

ADDENDUM NO. 1

TO

BIDDING AND CONTRACT REQUIREMENTS AND SPECIFICATIONS

FOR

**REPLACEMENT OF WATERMAINS AND/OR WATER SERVICES IN WILLARD STREET,
PLYMPTON STREET, OAK STREET AND CEDAR STREET**

**CITY OF WALTHAM
MASSACHUSETTS**

MAY 2014

**PREPARED BY:
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ADDENDUM NO. 1

REPLACEMENT OF WATERMAINS AND/OR WATER SERVICES IN WILLARD STREET, PLYMPTON STREET, OAK STREET AND CEDAR STREET WALTHAM, MASSACHUSETTS MAY 2014

As a point of clarification, it should be understood that the Contract Documents govern all aspects of the project. Informal discussions held over the telephone are informational only. All official changes to the Contract Documents are made only by addenda. The following changes and additional information are hereby made a part of the Contract Documents.

Please make the following changes in the specifications below.

SPECIFICATIONS:

DELETE Section 00300 – “Form for General Bid” in its entirety and **REPLACE** with the revised Bid Form - Section 00300R (Attached)

DELETE Section 01150 – “Measurement and Payment” in its entirety and **REPLACE** with the revised “Measurement and Payment” - Section 01150R (Attached)

DRAWINGS:

Sheet C-5: **ADD** the following note:

3. Final paving on Plympton Street shall include milling and a full-width overlay.

Sheet C-6: **ADD** the following note:

2. Final paving on Willard Street shall include milling and a full-width overlay.

SUPPLEMENTAL INFORMATION ATTACHED

1. Section 00300R – Form for General Bid
2. Section 01150R – Measurement and Payment

SECTION 00300R

FORM FOR GENERAL BID

CITY OF WALTHAM, MASSACHUSETTS
WATER MAIN IMPROVEMENTS

The following Bid is submitted to: City of Waltham Purchasing Department .
Attn: Joseph Pedulla, Chief Procurement Officer
Waltham City Hall .
610 Main Street
Waltham, Massachusetts 02452 .

By (Contractor Name): _____ .
(Address for Giving Notice): _____ .

(Telephone): _____ .
(FAX): _____ .

A. The Undersigned proposes to furnish all labor and materials required for Water Main Improvements Project in Waltham, Massachusetts, in accordance with the accompanying plans and specifications prepared by Wright-Pierce for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This bid includes addenda

Number _____
Dated _____

C. The proposed contract price for the Base Bid including Bid Items 1 through 22 complete is

_____ dollars (\$ _____).
(in Words) (in Figures)

D. The subdivision of the proposed contract price is as follows:

Item No.	Quantity*	Brief Description of Item with Unit Bid Price in Words	Unit Bid In Figures	Amount In Figures
1	1 LS	Mobilization (Maximum 5% of total Bid) The Sum of \$ _____ _____	\$ _____	\$ _____
Per Lump Sum				
2A	1,300 LF	12-inch Ductile Iron Water Main The Sum of \$ _____ _____	\$ _____	\$ _____
Per Linear Foot				
2B	2,700 LF	8-inch Ductile Iron Water Main The Sum of \$ _____ _____	\$ _____	\$ _____
Per Linear Foot				
2C	200 LF	6-inch Ductile Iron Water Main The Sum of \$ _____ _____	\$ _____	\$ _____
Per Linear Foot				
2D	75 LF	4-inch Ductile Iron Water Main The Sum of \$ _____ _____	\$ _____	\$ _____
Per Linear Foot				
3	7,500 LBS	Ductile Iron Fittings and Couplings The Sum of \$ _____ _____	\$ _____	\$ _____
Per Pound				
4A	19 EA	12-inch Gate Valves The Sum of \$ _____ _____	\$ _____	\$ _____
Per Each				

Item No.	Quantity*	Brief Description of Item with Unit Bid Price in Words	Unit Bid In Figures	Amount In Figures
4B	28 EA	8-inch diameter Gate Valves The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Each		
5	10 EA	Hydrant Assemblies The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Each		
6A	100 EA	1-inch Corporation Stops The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Each		
6B	6 EA	2-inch Corporation Stops The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Each		
6C	100 EA	1-inch Curb Stop The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Each		
6D	6 EA	2-inch Curb Stop The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Each		
6E	2,000 LF	1-inch Type K Copper Tubing The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Linear Feet		
6F	100 LF	2-inch Type K Copper Tubing The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Linear Feet		
7	600 LF	4-inch PVC Sewer Services The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Linear Feet		

