

SECTION 00 91 13

ADDENDUM NO. 1

NOTICE is hereby given to prospective Bidders of the following information, clarifications, and modifications to the Bidding Documents. The Bidding Documents remain unchanged except as indicated below. Bidders must acknowledge receipt of this Addendum in the Bid Form and comply with the requirements for submission of Bids as set forth in the Bidding Documents.

A **mandatory** pre-bid conference was held on Tuesday, August 22, 2017 at 10:00 AM local prevailing time at 200 Common Street, Room 202, Lawrence, MA 01840. A list of attendees and the meeting minutes from the pre-bid conference are attached as Attachment No. 1 and Attachment No. 2 respectively. **Bids will only be accepted from those on the list of attendees of the mandatory pre bid conference in accordance with the Bidding Documents.**

The answers below are provided in response to questions and comments submitted by prospective Bidders.

Question: Can you provide an anticipated Notice of Award date?

Response: *See Section 00 43 30 for anticipated Notice of Award date.*

Question: What work must be completed this year?

Response: *As specified in Section 00 52 10, the portion of the Work defined as High Priority Construction shall be substantially complete by December 1, 2017 and completed and ready for final payment by June 1, 2018 in accordance with Paragraph 14.07 of the Standard General and Supplementary Conditions, if any.*

Question: What is the MassDOT prequalification amount for the project?

Response: *This project does not require MassDOT prequalification.*

Question: Has the Work been coordinated with Lawrence DPW, and do they plan to contract for other work within the project area during the Work?

Response: *The Work has been coordinated with Lawrence DPW. At this time, they do not plan to contract separately for any work within the project area prior to the date of substantial completion.*

Question: Will the City only issue payment to the Contractor upon reimbursement under the MassDEP SRF Program?

Response: *Yes, the City will issue payment to the Contractor upon reimbursement. See the updates to Section 00 73 73, included in this addendum, for further information. The City intends to complete payment to the Contractor based on the following typical schedule:*

- *Monthly pay periods run through the last Friday of the month*
- *Contractor submits pencil requisition for Engineer's review on the following Tuesday*
- *Requisitions are reviewed and finalized within three days of receipt*

- *Requisitions signed by the City and sent into MassDEP within three days of finalizing*
- *MassDEP completes fund transfer by the 14th of the month*
- *City approves payment on the 15th of the month*
- *City issues payment on the 30th of the month*

Question: The specifications currently require Mueller Hydrants. Is this correct?

Answer: *The City does not plan to utilize a proprietary specification for hydrants. See the updates made to Section 33 10 00, included in this addendum, for further information.*

Question: Item 2 in the Bid Form is the bid item “Clean and Structurally Line 12-Inch Water Main.” We could not find on the drawing or in the specifications where water mains are to be lined. And since this is a lump sum price the exact length and location to be lined should be available at bid time. Can the location and extent of pipe to be lined be identified?

Response: *The 12-inch water main to be cleaned and structurally lined is located on Andover Street between State Street and Blanchard Street. The work is identified on Sheets C-115 and C-116.*

Question: The MassDOT permit states that “A permanent patch shall then be placed consisting of 2” of binder and 2 of modified top (Class I Bituminous Concrete Pavement - Type I-I) to meet the existing pavement surface grade” over CDF. While the specifications and the details call for the placement of 7-inches of temporary pavement to be milled three inches and replaced with three inches of top course pavement. Please identify the method to be employed to repair the trench within the area within the MassDOT jurisdiction.

Response: *Trench pavement within the MassDOT jurisdiction will be completed as shown in the “Trench Detail for MassDOT Roadway” Detail, Sheet C-502.*

Question: The typical trench detail on sheet C-502 indicates that the permanent trench pavement will be trench pavement, paved to one foot beyond the temporary trench pavement. However, there is no item for permanent trench pavement. There is an item for what appears to be full width overlay, but no detail is provided. Can you identify if permanent trench paving is to be performed, if only full width overlay is to be performed, or if permanent trench paving and full width overlay if to be performed? And if permanent trench paving is to be performed how will that be paid?

Answer: *Within the pavement limits shown on the drawings, all permanent pavement will be completed as curb-to-curb milling and overlay. Within MassDOT jurisdiction, trench pavement will be completed as shown in the “Trench Detail for MassDOT Roadway” Detail, Sheet C-502. No permanent trench pavement outside of MassDOT roadways is included in the Work.*

Clarifications

- The Engineer's estimate for the Project is \$8,500,000.
- No MassDOT Prequalification is necessary for this project.

NOTICE is hereby given that the Bidding Documents have been modified and replacement section(s) are reissued herewith in their entirety and included in Attachment No. 3, have an Issue Date of **August 24, 2017**, contain reference to "ADDENDUM NO. 1." in the footer, and text changes identified by double-underline for additions and ~~Strikeout~~ for deletions.

Section 00 43 22 – Unit Prices Form, consisting of 16 pages.

NOTICE is hereby given that the Bidding Documents have been modified and replacement pages are issued herewith and included in Attachment No. 4.

Replacement pages have an Issue Date of **August 24, 2017**, contain reference to "ADDENDUM NO. 1" in the footer, and text changes identified by double-underline for additions and ~~Strikeout~~ for deletions.

Replacement pages (with text changes)	Provided for purposes of double-sided printing only - no changes (front or back of replacement page)
00 73 73-12, 16	00 73 73-11, 15
01 15 00-5	01 15 00-6
33 10 00-1, 2, 6	33 10 00-5

NOTICE is hereby given that the Drawings have been modified as follows. Replacement pages/sheets are not being issued.

- Drawing C-112, Sheet 13 of 25: DELETE Note 3 and replace with the following "3. WORK ON SOUTH BROADWAY FROM ANDOVER STREET TO FARLEY STREET SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM."
- Drawing C-113, Sheet 14 of 25: DELETE Note 3 and replace with the following "3. WORK ON JACKSON STREET FROM THE SPICKETT RIVER TO CANAL STREET SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM."
- Drawing C-114, Sheet 15 of 25: DELETE Note 4 and replace with the following "4. WORK ON JACKSON STREET FROM THE SPICKETT RIVER TO CANAL STREET SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM."
- Drawing C-115, Sheet 16 of 25: DELETE Note 5 and replace with the following "5. WORK ON ANDOVER STREET FROM SOUTH BROADWAY TO PARKER STREET SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM." DELETE Note 6 and replace with the following "6. WORK ON SOUTH BROADWAY FROM ANDOVER STREET TO FARLEY STREET SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM."

