast or ductile iron and shall be provided with gaskets of a composition suitable for exposure to the liquid within the pipe.
- C. Couplings for buried pipe shall be Dresser 38 or 138; Smith-Blair Type 441; Romac Style 501; Ford Style FC1 or FC2; or approved equal.

PART 3 - EXECUTION

3.01 INSPECTION BEFORE INSTALLATION:

Pipes and fittings shall be subjected to a careful inspection just before being laid or installed.

3.02 HANDLING AND CUTTING:

A. Any pipe or fitting which has a damaged lining, scratched or marred machine surface and/or abrasion of the pipe coating or lining shall be rejected and removed from the job-site.

- B. Any fitting showing a crack and any fitting or pipe which has received a severe blow that may have caused incipient fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the work.
- C. In any pipe showing a distinct crack and in which it is believed there is no incipient fracture beyond the limits of the visible crack, the cracked portions, if so approved, may be cut off by and at the expense of the Contractor before the pipe is laid so that the pipe used will be perfectly sound. The cut shall be made in the sound barrel at a point at least 12-inches from the visible limits of the crack.
- D. Except as otherwise approved, all cutting shall be done with a machine suitable for cutting ductile iron pipe. Hydraulic squeeze cutters are not acceptable for cutting ductile iron pipe. Travel type cutters or rotary type abrasive saws may be used. All cut ends shall be examined for possible cracks caused by cutting.
- E. Lined and coated pipe and fittings shall be assembled and installed with approved packing or gaskets of the type recommended by the pipe manufacturer for the particular lining used.

3.03 INSTALLATION:

- A. Each pipe length shall be inspected before being laid to verify that it is not cracked. Pipe shall be laid to conform to the lines and grades indicated on the drawings or given by the Engineer. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.
- B. The pipe shall be supported by compacted crushed stone. Crushed stone shall be as specified under Section 31 00 00, EARTHWORK.
- C. The pipe shall not be driven down to grade by striking it with a shovel handle, timber, rammer, or other unyielding object. When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.
- D. Before a joint is made, the pipe shall be checked to assure that a close joint with the next adjoining pipe has been maintained and that inverts are matched and conform to the required line and grade.
- E. For pipe placed on crushed stone, immediately after the joint is made, the jointing area shall be filled with suitable materials so placed and compacted that the ends of either pipe will not settle under backfill load.
- F. No pipe or fitting shall be permanently supported on saddles, blocking, or stones.
- G. Branches and fittings shall be laid by the Contractor as indicated on the drawings, and/or as required by the Engineer. Open ends of pipe and branches shall be closed with DI caps secured in place with premolded gasket joints or as required by the Engineer.

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- H. All pipe joints shall be made as nearly watertight as practicable. There shall be no visible leakage at the joints and there shall be no sand, silt, clay, or soil of any description entering the pipeline at the joints. Where there is evidence of water or soil entering the pipeline, connecting pipes, or structures, the defects shall be repaired to the satisfaction of the Engineer.
- I. The Contractor shall build a tight bulkhead in the pipeline where new work enters an existing sewer. This bulkhead shall remain in place until its removal is authorized by the Engineer.
- J. Care shall be taken to prevent earth, water, and other materials from entering the pipe, and when pipe-laying operations are suspended, the Contractor shall maintain a suitable stopper in the end of the pipe and at openings for manholes.
- K. As soon as possible after the pipe and manholes are completed on any street, the Contractor shall flush out the new pipeline using a rubber ball ahead of the water, and none of the flushing water or debris shall be permitted to enter any existing sewer.

3.04 PUSH ON JOINTS:

- A. Joining of push-on joint pipe shall conform to AWWA C600.
- B. If effective sealing of the joint is not attained, the joint shall be disassembled, thoroughly cleaned, a new gasket inserted and joint reassembled.

3.05 MECHANICAL JOINTS:

- A. Assembling of fittings with mechanical joint ends shall conform to AWWA C600.
- B. If effective sealing of the joint is not attained at the maximum torque indicated in the above standard, the joint shall be disassembled and thoroughly cleaned, then reassembled. Bolts shall not be overstressed to tighten a leaking joint.

3.06 SLEEVE-TYPE COUPLINGS:

A. Pipe ends shall be cleaned thoroughly prior to installation. After the bolts have been inserted and all nuts have been made up finger tight, diametrically opposite nuts shall be progressively and uniformly tightened all around the joint, preferable by use of a torque wrench of the appropriate size and torque for the bolts. The correct torque as indicated by a torque wrench shall not exceed 90 foot-lb.

3.07 QUALITY ASSURANCE:

- 1. On completion of a section of sewer, including building connections installed to the property line, the Contractor shall TV inspect the section in accordance with Section 02440, Sewer Cleaning and Inspection at no additional cost to the Owner.
- 2. The Contractor shall be responsible for the satisfactory water-tightness of the entire section of the sewer. Should the Engineer determine that the sections inspected are

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- unsatisfactory, the Contractor shall so all work required to locate and repair the defects and re-inspect as the Engineer may require without additional compensation.
- 3. A plan of the method for repairing any defects that are found shall be submitted to the Engineer for review.

END OF SECTION

 $P:\ \ MA\ Somerville\ MA\ 24-1097-2024\ Sewer\ Rehab\ Design\ 05-Specifications\ DIVISION\ 2\ SITE\ CONSTRUCTION\ 6\ digit\ specs\ SECTION\ 333113.19-DUCTILE\ IRON\ IN\ GRAVITY\ AND\ FITTINGS\ FOR\ SEWERS. docx$

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