Item No.	Quantity*	Brief Description of Item with Unit Bid Price in Words	Unit Bid In Figures	Amount In Figures
8	100 LF	Removing/Relaying Existing Utilities The Sum of \$ _____ _____	\$ _____	\$ _____
		Per LF		
9	25 CY	Ledge Excavation The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Cubic Yard		
10	100 CY	Excavation Below Trench Grade and Replacement Backfill The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Cubic Yard		
11	250 CY	Replacement of Unsuitable Material above Trench Grade The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Cubic Yard		
12A	1,000 TN	Binder Course The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Ton		
12B	280 TN	Trench Top Course The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Ton		
12C	200 TN	Overlay Top Course (Willard St. and Plympton Street ONLY) The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Ton		
12D	1600 SY	Milling The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Square Yard		

Item No.	Quantity*	Brief Description of Item with Unit Bid Price in Words	Unit Bid In Figures	Amount In Figures
13	130 LF	Remove and Reset Curb The Sum of \$ _____ _____ Per Linear Foot	\$ _____	\$ _____
14	105 TN	Repair Bituminous Sidewalks and Curbs The Sum of \$ _____ _____ Per Ton	\$ _____	\$ _____
15	1 LS	Erosion and Sedimentation Control The Sum of \$ _____ _____ Per Lump Sum	\$ _____	\$ _____
16	1 LS	Temporary Water Bypass The Sum of \$ _____ _____ Per Lump Sum	\$ _____	\$ _____
17	10 EA	Test Pit Excavation The Sum of \$ _____ _____ Per Each	\$ _____	\$ _____
18	1 LS	Utility Coordination The Sum of \$ _____ _____ Per Lump Sum	\$ _____	\$ _____
19	Allowance	Uniformed Police Detail The Sum of \$ _____ _____ Allowance	\$155,000.00	\$155,000.00
20	Allowance	Price Adjustment Allowance The Sum of \$ _____ _____ Allowance	\$7,500.00	\$7,500.00
21	Allowance	Utility Repairs The Sum of \$ _____ _____ Allowance	\$40,000.00	\$40,000.00

Item No.	Quantity*	Brief Description of Item with Unit Bid Price in Words	Unit Bid In Figures	Amount In Figures
22	150 DAYS	Portable Message Boards (TWO) The Sum of \$ _____ _____	\$ _____	\$ _____
		Per Day		

* Indeterminate quantities assumed for comparison of bids. Quantities are not guaranteed. Payment will be based on actual quantities installed/constructed.

E. The undersigned agrees that, if selected as general contractor, he/she will within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price.

The undersigned declares that the only persons or parties interested in this Bid as principals are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that all, the Contract Documents as prepared by Wright-Pierce, 40 Shattuck Road, Suite 305, Andover, MA 01810 and dated APRIL 2014 have been carefully examined; that the undersigned is fully informed in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. These prices shall cover all expenses incurred in performing the Work required under the Contract Documents, of which this Bid Form is a part.

The time period for holding bids, where Federal approval is not required is 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids.

The Bid Security accompanying this Bid shall be in the amount of 5 percent of the Bid. The Bid Security shall be sealed in a separate envelope from the Bid and then attached to the envelope containing the Bid.

If a Notice of Award accompanied by at least six unsigned copies of the Agreement and all other applicable Contract Documents is delivered to the undersigned within thirty days, excluding Saturdays, Sundays, and legal holidays after the actual date of the opening of the General Bids, the undersigned will within five days, excluding Saturdays, Sundays, and legal holidays, after the date of receipt of such notification, execute and return all copies of the Agreement and all other applicable Contract Documents to OWNER. The premiums for all Bonds required shall be paid by CONTRACTOR and shall be included in the Contract Price. The undersigned Bidder further agrees that the Bid Security accompanying this Bid shall become the property of OWNER if the Bidder fails to execute the Agreement as stated above.

The undersigned hereby agrees that the Contract Time shall commence twenty days following the Effective Date of the Agreement and that the Work will be substantially complete and completed and ready for final payment in accordance with paragraph 14.07 of the General and Supplementary Conditions on or before the dates or within the number of calendar days indicated in the Agreement. Work will be substantially complete within **150** calendar days after the date of the Notice to Proceed.