- Drawing C-116, Sheet 17 of 25: DELETE Note 3 and replace with the following “3. WORK ON SOUTH UNION STREET FROM MARKET STREET TO WINTHROP AVENUE SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM.”
- Drawing C-117, Sheet 18 of 25: DELETE Note 4 and replace with the following “4. WORK ON SOUTH UNION STREET FROM MARKET STREET TO WINTHROP AVENUE SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM.”
- Drawing C-118, Sheet 19 of 25: DELETE Note and replace with the following “WORK ON SOUTH UNION STREET FROM MARKET STREET TO WINTHROP AVENUE SHALL OCCUR BETWEEN THE HOURS OF 10:00 AM AND 7:00 PM.”

This Addendum is provided to Bidders in a single Portable Document Format (.PDF) posted on the City of Lawrence Bidding web portal at <http://bids.cityoflawrence.com/>. **It is each Bidder's responsibility to check the website for Addenda per the Instructions to Bidders.**

Prepared and Issued by Woodard & Curran on behalf of:

City of Lawrence
200 Common Street
Lawrence, MA 01843

ATTACHMENT NO. 1: PRE-BID MEETING SIGN IN SHEET

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Lawrence, MA
Water Main Replacement - DWSRF 3814 Contract 2
Project No. 227402
Mandatory Pre-Bid Meeting
August 22, 2017 at 10:00 AM

SIGN IN SHEET

Name	Company/Organization/Address	Telephone	Fax	Email
MATTHEW T. MAGLIOZZI	ALBANE BROTHERS INC PO Box 578 28 LOON HILL RD DRACT MA	978-454-3330	978-458-8710	MAGLIOZZI@ALBANEBSBROS.COM MARIELLA@ALBANEBSBROS.COM
Mark J. Cardillo	Joseph P. Cardillo & Son Inc 1 Melvin ST WAKEFIELD MA 01880	781-245-8095	781-245-3478	mcardillo@jpcardillo.com mauricejpcardillo.com
KEO LESSARD	THE LESSARD INC 1203 GOOD STREET NORTH ANDOVER	978-689-2745	978-683-2844	LESSARD@THELESSARD.COM
Phil Anselmi	GTA CO INC 140 Tremont St BRIGHT MA 02149	617-389-2840	617-389-0981	Phil@gtacoine.com greg@gtacoine.com
Glenn Cairns	George Cairns and Sons Inc 8 Lodge Rd WINDHAM NH 03587	603-421-1885	603-421-9211	glenncairns@cairnsinc.com
Jack Granesse	N. Granesse & Sons, Inc 59 Jefferson Ave Salem, MA. 01970	(781) 592-8121	(781) 631-8466	info@n.granesse.com
Bill Daisey	BTD SITE DEV. 7 Hemlock Ln GROVELAND MA. 01834	978-574-4353	978-702-4448	bill@btddevelopment.com

Lawrence, MA
Water Main Replacement - DWSRF 3814 Contract 2
Project No. 227402
Mandatory Pre-Bid Meeting
August 22, 2017 at 10:00 AM

SIGN IN SHEET

Name	Company/Organization/Address	Telephone	Fax	Email
James Sullivan	Albanese D+S, 66 Silva Lane, Dracut, MA 01826	978-937-0909 x213	978-937-9292	pciano@albaneseds.com
David Hamilton	E.J. Prescott Inc. 162 Main St. Andover, MA	978-312-1171	978-774-3853	david.hamilton@ejprescott.com
Alec DeBenedictis	28 Silva Ln Dracut MA De Felice Corp.	978 452 6967		engineering@defelicecorp.com
Sami AlSalabi	90 EARLS WAY FRANKLIN, MA 02458 Revoli Const	978 815-1661		Shawqi56@hotmail.com
Todd Prokop	Woodard & Curran 46 Southfield, Andover MA	978- 666 482-7913	978-557	tkprokop@woodardcurran.com
KEVIN ROCHE	WOODARD + CURRAN 40 SMITH RD ANDOVER, MA	978 606 7581		KROCHE@WOODARDCURRAN.COM

ATTACHMENT NO. 2: PRE-BID MEETING MINUTES

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CITY OF LAWRENCE, MA

WATER MAIN REPLACEMENT, DWSRF 3814 CONTRACT 2

PRE-BID MEETING MINUTES



This Meeting: **Mandatory** Pre-bid Meeting Bid Date/Time: August 30, 2017 at 11:00 AM
Date/Time: August 22, 2017 at 10:00 AM Bid Location: 200 Common Street,
Location: 200 Common Street, Room 301
Room 202 Lawrence, MA 01840
Lawrence, MA 01840
Project Name: Water Main Replacement, DWSRF 3814 Contract 2
Project Number: 227402
Client: City of Lawrence, Department of Public Works

Agenda

- Introductions/Opening
- Specification Highlights, Instructions, and Clarifications
- Schedule
- Questions
- Meeting Conclusion

Introductions/Opening

- Thank you all for coming. This is the pre-bid meeting for Water Main Replacement, DWSRF 3814 Contract 2.
- The Owner is the City of Lawrence.
- Todd Prokop and Kevin Roche are in attendance from Woodard & Curran.
- This pre-bid meeting is mandatory; please sign the sign-in sheet, and fill in all information requested. Bids will not be accepted from bidders that are not recorded as having attended the pre-bid conference.
- Any questions that arise during or after this meeting shall be dealt with as specified in contract documents.
- Contract Documents are available at no cost electronically by registering on the City of Lawrence Bidding web portal at <http://bids.cityoflawrence.com/>.

Specifications:

- Bid Opening – August 30, 2017 at 11:00 AM at 200 Common Street, Room 301 Lawrence, MA 01840. Bids may be opened in Room 202 depending on conference room availability and the number of bids received, but all bids should be submitted to Purchasing in Room 301.



