

TOWN OF MILFORD WATER DEPARTMENT

DOCUMENTS AND SPECIFICATIONS

FOR THE CONSTRUCTION OF THE

COURT STREET

WATER MAIN IMPROVEMENTS



*Molly Caruso*  
2-4-2026

TATA & HOWARD, INC.

CONSULTING ENGINEERS

201 BOSTON POST ROAD WEST

MARLBOROUGH, MASSACHUSETTS

FEBRUARY 2026

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SECTION 00030

ADVERTISEMENT FOR BIDS

The Town of Milford shall receive General Bids at the office of the Town of Milford Water Department, 66 Dilla Street, Milford, MA 01757, Attn: David Condrey, for the Construction of the Court Street Water Main Improvements in Milford, Massachusetts, until 2:00 PM prevailing time, February 19, 2026 at which time bids will be opened. Bids submitted after this time will not be accepted.

The Work of this Contract generally consists of the construction of approximately 620 linear feet of new 8-inch ductile iron water main in Court Street from Main Street to Spring Street and associated valves, fittings, hydrants, and service connections. The existing water main shall be abandoned and left in place. All service connections are to be completed after the water main successfully passes pressure testing and chlorination procedures. All water main work shall be completed within 60 consecutive calendar days.

Contract Documents will be available, on or after 2:00 PM on Wednesday, February 4, 2026, and may be electronically downloaded from the Tata & Howard, Inc. website at <https://tataandhoward.com/projects-out-to-bid/>.

Each bid shall be accompanied by a bid security in the amount of 5% of the total bid amount and in the form described in the Instructions to Bidders. A Performance Bond and Labor and Materials Payment Bond each in the amount of 100 percent of the contract price will be required in the form described in the Instructions to Bidders.

No Bidder may withdraw his bid within 30 days (Saturdays, Sundays and legal holidays excluded) after the actual date of the opening of the General Bids.

Complete instructions for filing bids are included in the Instructions to Bidders. The bidding and award of the Contract will be under the provisions of "Massachusetts General Law, Chapter 30, Section 39M (MGL C.30, S.39M)."

Minimum wage rates as determined by the Commissioner of Department of Labor and Industries under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H, as amended, apply to this project. It is the responsibility of the bidder, before bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people and additional classifications who may be employed for the proposed work under this contract.

If the bidder views/obtains the plans and specifications from a source other than those noted in this Advertisement for Bids, the accuracy and/or completeness of the bid documents cannot be guaranteed and the bidder assumes the responsibility for obtaining any additional information regarding the project, including addenda, that may be required for bidding. Failure to acknowledge addenda issued during bidding shall designate a bid as non-responsive.

A copy of this advertisement is available on the Massachusetts Newspaper Publishers Association (MNPA) website (<http://masspublicnotices.org/>).

This Contract contains price adjustments for hot mix asphalt, diesel fuel, gasoline, and Portland cement concrete. For this project the base prices are as follows: liquid asphalt \$625.00 per ton, diesel fuel \$2.724 per gallon, gasoline \$2.152 per gallon, and Portland cement \$425.13 per ton. MassDOT posts the Price

Adjustments on their Highway Division's website at <https://www.mass.gov/massdot-contract-price-adjustments>.

The Owner reserves the right to reject any or all bids, to accept any bid, to waive any informality on bids received, to omit any item or items deemed advisable for the best interests of the Owner or to limit the extent of the Work to keep within the limits of available funds

TOWN OF MILFORD

END OF SECTION

SECTION 00100

INSTRUCTIONS TO BIDDERS

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SECTION 00100

INSTRUCTIONS TO BIDDERS

ARTICLE 1 DEFINED TERMS

1.01 Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (C-700) have the meanings assigned to them in the General Conditions.

Certain additional terms used in these Instructions to Bidders have the meaning indicated below which are applicable to both the singular and plural thereof, and are gender inclusive.

- A. BIDDER - One who submits a Bid directly to Owner for all the work described in the Contract Documents, including the filed sub-bids.
- B. APPARENT LOW BIDDER - That Bidder whose Bid as offered in the Bid Form for General Bid represents the lowest total as determined by the Proposed Contract Price.
- C. PROPOSED CONTRACT PRICE - The sum of all Bid Items on the Bid Form for General Bid.
- D. SUCCESSFUL BIDDER - The lowest responsible and responsive Bidder to whom Owner (on the basis of Owner's evaluation as herein provided) makes an award.

ARTICLE 2 BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the deposit sum stated in the Advertisement For Bids may be obtained from the location(s) stated in the Advertisement For Bids.
- 2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 QUALIFICATIONS OF BIDDERS

3.01 To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five days after Bid opening, upon Owner's request, detailed written evidence such as financial data, previous experience, present commitments and other such data as may be called for below. Each Bid must contain evidence of Bidder's qualifications to do business in the state where the project is located or covenant to obtain such qualification prior to award of contract.