The undersigned further understands that delays in completion of the Work will cause the OWNER to suffer damages and incur substantial costs, and will expose the OWNER to other substantial liabilities, and that if the selected Contractor shall neglect, fail or refuse to achieve Substantial Completion or final completion of the Work within the times specified above, as such times may be extended pursuant to the provisions of the Contract Documents, the OWNER will hold the selected Contractor strictly liable for all such damages and any other damages, costs, expenses or liabilities sustained or incurred by the OWNER arising out of such delays, as further provided in the Agreement, or for any delay in achieving any other milestones set forth in the Contract Documents in accordance with the terms of the Agreement. The undersigned accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work on time in the amount of **\$1,000** per day after substantial completion time limits.

In accordance with the above understanding, the undersigned proposes to perform the Work, furnish all materials and complete the work in its entirety in the manner and under the conditions required.

The OWNER shall select the low responsive and responsible bidder based on the Base Bid and available funding.

The undersigned agrees that extra work, if any, will be performed in accordance with Article 10 of the General Conditions of the Contract and will be paid for in accordance with Article 16 of the General Conditions of the Contract.

The bidding and award of this Contract will be in accordance with M.G.L. Chapter 30, Section 39M.

The undersigned must furnish a 100 percent Performance Bond and a 100 percent Payment Bond with a surety company acceptable to OWNER.

Where indicated for amounts to be shown in both words and figures, in case of discrepancy, the amount shown in words shall govern.

CERTIFICATIONS

Pursuant to M.G.L. Ch. 62C, sec. 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all state taxes required under law.

The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that he/she will comply fully with all laws and regulations.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of Section Twenty-nine F of Chapter Twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Social Security Number or
Federal Identification Number

Individual or Corporate Name
(Print or Type)

For Certifications By: _____
(Signature of Authorized Person)

Signatures for Joint Ventures

For Certifications By: _____
(Signature of Authorized Person)

For Certifications By: _____
(Signature of Authorized Person)

RESPECTFULLY SUBMITTED on _____, 20__

An Individual: By (Individual's Signature)_____ (SEAL)

(Print Individual's Name)_____

doing business as _____

Business address: _____

A Partnership: By (Authorized Signature)_____ (SEAL)

(Print Partner's and Firm Name)_____

Business address: _____

A Corporation: By (Authorized Signature)_____ (Corporate Seal)

(Print Name and Title of Person Authorized to Sign)_____

(Corporation Name)_____

(State of Incorporation)_____

Attest (Secretary)_____

Business address: _____

A Joint Venture

By (Authorized Signature)_____ (SEAL)

Business address: _____

By (Authorized Signature)_____ (SEAL)

Business address: _____

By (Authorized Signature)_____ (SEAL)

Business address: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

PROVIDE CERTIFICATE OF AUTHORITY TO SIGN

SECTION 01150RMEASUREMENT AND PAYMENTPART I - GENERAL1.1 DESCRIPTION

- A. For lump sum items, payment shall be made to the contractor in accordance with an accepted progress schedule and schedule of values on the basis of actual work completed.
- B. For unit-price items, payment shall be based on the actual amount of work accepted and for the actual amount of materials in place, as shown by final measurements.
 - 1. All units of measurement shall be standard United States convention as applied to the specific items of work by tradition and as interpreted by the Engineer.
 - 2. At the end of each day's work, the Contractor's Superintendent or other authorized representative of the Contractor shall meet with the Resident Project Representative and determine the quantities of unit price work accomplished and/or completed during the work day.
 - 3. The Resident Project Representative will then prepare two "Daily Progress Reports" which shall be signed by both the Resident Project Representative and Contractor's Representative.
 - 4. Once each month the Resident Project Representative will prepare two "Monthly Progress Summation" forms from the month's accumulation of "Daily Progress Reports" which shall also be signed by both the Resident Project Representative and Contractor's Representative.
 - 5. These completed forms will provide the basis of the Engineer's monthly quantity estimate upon which payment will be made. Items not appearing on both the Daily Progress Reports and Monthly Progress Summation will not be included for payment. Items appearing on forms not properly signed by the Contractor will not be included for payment.
 - 6. After the work is completed and before final payment is made, the Engineer will make final measurements to determine the quantities of various items of work accepted as the basis for final settlement.