- Interpretations or clarifications deemed necessary in response to questions received about the meaning or intent of the Bid Documents will be issued by Addenda posted on bids.cityoflawrence.com. Questions received after 12:00 PM, August 25, 2017 will not be answered. Only answers in the Addenda will be binding. Oral statements, interpretations, and clarifications may not be relied upon and will not be binding or legally effective. It is the bidder's responsibility to download all addenda.
- Project description – The project includes, but is not limited to, construction of approximately 30,000 linear feet of new 16-inch through 6-inch cement lined ductile iron water main, temporary water mains, new valves, hydrants, fittings and service connections, concrete sidewalks, pavement milling, pavement reclaim, full-width final paving; and all materials and equipment, services, and construction inherent to the Work. The project also includes the structural lining of a water main under a railroad crossing, and the replacement of an existing water main within a box culvert. See Section 00 43 22 – UNIT PRICES FORM for exact quantity estimates.
- Schedule – The City intends to award the project as soon as regulatory approval from MassDEP is granted. The "High Priority Work" shown on sheets C-101 and C-102 shall be substantially complete no later than December 1, 2017 and ready for final payment by June 1, 2018. All other Work shall be substantially complete by November 15, 2018, and ready for final payment by July 1, 2019. Review SECTION 01 11 00 SUMMARY OF WORK – Work Sequence and Coordination and schedule work accordingly. The intent of this schedule is to install all water main and temporary patching by substantial completion, and return after a winter season to complete final pavement.
- A 5% Bid Security (bond or deposit) must accompany all bids.
- Performance and Payment Bonds shall be submitted upon notice of intent to award and shall be 100% of the total bid amount; each shall remain in effect for duration of warranty period, a minimum 1 year after satisfying substantial completion or greater if specified by state or local roadway permits.
- Wage Rates – Wage rates for the project were requested from the Massachusetts Executive Office of Labor and Workforce Development and the United States Department of Labor and are included in SECTION 00 73 46 - WAGE DETERMINATION SCHEDULE.
- **Qualifications:** Bidder's organization must have completed a minimum of three (3) water main replacement projects within the past 5 years, each of which: (a) has been completed by the date of the Bid opening; (b) includes water main replacement work that was solely completed by the Contractor and valued at \$1,000,000 or greater, exclusive of change order work.
 - The scope of work completed solely by the Bidder for each reference project submitted shall include, at a minimum: (a) furnishing and installing 3,000 linear feet of ductile iron water main pipe (6-inch diameter through 16-inch or greater); (b) furnishing and installing ten gate valves (6-inch diameter through 16-inch or greater); (c) furnishing and installing five hydrants; (d) furnishing, installing and 24-hour maintenance of a minimum 3,000 linear feet of 4-inch diameter (or greater) temporary water main (bypass) piping and service connections.
 - MassDOT prequalification in the class of Sewer and Water is also required. This was noted in the Central Register advertisement, and will be added to the contract documents as part of Addendum No. 1. *[Note: MassDOT prequalification has not been added to the Contract Documents. See Addendum No. 1 for further clarification.]*
- Project Award – based on lowest total bid price, including any alternates awarded, from qualified eligible and responsible Bidder.
- Bid Items – Please review SECTION 00 43 22 – UNIT PRICES FORM and SECTION 01 20 25 – MEASUREMENT AND PAYMENT carefully. Bidder's attention is directed to Item 19. –



Isolation Valve Investigation. Note that the successful Bidder will be required to operate all previously investigated valves in the distribution system necessary to achieve a workable shutdown for any work specified in the Contract Documents. Once investigations are complete, all Work related to achieving workable shutdowns will be considered incidental; no separate payment shall be made for this work. This was not intended to be an exhaustive review of all bid items; all bidders shall carefully review SECTION 00439 – UNIT PRICES FORM 00 43 22 and SECTION 01 20 25 - MEASUREMENT AND PAYMENT for a complete description of bid items.

- Contractor must comply with the American Iron and Steel (AIS) Requirements of the SRF Program, outlined in Section 00 73 10. Iron or steel products include, but are not limited to: pipes or fittings, manhole covers, municipal castings, hydrants, flanges, pipe clamps and restraints, valves, reinforced precast concrete, and construction materials. For further details, Bidder's attention is directed to Section 00 73 10 – PROJECT SPECIFIC REQUIREMENTS.
- Please note materials cost escalation for Liquid Asphalt, Portland Cement, Diesel and gasoline is included in Section 00 73 73.
- SECTION 01 11 00 – SUMMARY OF WORK: Bidders attention is directed to Article 1.04 – Work Sequence and Coordination. Again, note the high priority work with earlier completion dates. Note also the notification requirements – the contractor is responsible for notification to MassDOT, Owner, Engineer, and Residents for the Work as defined in Part 1.05B. Note also that the project work includes water main work within the City of Methuen, which will require separate permitting within that jurisdiction. Contractor is responsible for all permitting, except as noted in the contract documents. Please note that Work subject to restricted hours on sheets C-112, C-113, C-114, C-115, C-116, C-117, and C-118 will be further clarified in Addendum 1.
- SECTION 01 15 00 – SPECIFIC PROJECT REQUIREMENTS AND PROCEDURES, SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS, and SECTION 01 15 30 – PAYMENT AND ADMINISTRATIVE PROCEDURES AND QUALITY REQUIREMENTS:
 - Payment applications shall be submitted on EJCDC FORM C-00621 (provided in the Contract Documents). The successful Bidder will be required to submit pencil requisition for Owner review prior to finalizing and submitting the monthly requisition. Monthly requisitions shall be submitted with six (6) signed and notarized original copies. Monthly requisitions shall include Certified Payroll Statements. Monthly requisitions that do not include Certified Payroll Statements shall be considered incomplete and will not be processed until Certified Payroll Statements are received. **The City will submit payment applications to MassDEP for reimbursement and issue payment to the Contractor upon receipt of funds from MassDEP.**
 - Off-Site construction parking area to be established at a location determined by Contractor and approved by Owner. Field offices are not required for the Project.
 - Pre and post construction photographs and video are required.
 - Product submittals will be submitted, tracked and reviewed utilizing a digital document exchange system (Procore).
 - Except when road closure and road blockage permits are obtained, maintain, at a minimum, one lane of traffic (alternating traffic in each direction) on all roadways impacted by the Work during construction hours. Restore normal traffic flow patterns at the end of each work day. Traffic Management plans for MassDOT roadways and other high traffic areas are provided in the Contract Documents. Where no plans are provided, follow the traffic control requirements provided in Section 01 50 00.



- SECTION 01 20 25 – MEASUREMENT AND PAYMENT: Note that Work not specifically described or designated as an item, shall be considered incidental to all items, and shall not be measured separately for payment. This includes General Requirements specified in Section 01 11 00 for items that may be included in Mobilization/Demobilization.
- SECTION 01 51 38 – TEMPORARY WATER BYPASS:
 - Interruption of water service or fire protection is not permitted during water main construction or bypass installation/removal. If any alterations to bypass plans are proposed, Contractor must submit plans to Owner 14 days before the start of construction in the area in which the change is proposed.
 - Contractor shall take necessary measures, including tapping existing water mains and installing gate valves when existing hydrants and existing gate valves are unavailable for use, to assure continuous water service and fire protection.
 - Temporary hydrants shall be acceptable to and supported by a means approved by the local Fire Department to prevent deflection of the hydrant or bypass piping system when the hydrant is in operation.
 - When bypass water main system has been tested and is approved to be put into service, it shall be maintained 24-hours per day, 7 days per week by the Contractor until the Work has been completed and the bypass system has been removed. Submit an emergency contact list with a minimum of three (3) employees skilled in the maintenance and repair of the temporary by-pass systems. Each employee must be well-informed of the bypass system in use with specific knowledge of its operational requirements and valve locations. The employees listed on the emergency contact list shall be on call 24 hours/day, 7 days/week while the temporary bypass system is active. Each shall be able to respond to emergency repair calls within a maximum of two (2) hours. The emergency contact list shall include, at a minimum the name, address, home and mobile telephone number for each employee listed.
 - Complete all sections of the Project in progress before the daily low temperature falls below 35 degrees Fahrenheit. Maintain all components of the by-pass system impacted by freezing conditions, including service connections and take reasonable measures when scheduling work as cold weather season approaches. Should it become necessary to stop work and remove the by-pass system due to freezing conditions, separate payment shall not be made to re-install, chlorinate, test and return the temporary by-pass system to service.