1.2 SCOPE OF PAYMENT

- A. Payments to the Contractor will be made for the actual quantities of the Contract items performed and accepted in accordance with the Contract Documents. Upon completion of construction, if these actual quantities show either an increase or decrease from the quantities given in the Proposal Form, the Contract Unit Prices will still prevail.
- B. The Contractor shall accept in compensation, as herein provided, in full payment for furnishing all materials, labor, tools, equipment, and incidentals necessary to the completed work and for performing all work contemplated and embraced by the Contract; also for all loss or damage arising from the nature of the Work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work and until its final acceptance by the Engineer, and for all risks of every description connected with the prosecution of the work, except as provided herein, also for all expenses incurred in consequence of the suspension of the Work as herein authorized.

- C. The payment of any partial estimate or of any retained percentage except by and under the approved final invoice, in no way shall affect the obligation of the Contractor to repair or renew any defective parts of the construction or to be responsible for all damage due to such defects.

1.3 PAYMENT FOR INCREASED OR DECREASED QUANTITIES

- A. When alterations in the quantities of work not requiring supplemental agreements, as hereinbefore provided for, are ordered and performed, the Contractor shall accept payment in full at the Contract price for the actual quantities of work done. No allowance will be made for anticipated profits. Increased or decreased work involving supplemental agreements will be paid for as stipulated in such agreements.

1.4 OMITTED ITEMS

- A. Should any items contained in the bid form be found unnecessary for the proper completion of the work contracted, the Engineer may eliminate such items from the Contract, and such action shall in no way invalidate the Contract, and no allowance will be made for items so eliminated in making final payment to the Contractor.

1.5 PARTIAL PAYMENTS

Partial payments shall be made monthly as the work progresses. Partial payments shall be made subject to the provisions of the Supplemental and General Conditions.

1.6 PAYMENT FOR MATERIAL DELIVERED

- A. When requested by the Contractor and at the discretion of the Owner, payment may be made for all or part of the value of acceptable, non-perishable materials and equipment which are to be incorporated into bid items, have not been used and have been delivered to the construction site, or placed in storage places acceptable to the Owner. Payment shall be subject to the provisions of the General and Supplemental Conditions.
- B. No payment shall be made upon fuels, supplies, lumber, false work, or other materials, or on temporary structures of any kind which are not a permanent part of the Contract.

1.7 FINAL PAYMENT

- A. The Engineer will make, as soon as practicable after the entire completion of the project, a final quantity invoice of the amount of the Work performed and the value of such Work. Owner shall make final payments of the sum found due less retainages subject to provisions of the General and Supplemental Conditions.

1.8 INCIDENTAL WORK

- A. Incidental work items for which separate payment will not be made includes, but is not limited to, the following items:
 1. Construction schedules, bonds, insurance, shop drawings, warranties, guarantees, certifications, and other submittals required by the Contract Documents.
 2. Permits not otherwise paid for or provided by the Owner.
 3. Test pits to determine existing utility locations, soils conditions, and as required to complete the project.
 4. Clearing, grubbing, and stripping.
 5. Visits to the Project site or elsewhere by personnel or agents of the Contractor, including manufacturer's representatives, as may be required.

6. Preconstruction Photos and Videos.
7. Coordination with the Owner, Utilities and others, including related inspection cost (refer to Section 01050)
8. Earthwork (except ledge)
9. Dust control. Contractor shall have watering equipment on site for the duration of the construction. Watering shall take a place a minimum of two times per day or at the direction of the Engineer.
10. Dewatering and disposal
11. Removal and disposal of existing piping (except asbestos) and unsuitable materials.
12. Temporary utilities for construction and to maintain existing service during construction, payment is otherwise made.
13. Temporary construction and other facilities not to be permanently incorporated into the Work necessary for construction sequencing and maintenance of operations.
14. Steel and/or wood sheeting as required, including that left in place
15. Materials testing
16. Quality assurance testing
17. Utility crossings and relocations, unless payment is otherwise made
18. Traffic Regulation except uniformed police detail and Certified Flaggers.
19. Safety Signing for construction operations.
20. Repainting of existing crosswalks and stoplines after milling and paving.
21. On-site and other facilities acceptable to Engineer for the storage of materials, supplies and equipment to be incorporated into the Work
22. Pipe Markings
23. Utility crossings and relocations, unless payment is otherwise made.
24. Engineer's Temporary Field Office.
25. Weather protection, winter construction equipment and fuel.
26. Restoration of property, and replacement of fences, curbs, structures and other minor items disturbed by the construction activities.
27. Repair and replacement of utilities damaged by construction activities and corresponding proper disposal of removed materials.
28. Clean-up.
29. Loam and seeding.
30. Potable water for cleaning, disinfection and testing.
31. Facilities start-up services required by the Contract Documents.
32. Construction Administration and Insurance.
33. GPS location of all structures
34. Demobilization
35. Project record documents.
36. Rebuilding/reconstruction/modification of tables and inverts where new sewer is constructed into an existing sewer.

1.9 DESCRIPTION OF PAY ITEMS

- A. The following sections describe the measurement of and payment for the work to be done under the respective items listed in the Bid Form.
- B. Each unit or lump-sum price stated in the Bid Form shall constitute full compensation, as herein specified, for each item of the work completed.

Item No. 1 - Mobilization

Payment of the lump sum amount for Item No.1 in the Bid Schedule shall be full compensation for mobilization costs. The amount bid for Item No. 1 shall not exceed 5% of the sum of all other bid items.

Items No. 2 - Furnish and Install Ductile Iron Water Mains

- A. Method of Measurement: Water main measured for payment shall be the actual length in feet as measured along the center line of the pipe as laid including all fittings and valves.
- B. Basis of Payment:
 - 1. Water main shall be paid for at the unit price per linear foot stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all pipes, and other materials required for the installation of the pipelines; for clearing and grubbing; for cutting trees to required length; for dewatering; for installing the pipelines; for excavating (except rock excavation), laying, setting, and jointing all pipes and fittings; for furnishing and placing all bedding, haunching and initial backfill; for backfilling; for furnishing and placing all gravel required in areas of gravel shoulder; for compaction; for replacement of aggregate base and subbase material; for thrust blocks; for restraining joints; for furnishing and placing all temporary and/or permanent sheeting and bracing; for all labor, tools and construction equipment; for all connections to the existing water mains unless otherwise paid for; for cleaning and flushing including temporary flushing connections; for chlorination, temporary taps and fittings required for testing; and for all other work and expenses incidental thereto.
 - 2. Only ninety (90%) of the price per lineal foot of pipe shall be paid for upon its installation, the balance shall be withheld until such time as the pipe has been successfully tested and chlorinated and ready to be incorporated into the existing system. The above percentages are prior to the specified retainage to be withheld.
- C. All temporary items and labor necessary to properly protect work, test and chlorinate mains shall be covered under this item.
- D. Existing water main to be replaced in same trench shall be disposed of by the contractor, work to be covered under this unit price per linear foot.

Items No. 3 - Furnish and Install Ductile Iron Fittings

- A. Method of Measurement: Ductile iron fittings measured for payment shall be the actual number of compact ductile iron fittings installed complete in place.
- B. Basis of Payment: Ductile iron fittings shall be paid for at the unit price per pound stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment and tools; for installing, setting, and joining; and for all other work and expenses incidental thereto. Mechanical joint restraints and thrust blocks shall not be included in the fitting weight for payment.

Items No. 4 - Furnish and Install Gate Valves

- A. Method of Measurement: Gate valves measured for payment shall be the actual number of valves and valve boxes installed complete in place.
- B. Basis of Payment: Gate valves shall be paid for at the unit price per each stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment, and tools; for installing, setting, and jointing; for restraining joints; for testing all valves and valve boxes; and for all other work and expenses incidental thereto.

Items No. 5 - Furnish and Install Hydrant Assemblies

- A. Method of Measurement: Hydrants measured for payment shall be the actual number installed complete in place.
- B. Basis of Payment: Hydrant assemblies shall be paid for at the unit price each stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment, and tools; for installing, setting and jointing; for excavation (except rock excavation); for all thrust blocks; restraining joints; for the hydrant, valve anchoring tee; 6-inch gate valve, and for all other work and expenses incidental thereto. 6-inch pipe necessary to connect the hydrant to the anchoring tee will be paid for under the appropriate pipe item.

Items No. 6 - Furnish and Install Water Services - Corporation Stops, Curb Stops and Box, Copper Service Pipe