Instructions:

- Submit bids on most up to date bid forms furnished by Owner. Fill in all blank spaces in ink or typewritten. Bid prices for each item shall be provided in both words and figures. If there is a discrepancy between prices written in words and prices written in figures, the written words will govern. Note that the Unit Prices Form will be reissued in Addendum No. 1.
- Bids with bid prices that are abnormally high or low may be rejected as unbalanced.
- Bid will be awarded to an eligible and responsible bidder with the lowest total bid, as the sum of the base bid and any alternates awarded, subject to available funds and regulatory approval.

Schedule:

- Bid opening is scheduled for August 30, 2017 at 11:00 AM at 200 Common Street, Room 301 Lawrence, MA 01840.
- No Bid may be withdrawn for at least 90 days after receipt of bids unless released by the Owner.

- Liquidated damages - \$1,000 per calendar day

Site Walk

- The site consists of various streets within the City of Lawrence, some of which are urban and highly trafficked. Bidders are encouraged to visit the project site to gain an understanding of existing site conditions and potential site limitations.



Meeting Conclusion

- This pre-bid meeting is mandatory; please sign the sign-in sheet, and fill in all information requested, including a current email address and mailing address.
- Addenda may be issued electronically on the City of Lawrence Bidding web portal at <http://bids.cityoflawrence.com/>. It is the Bidder's responsibility to access this portal to download all addenda. Bidders can contact me directly to confirm issuance of addenda, if desired.
- There will be an addendum issued after this meeting that includes the minutes for this meeting, the sign-in sheet and will address questions received or raised at this meeting or prior to 12:00 PM August 25, 2017. The addendum will also include an updated Unit Prices Form.

Questions

- Are there any questions?

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ATTACHMENT NO. 3: REISSUED SECTIONS

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SECTION 00 43 22

UNIT PRICES FORM

Provide unit pricing for each Bid item in both words and figures. Provide Bid item totals in figures. Discrepancies between prices written in words and prices written in figures will be resolved in favor of prices written in words. Discrepancies between the multiplication of estimated quantities and unit prices will be resolved in favor of the unit prices.

BID PRICES SHALL EXCLUDE SALES AND USE TAX

BASE BID

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
1a	Furnish and Install 16-inch Cement Lined Ductile Iron Pipe	1,325				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
1b	Furnish and Install 12-inch Cement Lined Ductile Iron Pipe	<u>9,650</u> 9,750				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
1c	Furnish and Install 12-inch Pre-Insulated Cement Lined Ductile Iron Pipe	1				
	@ _____ dollars and ____/100 PER LUMP SUM	LS				
1d	Furnish and Install 10-inch Cement Lined Ductile Iron Pipe	40				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
1e	Furnish and Install 8-inch Cement Lined Ductile Iron Pipe	<u>17,750</u> 20,750				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
1f	Furnish and Install 6-inch Cement Lined Ductile Iron Pipe	2,500				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				

Addendum No. 1

227402

Issue Date: August 24, 2017

Water Main Replacement, DWSRF 3814 Contract 2
Lawrence, Massachusetts

BASE BID (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
1g	Furnish and Install 4-inch Cement Lined Ductile Iron Pipe	100				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
2	Clean and Structurally Line 12-inch Water Main	1				
	@ _____ dollars and ____/100 PER LUMP SUM	LS				
3a	Furnish and Install 16-inch Gate Valve & Box	16				
	@ _____ dollars and ____/100 PER EACH	EA				
3b	Furnish and Install 12-inch Gate Valve & Box	70				
	@ _____ dollars and ____/100 PER EACH	EA				
3c	Furnish and Install 10-inch Gate Valve & Box	1				
	@ _____ dollars and ____/100 PER EACH	EA				
3d	Furnish and Install 8-inch Gate Valve & Box	170 175				
	@ _____ dollars and ____/100 PER EACH	EA				
3e	Furnish and Install 6-inch Gate Valve & Box	110 115				
	@ _____ dollars and ____/100 PER EACH	EA				
3f	Furnish and Install 4-inch Gate Valve & Box	3				
	@ _____ dollars and ____/100 PER EACH	EA				

Addendum No. 1

WOODARD & CURRAN

UNIT PRICES FORM
00 43 22-2

227402

Issue Date: August 24, 2017Water Main Replacement, DWSRF 3814 Contract 2
Lawrence, Massachusetts

BASE BID (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollar s	Cents	Dollars	Cents
4	Furnish and Install Cement Lined Ductile Iron Fittings	52,500				
	@ _____ _____ dollars and ____/100 PER POUND	LB				
5	Furnish and Install Hydrants	85				
	@ _____ _____ dollars and ____/100 PER EACH	EA				
6	Disinfection, Pressure and Bacteria Testing of Water Mains	1				
	@ _____ _____ dollars and ____/100 PER LUMP SUM	LS				
7a	Furnish and Install 1-inch Corporation Stop	475 495				
	@ _____ _____ dollars and ____/100 PER EACH	EA				
7b	Furnish and Install 2-inch Corporation Stop	6				
	@ _____ _____ dollars and ____/100 PER EACH	EA				
7c	Furnish and Install 1-inch Curb Stop & Box	475 460				
	@ _____ _____ dollars and ____/100 PER EACH	EA				
7d	Furnish and Install 2-inch Curb Stop & Box	6				
	@ _____ _____ dollars and ____/100 PER EACH	EA				

Addendum No. 1

WOODARD & CURRAN

UNIT PRICES FORM
00 43 22-3

227402

Issue Date: August 24, 2017Water Main Replacement, DWSRF 3814 Contract 2
Lawrence, Massachusetts

BASE BID (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
8a	Furnish and Install 1-inch Type K Copper Tubing	<u>11,750</u> 12,500				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
8b	Furnish and Install 2-inch Type K Copper Tubing	125				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
9a	Furnish and Install 6-inch Temporary Bypass Water Mains	<u>37,750</u> 45,000				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
9b	Furnish and Install 2-inch Temporary Bypass Water Mains	<u>16,500</u> 17,500				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
10a	Remove and Dispose of Unsuitable Material Below Normal Grade	500				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
10b	Remove and Dispose of Unsuitable Material Above Normal Grade	700				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
10c	Rock and Boulder Excavation	250				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				

Addendum No. 1

WOODARD & CURRAN

UNIT PRICES FORM
00 43 22-4

BASE BID (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
10d	Controlled Density Fill (CDF), Type 2E	200				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
11a	Furnish and Install Temporary Trench Pavement	3,100				
	@ _____ dollars and ____/100 PER TON	TON				
11b	Furnish and Install Temporary Trench Pavement in MassDOT Roadway	65				
	@ _____ dollars and ____/100 PER TON	TON				
11c	Furnish and Install Permanent Trench Pavement in MassDOT Roadway	40				
	@ _____ dollars and ____/100 PER TON	TON				
11d	Provide Full Width Pavement Milling	107,500				
	@ _____ dollars and ____/100 PER SQUARE YARD	SY				
11e	Furnish and Install Top Course Overlay Pavement	12,000				
	@ _____ dollars and ____/100 PER TON	TON				
11f	Furnish and Install Additional Hot-Mix Asphalt	500				
	@ _____ dollars and ____/100 PER TON	TON				
12	In-Kind Sidewalk Replacement	2,865				
	@ _____ dollars and ____/100 PER SQUARE YARD	SY				

Addendum No. 1

BASE BID (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
13	Provide 3,000 psi Concrete for Thrust Restraint and Encasement	2,500				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
14	Remove and Reset Granite Curb	2,500				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
15a	Remove and Dispose of Cobblestones	800				
	@ _____ dollars and ____/100 PER SQUARE YARD	SY				
15b	Remove and Dispose of Rails and Ties	200				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
16	Calcium Chloride for Dust Control	25,000				
	@ _____ dollars and ____/100 PER POUND	LB				
17	Provide Catch Basin Protection	500				
	@ _____ dollars and ____/100 PER EACH	EA				
18	Test Pits	600				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
19	Isolation Valve Investigation	450				
	@ _____ dollars and ____/100 PER EACH	EA				

BASE BID (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
20	Install, Program and Maintain Sign Board	100				
	@ _____ dollars and ____/100 PER WEEK	WK				
21	ALLOWANCE for Establishment of Control of Distribution System	1	\$400,000.00		\$400,000.00	
	@ FOUR HUNDRED THOUSAND dollars and 00/100 PER ALLOWANCE	NOT TO EXCEED				
22	ALLOWANCE for Contaminated Soil and Groundwater	1	\$50,000.00		\$50,000.00	
	@ FIFTY THOUSAND dollars and 00/100 PER ALLOWANCE	NOT TO EXCEED				
23	Mobilization/Demobilization	1				
	@ _____ dollars and ____/100 PER LUMP SUMP	LS				
24	ALLOWANCE for Compaction Testing	1	\$35,000.00		\$35,000.00	
	@ THIRTY-FIVE THOUSAND FIVE HUNDRED dollars and 00/100 PER ALLOWANCE	NOT TO EXCEED				
25	ALLOWANCE for Materials Escalation	1	\$200,000.00		\$200,000.00	
	@ TWO HUNDRED THOUSAND dollars and 00/100 PER ALLOWANCE	NOT TO EXCEED				

ALTERNATE 1

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A1.1a	Furnish and Install 16-inch Cement Lined Ductile Iron Pipe	85				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.1b	Furnish and Install 12-inch Cement Lined Ductile Iron Pipe	350				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.1c	Furnish and Install 8-inch Cement Lined Ductile Iron Pipe	1,200				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.1d	Furnish and Install 6-inch Cement Lined Ductile Iron Pipe	300				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.2a	Furnish and Install 16-inch Gate Valve & Box	3				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.2b	Furnish and Install 12-inch Gate Valve & Box	3				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.2c	Furnish and Install 8-inch Gate Valve & Box	8				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.2d	Furnish and Install 6-inch Gate Valve & Box	16				
	@ _____ dollars and ____/100 PER EACH	EA				

Addendum No. 1

ALTERNATE 1 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A1.3	Furnish and Install Cement Lined Ductile Iron Fittings	7,500				
	@ _____ dollars and ____/100 PER POUND	LB				
A1.4	Furnish and Install Hydrants	7				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.5	Disinfection, Pressure and Bacteria Testing of Water Mains	1				
	@ _____ dollars and ____/100 PER LUMP SUM	LS				
A1.6a	Furnish and Install 1-inch Corporation Stop	22				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.6b	Furnish and Install 2-inch Corporation Stop	6				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.6c	Furnish and Install 1-inch Curb Stop & Box	22				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.6d	Furnish and Install 2-inch Curb Stop & Box	6				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.7a	Furnish and Install 1-inch Type K Copper Tubing	775				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				

ALTERNATE 1 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A1.7b	Furnish and Install 2-inch Type K Copper Tubing	225				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.8a	Furnish and Install 6-inch Temporary Bypass Water Mains	5,500				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.8b	Furnish and Install 2-inch Temporary Bypass Water Mains	800				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.9a	Remove and Dispose of Unsuitable Material Below Normal Grade	25				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A1.9b	Remove and Dispose of Unsuitable Material Above Normal Grade	25				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A1.9c	Rock and Boulder Excavation	15				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A1.10a	Furnish and Install Temporary Trench Pavement	200				
	@ _____ dollars and ____/100 PER TON	TON				
A1.10b	Provide Full Width Pavement Milling	13,850				
	@ _____ dollars and ____/100 PER SQUARE YARD	SY				

ALTERNATE 1 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A1.10c	Furnish and Install Top Course Overlay Pavement	1,550				
	@ _____ dollars and ____/100 PER TON	TON				
A1.10d	Furnish and Install Additional Hot-Mix Asphalt	10				
	@ _____ dollars and ____/100 PER TON	TON				
A1.11	In-Kind Sidewalk Replacement	50				
	@ _____ dollars and ____/100 PER SQUARE YARD	SY				
A1.12	Provide 3,000 psi Concrete for Thrust Restraint and Encasement	25				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A1.13	Remove and Reset Granite Curb	25				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.14a	Remove and Dispose of Cobblestones	15				
	@ _____ dollars and ____/100 PER SQUARE YARD	SY				
A1.14b	Remove and Dispose Rails and Ties	20				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A1.15	Calcium Chloride for Dust Control	250				
	@ _____ dollars and ____/100 PER POUND	LB				

ALTERNATE 1 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A1.16	Provide Catch Basin Protection	25				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.17	Test Pits	150				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A1.18	Isolation Valve Investigation	75				
	@ _____ dollars and ____/100 PER EACH	EA				
A1.19	Mobilization/Demobilization	1				
	@ _____ dollars and ____/100 PER LUMP SUMP	LS				