- A. Method of Measurement:
 - 1. Corporation stops and taps measured for payment shall be the actual number furnished and installed for service connections.
 - 2. Curb stops measured for payment shall be the actual number installed.
 - 3. Copper service pipe measured for payment shall be the actual length in feet as measured along the center line of the pipe as laid.
- B. Basis of Payment:
 - 1. Corporation stops and taps shall be paid for at the unit price per each stated in the Bid Schedule. Said unit price shall be full compensation for all fittings, labor, equipment, and tools necessary for the installation of the corporation stops; tapping the main; and for all work and expenses incidental thereto.
 - 2. Curb stops and boxes shall be paid for at the unit price per each stated in the Bid Schedule. Said unit price shall be full compensation for all fittings, labor, equipment, tools and other materials required for the installation of the curb stop and box; for connection of the homeowner's existing service pipe to the curb stop; for trench dewatering; for excavating and backfilling; for replacing or rebuilding shrubs, fences, lawns, trees, and other materials except other such items specifically included in the Bid Schedule; and for all other work and expenses incidental thereto.
 - 3. Service pipe shall be paid for at the unit price per linear foot stated in the Bid Schedule. Said unit price shall be full compensation for all service pipe, labor, equipment, tools, and other materials required for the installation of service pipes; for trench dewatering; for excavating, laying, setting, and jointing all pipes and fittings; for cleaning, testing, and disinfecting; for backfilling; for replacing or rebuilding shrubs, fences, lawns, trees, or other materials, except other such items specifically included in the Bid Schedule; and for all other work and expenses incidental thereto.

Items No. 7 - Sewer Service Connections

- A. Method of Measurement: Sewer service connections measured for payment shall be linear feet measured from the top of the tee or wye to the edge of right-of-way measured along the centerline of the pipe.
- B. Basis of Payment:
 - 1. Payment for furnishing and installing service connection lines will be made for the unit bid price in the Bid Schedule. The unit price shall include, but not be limited to, furnishing, installing, providing tees or wyes, excavating (except rock excavation), backfilling, compaction,

replacement of aggregate base and subbase material, adequately capping service connection and marking location as specified and shown on the Drawings.

Items No. 8 - Removing and Relaying Existing Utilities

- A. Method of Measurement: The quantity to be paid shall be based on the length in feet of the utility to be replaced.
- B. Basis of Payment:
1. Payment for removing and relaying drains, sewer, water mains, gas mains, electrical and communication ducts and other utilities shall be made at the unit price bid per linear foot as stated in the Bid Schedule. Only such utilities which directly conflict with the new water main or sewer or utilities removed as deemed necessary by the Owner shall be measured and paid for under this item. Utilities shall only be removed and relayed and paid for when such lines cross the proposed utilities main at an elevation that conflicts with the grade of the proposed work; when a long angle crossing exists which may hinder the work and result in damage to the utilities and structures; where shown on the drawings; or when requested by the Owner. Utilities running parallel to the proposed pipeline shall be properly braced or otherwise protected to prevent displacement.
 2. Payment for removing and relaying existing utilities shall be made at the unit price bid per linear foot as stated in the Bid Schedule. Said unit price shall be full compensation for coordination with the affected utility; for furnishing labor, tools, and equipment; for disposal of existing pipe; for furnishing and placing replacement borrow material; for repairing all pavement damage outside the payment widths for paving; and for all other work and expenses incidental thereto.

Items No. 9 - Ledge Excavation, Disposal and Replacement Backfill

- A. Method of Measurement: The quantity of ledge excavation to be paid for shall be the actual number of cubic yards of ledge removed within the limits of normal excavation. For pipelines, the limits are defined by the vertical planes at a distance three feet apart and to a depth of six inches below the bottom of the pipe. For structures, the limits are defined as 2 feet beyond (horiz) the finished structure footing and 1 foot below the bottom of the footing or floor. Field measurements for computing ledge volumes shall be determined by one of the following methods as selected by the Engineer.
1. From ledge profile of exposed surface.
 2. By field measurements of the length of the trench ledge excavated and the average depth of ledge excavation as determined by the field representative.
 3. The volume of rocks shall be determined from their average length, width, and depth as measured by the field representative. Boulders more than 2 cubic yards in volume shall be paid for as ledge.
- B. Basis of Payment: Ledge excavation and disposal shall be paid for at the unit price per cubic yard as stated in the Bid Schedule (Min. \$50.00 C.Y. - Max. \$120.00 C.Y.). Said unit price shall be full compensation for furnishing all materials, labor, tools, and equipment; for disposal of ledge; for furnishing and placing replacement granular borrow material; for conducting all preblast surveys and investigations; for repairing all overblast; for repairing all pavement damage outside the payment widths for paving; and for all other work and expenses incidental thereto.

Items No. 10 - Earth Excavation below Grade and Replacement Backfill

- A. Method of Measurement: Earth excavation below grade (below the bottom of the bedding layer by order of the Engineer) and replacement backfill below grade accepted for payment shall be the actual number of cubic yards installed and accepted complete in place.
- B. Basis of Payment: The Contract unit price per cubic yard for earth below grade and replacement backfill below grade furnished and installed shall be full compensation for labor, materials, tools and equipment necessary to complete this work including; excavation and disposal of unsuitable materials including muck, crib work, trees, stumps and all other buried refuse; replacement suitable fill, compaction, dewatering and all else incidental thereto for which payment is not provided under other items.