ALTERNATE 2

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A2.1a	Furnish and Install 8-inch Cement Lined Ductile Iron Pipe	2,150				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A2.1b	Furnish and Install 6-inch Cement Lined Ductile Iron Pipe	110				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A2.2a	Furnish and Install 8-inch Gate Valve & Box	13				
	@ _____ dollars and ____/100 PER EACH	EA				
A2.2b	Furnish and Install 6-inch Gate Valve & Box	7				
	@ _____ dollars and ____/100 PER EACH	EA				
A2.3	Furnish and Install Cement Lined Ductile Iron Fittings	2,500				
	@ _____ dollars and ____/100 PER POUND	LB				
A2.4	Furnish and Install Hydrants	5				
	@ _____ dollars and ____/100 PER EACH	EA				
A2.5	Disinfection, Pressure and Bacteria Testing of Water Mains	1				
	@ _____ dollars and ____/100 PER LUMP SUM	LS				

ALTERNATE 2 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
A2. 6a	Furnish and Install 1-inch Corporation Stop	25				
	@ _____ dollars and ____/100 PER EACH	EA				
A2. 6b	Furnish and Install 1-inch Curb Stop & Box	25				
	@ _____ dollars and ____/100 PER EACH	EA				
A2. 7	Furnish and Install 1-inch Type K Copper Tubing	500				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A2. 8a	Furnish and Install 6-inch Temporary Bypass Water Mains	2,850				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A2. 8b	Furnish and Install 2-inch Temporary Bypass Water Mains	1,700				
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF				
A2. 9a	Remove and Dispose of Unsuitable Material Below Normal Grade	25				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A2. 9b	Remove and Dispose of Unsuitable Material Above Normal Grade	25				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				
A2. 9c	Rock and Boulder Excavation	15				
	@ _____ dollars and ____/100 PER CUBIC YARD	CY				

ALTERNATE 2 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price	Total Bid Item Price
A2. 10a	Furnish and Install Temporary Trench Pavement	225		
	@ _____ dollars and ____/100 PER TON	TON		
A2. 10b	Provide Full Width Pavement Milling	5,250		
	@ _____ dollars and ____/100 PER SQUARE YARD	SY		
A2. 10c	Furnish and Install Top Course Overlay Pavement	600		
	@ _____ dollars and ____/100 PER TON	TON		
A2. 10d	Furnish and Install Additional Hot-Mix Asphalt	10		
	@ _____ dollars and ____/100 PER TON	TON		
A2. 11	Provide 3,000 psi Concrete for Thrust Restraint and Encasement	25		
	@ _____ dollars and ____/100 PER CUBIC YARD	CY		
A2. 12a	Remove and Dispose of Cobblestones	10		
	@ _____ dollars and ____/100 PER SQUARE YARD	SY		
A2. 12b	Remove and Dispose of Rails and Ties	15		
	@ _____ dollars and ____/100 PER LINEAR FOOT	LF		
A2. 13	Calcium Chloride for Dust Control	250		
	@ _____ dollars and ____/100 PER POUND	LB		

ALTERNATE 2 (continued)

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price	Total Bid Item Price
A2.14	Provide Catch Basin Protection	5		
	@ _____ dollars and ____/100 PER EACH	EA		
A2.15	Test Pits	20		
	@ _____ dollars and ____/100 PER CUBIC YARD	CY		
A2.16	Isolation Valve Investigation	15		
	@ _____ dollars and ____/100 PER EACH	EA		
A2.17	Mobilization/Demobilization	1		
	@ _____ dollars and ____/100 PER LUMP SUMP	LS		

END OF SECTION

ATTACHMENT NO. 4: REPLACEMENT PAGES

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variance in price between Base Price and Period Price of diesel or gasoline.

- b) For items 11a-11c; 11e; 11f; A1.10a; A1.10c; A1.10d; A2.10a; A2.10c; A2.10d the Price Adjustment will be determined by multiplying the number TONS of Hot Mix Asphalt installed times the fuel factor for each item of Work times the variance in price between Base Price and Period Price of diesel or gasoline. The Contractor shall provide the Owner with weigh slips for all Hot Mix Asphalt installed.
- c) This Price Adjustment will be paid or credited if the variance from the Base Price is 5 percent or more for a monthly period. No further Price Adjustments will be processed after the Contract is finally complete, unless an extension of Contract Time is approved by the Owner.

c. **Monthly Price Adjustment for Portland Cement Concrete Mixes:** This adjustment will provide for either additional compensation to the Contractor or repayment to the Owner, depending on an increase or decrease in the Period Price of Portland cement.

- 1) **Base Price:** The Base Price of Portland cement listed above is the fixed price determined at the time of Bid by the Owner by using the same method as for the determination of the Period Price detailed below.
- 2) **Price Adjustment:** The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges. This Price Adjustment will occur on a monthly basis.
- 3) **Period Price:** The Period Price for this Contract shall be the current Portland cement Period Price, in English Units, as published by the Massachusetts Department of Transportation – Highway Division at

<http://www.massdot.state.ma.us/highway/DoingBusinessWithUs/Construction/PriceAdjustments.aspx>

- 4) **Applicability:** The price adjustment applies only to the actual Portland cement content in the mix placed on the Project in accordance with the Contract Documents for item 15 on the Unit Prices Form.

- 5) Payment/Credit of Price Adjustment: The Contract Price of the Portland cement content in the mix will be paid under the respective items in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the Work has been performed, using the monthly Period Price for the month during which the Work was performed. The Price Adjustment will be a separate payment item and processed by Change Order. It will be determined by multiplying the number of cubic yards of Portland cement concrete placed during each monthly period times the Portland cement content percentage times the variance in price between the Base Price and Period Price of Portland cement. This Price Adjustment will be paid or credited if the variance from the Base Price is 5 percent or more for a monthly period. No further Price Adjustments will be processed after the Contract is finally complete, unless an extension of Contract Time is approved by the Owner.

SC-14.02. *Progress Payments*

Add the following language to Paragraph 14.02.A.

The provisions of MGL Chapter 30, Section 39G, *Completion of public works; semi-final and final estimates; payments; extra work; disputed items*, covering “periodic estimate” and “periodic payment” apply to this Project and shall be considered Progress Payments per Paragraph 14.02. The forms listed in Section 00 60 00 and included in the Contract Documents will be utilized.

Add the following new subparagraph immediately after subparagraph 14.02.A.1.

- a. Pursuant to MGL Chapter 30, Section 39S, *Contracts for construction; requirements*, provide certification for each employee employed at the Work Site of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins Work.

Add the following language to Paragraph 14.02.C.1.

For the purposes of this Paragraph, “Owner” shall mean “Owner’s approving authorities”.

Add the following new paragraph and subparagraphs immediately after subparagraph 14.02.D.3.