Item No. 11 - Furnishing and Placing of Suitable Material Above Trench Grade to Replace Unsuitable Material

- A. Method of Measurement: The quantity of suitable material placed above trench grade to be paid for shall be the actual number of cubic yards of material placed as required by and/or authorized by the Engineer as measured following excavation.
- B. Basis of Payment: Placement of Suitable Material shall be paid for at the unit price per cubic yard stated in the Bid Schedule. Said unit price shall be measured from a point fifteen inches below the road surface to twelve inches above the top of the pipe and to a width of two feet plus the inside pipe diameter.
- C. Bedding material placed from a point six inches below the bottom of the pipe to a point of one foot above the top of the pipe shall be covered under the respective Bid Item for installing water main.

Items No. 12 - Pavement

- A. Method of Measurement
 - 1. Bituminous concrete pavement accepted for payment shall be the number of tons of pavement placed at the direction of the Engineer, calculated as described below, within the payment limits shown on the Drawings.
 - a. Actual widths will be used in computing area wherever the width of pavement removed and replaced is less than the limits indicated on the Drawings.
 - b. The conversion factor to change volume of bituminous concrete pavement measured in place to tons will be 0.055 tons per square yard per inch of thickness.
 - 2. Milling to be paid for shall be based on the actual number of square yards of pavement removed to the depth of 1-½ inches by milling machinery to prepare the roadway for final overlay, and for the entire width of the road within the limits of work (Willard Street and Plympton Street Only).
- B. Basis of Payment:
 - 1. Trench pavement shall be paid for at the Contract unit price per ton stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all materials, labor, equipment and tools necessary for the placement and removal of pavement. No additional payment will be made to the contractor for repair work done by him in maintaining bituminous concrete pavement.
 - 2. Overlay pavement shall be paid for at the Contract unit price per ton stated in the Bid Schedule. Said price shall be full compensation for all work required to restore the roadway. Payment shall include, but not be limited to, saw cutting pavement, removing sawn pavement, adjusting castings, cleaning existing pavement edges, coating existing pavement edges with an emulsified asphalt prior to and after placement of asphalt, furnishing and installing 1-½ inches of

permanent bituminous concrete overlay, adjusting structures, covers, traffic control, and all other work required for or incidental to the completion of this item.

3. Milling shall be paid for per square yard as stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all labor and equipment necessary to complete the milling including removal of pavement by other means, traffic control, removal and disposal of milled material, and the resultant surface after milling. No payment shall be made for additional cleaning that may be necessary just prior to placement of any overlaying pavement course. Payment shall also include placing a temporary bituminous concrete ramp at all built joints, and removing the ramp prior to the installation of the overlay, as well as orange spray paint on the exposed castings.

Items No. 13 - Remove and Reset Curb

- A. Method of Measurement: Curb measured for payment shall be the actual linear footage of curb installed and accepted complete and in place.
- B. Basis of Payment: The Contract unit price per linear foot for removing and resetting curb shall constitute full compensation for all labor, equipment and materials necessary to complete this work including carefully labeling removing curb, safely storing curb for reuse, re-installing curb, subgrade preparation, placement of concrete fill, backfill, compaction, and all labor and appurtenances incidental thereto for which payment is not provided under other items.

Items No. 14 - Repair of Sidewalks

- A. Method of Measurement:
 1. Bituminous concrete sidewalks and curbs measured for payment shall be the number of tons of pavement installed and accepted in place.
 - a. Actual widths will be used in computing area wherever the width of pavement removed and replaced is less than the limits indicated on the Drawings.
 - b. The conversion factor to change volume of bituminous concrete pavement measured in place to tons will be 0.055 tons per square yard per inch of thickness.
- B. Basis of Payment:
 1. Pavement shall be paid for at the contract unit price per ton for bituminous concrete sidewalks and curbs stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all labor, materials, equipment and tools necessary for the placement and removal of bituminous sidewalks and curbs. No additional payment will be made to the contractor for repair work done by him in maintaining bituminous concrete pavement.

Items No. 15 - Erosion Control

- A. Method of Measurement: Payment for erosion control shall be on a lump sum basis.
- B. Basis of Payment: Payment of the lump sum amount for erosion control shall be full compensation for installation, maintenance and removal of the type and quantity of erosion control devices as required and shown on the drawings.

Items No. 16 - Temporary Water Mains

- A. Method of Measurement: Temporary water mains measured for payment shall be on a Lump Sum basis following installation and successful testing.
- B. Basis of Payment: Temporary water lines, hydrant assemblies, saddles, taps, corporation stops and appurtenances shall be paid for at the lump sum price in the Bid Schedule. the lump sum price shall be full compensation for furnishing all labor, materials, and equipment required to provide a fully

operational temporary water system including mainlines and services as specified; for removing all temporary lines at the resumption of water service; for placing and maintaining fill over temporary mains at drives, walks, etc.; for making connections to buildings; for excavation and connection to existing mains and services; for cleaning, pressure testing, and disinfecting temporary lines; for coordinating connections and shut-offs with the Owner; and for all other work and expenses incidental thereto.

Item No. 17 - Test Pit Excavation, Backfill and Restoration

- A. Method of Measurement - Test pit excavation measured for payment shall be per each unit completed as ordered by the Engineer and as indicated on the Drawings.
- B. Basis of Payment - The contract unit price for each test pit excavation shall be full compensation for all labor, materials, tools and equipment necessary to complete this work including cutting existing pavement, hand and machine excavation, repairing damage to pipes, utilities, structures and property backfilling, compaction, maintenance and all else incidental thereto for which payment is not provided under other items.

Item No. 18 - Utility Coordination

- A. Method of Measurement – Utility coordination measured for payment shall be on a Lump Sum basis.
- B. Basis of Payment: Coordination with Utilities costs are those costs of working with utilities (gas, power, sewer, water, etc.), including but limited to timely communication and consultation with companies, public entities, and agencies; utility services (utility pole holding, utility pole relocation, gas line relocation, contacting Dig-Safe etc.); including working around utility poles prior to relocation. The contract lump sum price shall be full compensation for all labor, materials and equipment necessary to complete this work. The contract lump sum price shall be paid in a series of equal partial payments made to cover all Coordination with Utilities costs throughout the entire contract.

Items No. 19 - Uniformed Police Traffic Control

- A. Method of Measurement – Uniformed police details will be paid based on actual invoices submitted by the Contractor and will be paid from the Bid Item allocation.
- B. Basis of Payment: Cash allowance as compensation for fees associated with providing uniformed police officer in accordance with the requirements of the City of Waltham Police Department. The cost associated, MUTCD signage, and other traffic control requirements shall be considered incidental to the work. Adjustment to the final cost for this item will be made as follows. Prior to final payment, Contractor shall present all receipts for this work (if not previously presented to the Engineer), and the amount due will be deducted from the allowance.

Item No. 20– Price Adjustment Allowance

- A. Method of Measurement - An allowance is included in the bid schedule for price adjustments for fuel (diesel and gasoline), Liquid Asphalt and Portland Cement contained in cast-in-place concrete, as defined in Section 01151.
- B. Basis of Payment: Payment shall be paid based on receipts provided by the Contractor and shall be deducted from the allowance stated in the Bid Schedule.

Item No. 21 – Utility Repair Allowance

- A. Method of Measurement – Payment for utility repairs as directed by City shall be based on time and materials and actual invoices submitted.

- B. Basis of Payment: The contract allowance for utility repairs to existing sewer and drainage piping and structures shall be full compensation for labor, materials, tools and equipment necessary to the complete the work including: gravity sewer pipe replacement/repair, sewer manhole replacement/repair, drainage pipe replacement/repair, drainage manhole replacement/repair, and catchbasin replacement/repair. It is the intent of the work to repair and/or replace any existing sewer or drainage utility as required based on field observations of the existing condition of utilities during construction. At the time of bidding it is unknown how many existing structures or piping will need to be replaced/repared. Work for this item will be identified in the field during construction and as directed by the City. A time extension to the contract will be incorporated equal to the amount of time spent performing the work under this item only. All work for this item shall paid based on time and materials and actual invoices submitted. The amounts submitted will be paid from the allocation.

Item No. 22 – Portable Message Sign Boards (TWO)

- A. Method of Measurement – Payment for two portable message boards shall be per day whenever boards are required and accepted by the Owner.
- B. Basis of Payment: Payment of the per day amount for portable message sign boards shall be full compensation for furnishing equipment and programming, locating and relocating message boards as required by the Owner.

END OF SECTION