- E. The following provisions regarding payment to Subcontractors are required by MGL Chapter 30, Section 39F, *Construction contracts; assignment and subrogation; subcontractor defined; enforcement of claim for direct payment; deposit, reduction of disputed amounts*. These provisions shall be included in any subcontract in connection with Work under the Contract Documents.
1. “Forthwith after the general Contractor receives payment on account of a periodic estimate, the general Contractor shall pay to each Subcontractor the amount paid for the labor performed and the materials furnished by that

disputed by the general Contractor in the sworn reply; provided, that the Awarding Authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The Awarding Authority shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

6. “The Awarding Authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) above in an interest-bearing joint account in the names of the general Contractor and the Subcontractor in a bank in Massachusetts selected by the Awarding Authority or agreed upon by the general Contractor and the Subcontractor and shall notify the general Contractor and the Subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.
7. “All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) above shall be made out of amounts payable to the general Contractor at the time of receipt of a demand for direct payment from a Subcontractor and out of amounts which later become payable to the general Contractor and in the order of receipt of such demands from Subcontractors. All direct payments shall discharge the obligation of the Awarding Authority to the general Contractor to the extent of such payment.
8. “The Awarding Authority shall deduct from payments to a general Contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f) above, are sufficient to satisfy all unpaid balances of demands for direct payment received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any Claims against such amounts by creditors of the general Contractor.”

SC 14.04 Substantial Completion: Add the following new paragraph immediately after Paragraph 14.04.E.

- F. The provisions of MGL Chapter 30, Section 39G, *Completion of public works; semi-final and final estimates; payments; extra work; disputed items*, covering substantial completion apply to this Project. The forms listed in Section 00 60 00 and included in the Contract Documents will be utilized.

SC 14.07 Final Payment

÷ Add the following language to Paragraph 14.07.A.1

- a. The provisions of MGL Chapter 30, Section 39G, *Completion of public works; semi-final and final estimates; payments; extra work; disputed items* covering the final estimate and completion of the Work apply to this Project. The forms listed in Section 00 60 00 and included in the Contract Documents will be utilized.

Add the following language to Paragraph 14.07.C.1

For the purposes of this Paragraph, "Owner" shall mean "Owner's approving authorities".

SC-15.01 Owner May Suspend Work: Add the following new subparagraphs immediately after Paragraph 15.01.A.

1. Pursuant to MGL Chapter 30, Section 39O, *Contracts for construction and materials; suspension, delay or interruption due to order of awarding authority; adjustment in contract price; written claim*, the Awarding Authority may order the general Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as it may determine to be appropriate for the convenience of the Awarding Authority; provided however, that if there is a suspension, delay or interruption for 15 days or more or due to a failure of the Awarding Authority to act within the time specified in the Contract, the Awarding Authority shall make an adjustment in the Contract Price for any increase in the cost of performance of the Contract but shall not include any profit to the general Contractor on such increase; and provided further, that the Awarding Authority shall not make any adjustment in the Contract Price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this Contract provides for an equitable adjustment of the Contract Price under any other Contract provisions.
2. The general Contractor must submit the amount of a Claim under provision 1 above to the Awarding Authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under the Contract and, except for costs due to a suspension order, the Awarding Authority shall not approve any costs in the Claim incurred more than 20 days before the general Contractor notified the Awarding Authority in writing of the act or failure to act involved in the Claim.
- ~~3.~~ In the event a suspension, delay, interruption or failure to act of the Awarding Authority increases the cost of performance to any Subcontractor, that Subcontractor shall have the same rights against the general Contractor for payment for an increase in the cost of his performance as provisions 1 and 2 above give the general Contractor against the Awarding Authority, but nothing in provisions 1 and 2 above shall in any way change, modify or alter any other rights which the general Contractor or the Subcontractor may have against each other.

Work, the number of police personnel, the estimated number of police hours required for each location, and justification for each uniformed officer being requested. Payment to the police for work under this Contract shall be in accordance with the Massachusetts General Laws, Chapter 149, Section 34B and paid directly by Owner.

- If uniformed police have been arranged to work, and weather or some other situation prohibits the Work, notify the Police Department Detail before 5:30 a.m. on the day of intended Work to cancel the work order. Unless the work order is canceled in time, the Contractor shall be charged at the rate of minimum four hours for each officer included in the detail and shall be fully responsible for payment of all charges thus incurred.

Add Paragraph G. Control of Existing Water System

Contractor shall utilize previously investigated valves to achieve workable shutdowns of existing water system as required to complete the Work. See Section 01 11 00 for notification and coordination requirements.

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

1.02 OVERALL EXECUTION REQUIREMENTS

Pursuant to Paragraph A. **Coordination**,

subparagraph 4. **regarding space requirements**, a primary Site restriction is the width of the streets and volume of traffic within the Project Site which may require complete shut down or partial blocking of the streets during construction. Coordinate with the Fire Department and Police Department.

Pursuant to Paragraph B. **Existing Conditions**,

subparagraph 3. regarding **underground utilities**, comply with the following additional requirements.

- Contact DIGSAFE (www.digsafe.com) by dialing 811.

subparagraph 4. regarding **reference points**, survey information is included on the Drawings.

Comply with the following **additional requirements** regarding Existing Conditions:

- Before starting Work in existing manholes, test for gas and blow out the manholes.

1.03 STARTUP, TESTING, AND COMMISSIONING

Pursuant to Paragraph C. **Checkout and Starting of Systems**, comply with the following additional requirements.

- DELETE Paragraph C entirely.

ATTACHMENTS

- A. List of MassDOT Highway Division documents
- B. Boring Logs for Market Street (2 pages)
- C. Boring Logs for Knox Street (2 pages)
- D. Traffic Management Plans for High Street, Ferry Street, Knox Street, and Berkeley Street
- E. Traffic Management Plans for MassDOT Roadways
- F. MassDOT Permit to Access State Highway, Permit # 4-2017-0244
- G. Water Main Replacement Shutdown Plans

END OF SECTION

SECTION 33 10 00

WATER DISTRIBUTION PIPING, VALVES, AND FITTINGS

PART 1 – GENERAL

1.01 SUMMARY

- A. Work under this section includes replacement of existing gates valves and hydrants with new gate valves and hydrants, installation of water main pipe, fittings, water services and all appurtenances necessary to complete the Work shown on the Drawings.

~~B. The Owner has determined that specifying proprietary hydrants for the Project is in the public's best interest. The Owner has standardized on the Mueller Super Centurion 250™ hydrant due to reliability and the assembly and testing of the hydrant in the United States.~~

~~C.B.~~ Related Requirements

1. 31 00 00 – Earthwork
2. 31 41 00 – Shoring
3. 32 12 16 – Hot Mix Asphalt Paving
4. 32 90 00 – Planting

1.02 PRICE AND PAYMENT

- A. Measurement and payment requirements: per Division 01 General Requirements.

1.03 REFERENCES

A. Reference Standards

1. American Society for Testing and Materials (ASTM)
 - a. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs 60,000 PSI Tensile Strength
2. American National Standards Institute (ANSI)
 - a. ANSI B16.1 - Cast Iron Pipe Flanges and Flanged Fittings.
3. American Water Works Association (AWWA)
 - a. AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pressure Pipe and Fittings.

- b. AWWA C105 - Polyethylene Encasement for Ductile-Iron Piping for Water and Other Liquids.
 - c. AWWA C110 - Ductile-Iron and Gray-Iron Fittings, 3-in Through 48-in for Water and Other Liquids.
 - d. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 - e. AWWA C115 - Standard for Flanged Ductile-Iron Pipe with Threaded Flanges
 - f. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast in Metal Molds ~~olds~~ or Sand-Lined Molds for Water or Other Liquids.
 - g. AWWA C153 - Ductile-Iron Compact Fittings, 3-in Through 64-in for Water and Other Liquids.
 - h. AWWA C600 - Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.
 - i. AWWA C651 - Disinfection Water Mains.
- B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination, Sequencing, and Scheduling: per Division 01 General Requirements.

1.05 SUBMITTALS

- A. Submit in accordance with Division 01 General Requirements.
- B. Product Data: Submit manufacturer's product data and installation instructions for each product specified for water service piping.
- C. Shop Drawings
- D. Samples and Mockups: as specified in Article 1.06.
- E. Certificates
- 1. Manufacturer's notarized certificate certifying conformance with the Specifications to accompany shipments
- F. Design Data/Submittals
- 1. Pipe manufacturer's anti-floatation calculations for each pipe material and details, signed and stamped by a licensed Professional Engineer in the State of Massachusetts based on the following criteria:

shall be U.S. Pipe “TR Flex” pipe, Griffin Pipe “Snap-LOK” pipe, AMERICAN “Flex-Ring” joint pipe, or approved equal.

4. Pre-insulated Ductile Iron Pipe:

- a. Pre-insulated ductile iron pipe shall conform to all criteria specified above for ductile iron pipe.
- b. The insulation shall be a foamed in place closed cell polyurethane which completely fills the annular space between the carrier pipe and the exterior casing. The ends of the insulation shall be mastic sealed. The insulation shall have a minimum thickness of 2.17 inches for 12-inch diameter pipe with the following physical properties:
 1. Minimum Density (lb./cu. ft.); 2.0 to 3.0; ASTM D-1622
 2. “K” Factor BTU/Hr. sq. ft. °F/in.; .147; ASTM C-177
 3. 90-95% Closed Cell; ASTM D-2856
- c. The exterior casing shall be Seamless, High Density Polyethylene (HDPE) with a minimum wall thickness of 0.929 inches. The exterior casing shall have a minimum pressure rating of 160 psi. No PVC or tape casings will be allowed. The casing shall have the following material properties:
 1. ASTM D-790.....Flexural Modulus >120,000 psi
 2. ASTM D-638.....Tensile Strength at Yield Type IV >3,500 psi
 3. ASTM D-638.....Elongation at Break >800%
 4. ASTM D-638.....Elastic Modulus >175,000 psi
 5. ASTM D-2240.....Hardness 62 Shore D
- d. Fittings shall be mechanical joint and restrained with a mechanical retainer gland and a concrete poured thrust block. Fittings shall be in accordance with AWWA/ANSI C110/A21.10 and AWWA/ANSI C111/A21.11.
- e. All straight joints with an HDPE jacket shall be covered with a wrap of Polyken Tape and covered with a HDPE rockshield.
- f. Pre-insulated pipe shall be placed on a 6-inch layer of sand, tamped to provide a stable and uniform bedding, and carefully backfilled and covered with 12-inches of sand, compacted in 6-inch lifts.

B. Gate Valves, Fittings and Stops

1. Fittings: Pipe fittings shall be ductile iron, cement lined fittings. All fittings, except those associated with the flange pipe systems, shall have mechanical joints. The fittings shall be designed in accordance with the latest revision of AWWA/ANSI C153/A21.53 or AWWA/ANSI C110/A21.10, ductile iron and rated for 350 PSI working pressure for 3-inch through 24-inch diameter (250 PSI working pressure; 30-inch

through 48-inch). All exterior fittings are to be bituminous coated, cement lined and seal-coated as previously specified for ductile iron pipe.

2. Accessories: Accessories such as gaskets, glands, bolts, nuts, etc., shall be designed in accordance with AWWA/ANSI C-111/A21.11 and shall be furnished as required to make all piping systems complete.
3. Gate valves: Gate valves shall be manufactured in accordance with the latest revision of ANSI/AWWA C-515. Gate valves shall be OPEN RIGHT (CLOCKWISE), mechanical joint, resilient wedge, non-rising stem type, designed for minimum 250-psi working pressure. Gate valves shall meet or exceed requirements AWWA C-515 of latest revision, shall be UL listed and FM approved. The valves shall be manufactured of high-strength ductile iron with a wall thickness meeting or exceeding the requirements of AWWA C-515. The wedge shall be ductile iron, gray iron, or copper alloy fully encapsulated in rubber in accordance with AWWA C-515, provided with protective wedge guide covers, symmetrical and shall seal equally well with flow in either direction. Valve stems shall be sealed by three (3) O-rings, with two (2) of the O-rings residing above the thrust collar. O-rings above the thrust collar shall be replaceable under full working pressure and with the valve in the full open position. Exterior nuts and bolts shall be type 304 stainless steel, with hexagonal heads and with dimensions conforming to ANSI B18.2.1. The operating nut shall be 2-inch square, ductile iron and constructed to ensure even valve operating input torque. Valve body gaskets shall be of the pressure energized O-ring style. The waterway shall be smooth and oversized with no depressions or cavities in the seat area that will allow foreign material to accumulate and affect closure or sealing. The valve body and bonnet shall be fusion bonded epoxy coated, inside and out per AWWA C-550. The coating shall be electro-statically applied prior to assembly and certified to ANSI/NSF 61 Standard. Gate valves shall be fully assembled in the USA according to AWWA Specifications.
4. Hydrants shall be American Darling B-62-B-5, as manufactured by AMERICAN Flow Control, of Birmingham Alabama; Mueller Super Centurion 250™, as manufactured by Mueller Water Products, Inc., of Atlanta, Georgia; or Wastemaster 5CD250, as manufactured by EJ, of East Jordan, Michigan—~~or Engineer Approved Equal~~. Contractor shall paint hydrants as directed by owner: yellow, red and gray with Rust-Oleum High Performance Protection Enamel Oil Based paint or approved equal. Rust-Oleum color codes: Safety Yellow -K7744, Safety Red – K7564 and Aluminum – K7715.
5. Corporation Stops: Corporation stops shall be as manufactured by A.Y. McDonald, Ford, Mueller or approved equal, conforming to the latest revision of AWWA Standard C800 and shall be individually inspected and tested for leaks by air pressure under water. Corporation stops shall be ball type, straight-through/full port design, with AWWA Standard (CC) inlet threads and compression outlet, designed to prevent blow-out and shall be bubble-tight at 300 psig working pressure. The stop shall be “No-