- 3.02 Owner and/or Engineer may make such investigation as deemed necessary to determine the ability of Bidder to perform the work and Bidder shall furnish to Owner all such information for this purpose as Owner may request.
- A. No award will be made to any Bidder who cannot meet all of the following requirements. Bidder:
- a. Shall not have defaulted on any contract within three years prior to the bid date.
  - b. Shall maintain a permanent place of business.
  - c. Shall have adequate personnel and equipment to perform the work expeditiously.
  - d. Shall have suitable financial status to meet obligations incident to the work.
  - e. Shall have appropriate technical experience satisfactory to Owner in the class of work involved.
  - f. Shall be registered with the Secretary of State of the Commonwealth of Massachusetts to do business in Massachusetts.
  - g. Shall not have failed to perform satisfactorily on contracts of a similar nature.
  - h. Shall not have failed to complete previous contracts on time.
- 3.03 Owner reserves the right to reject any bid if the foregoing requirements are not satisfied or if any other evidence fails to satisfy Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated.
- 3.04 Nothing indicated herein will prejudice Owner's right to seek additional pertinent information as is provided in Article 18 – BASIS OF AWARD AND AWARD OF CONTRACT.

#### ARTICLE 4 EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- 4.01 It is the responsibility of each Bidder before submitting a Bid;
- A. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents.
  - B. To visit the site to become familiar with and satisfy Bidder as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.
  - C. To consider federal, state, and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work.
  - D. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related documents.
  - E. To promptly notify Engineer of all conflicts, errors, ambiguities or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.
- 4.02 Refer to paragraphs 5.03, 5.04, and 5.05 of the General Conditions for provisions concerning Subsurface and Physical Conditions, Differing Subsurface or Physical Conditions, and Underground Facilities.
- 4.03 Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished

to Owner and Engineer by owners of such Underground Facilities or others, and Owner and Engineer do not assume responsibility for the accuracy or completeness thereof.

- 4.04 On request, Owner will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests and studies as each Bidder deems necessary for submission of a Bid. Bidder must fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests, and studies.
- 4.05 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities and discrepancies that Bidder has discovered in the Contract Documents and the written resolutions thereof by Engineer is acceptable to Bidder and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

#### ARTICLE 5 PRE-BID CONFERENCE

- 5.01 There will be no pre-bid conference required for this Contract.

#### ARTICLE 6 AVAILABILITY OF LANDS FOR WORK, ETC.

- 6.01 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by the Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

#### ARTICLE 7 INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be directed to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five business days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Questions will be submitted by contacting Joyle Ortega at [jortega@tataandhoward.com](mailto:jortega@tataandhoward.com).
- 7.02 Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

## ARTICLE 8 BID SECURITY

- 8.01 Each Bid must be accompanied by Bid security made payable to Owner in an amount of five percent of Bidder's maximum Proposed Contract Price and in the form of cash, a certified or cashier check, or a Bid Bond, issued by a surety authorized to do business in the Commonwealth of Massachusetts.
- 8.02 The Bid Security shall be in the amount stated in the Advertisement For Bids. Bid Security shall be sealed in a separate envelope from the Bid and then attached to the envelope containing the Bid. All Bid Securities of General Bidder except those of the three lowest responsible and eligible General Bidders will be returned within five days, (Saturdays, Sundays and legal holidays excluded) after the opening of General Bids. All Bid Securities of Sub-Bidders, except those of the Sub-Bidders named in the General Bids of the lowest three responsible and eligible General Bidders and those of the three lowest responsible and eligible Sub-Bidders for each subtrade, will be returned within five days, (Saturdays, Sundays and legal holidays excluded), after the opening of the General Bids. All Bid Securities will be returned on the execution of the Agreement or if no award is made, within thirty days, (Saturdays, Sundays and legal holidays excluded), after the actual date of opening of the General Bids, unless forfeited under the conditions herein stipulated.
- 8.03 In the case a party to whom a contract is awarded shall fail or neglect to execute the Agreement and furnish the satisfactory bonds within the time specified, Owner may determine that the Bidder has abandoned the Contract, and thereupon the Bid Forms and acceptance shall be null and void and the Bid Security accompanying the Bid Form shall be forfeited to Owner as liquidated damages for such failure or neglect and to indemnify said Owner for any loss which may be sustained by failure of the bidder to execute the Agreement and furnish the bonds as aforesaid, provided that the amount forfeited to Owner shall not exceed the difference between the Proposed Contract Price of said Bidder and that of the next lowest responsible and eligible bidder and provided further that, in case of death, disability, or other unforeseen circumstances affecting the Bidder, such Bid Security may be returned to them. After execution of the Agreement and acceptance of the bonds by Owner, the Bid Security accompanying the Bid Form of the successful bidder will be returned.

## ARTICLE 9 CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which the Work is to be Substantially Completed, and Completed and ready for final payment are set forth in the Bid Form and the Agreement.

## ARTICLE 10 LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages are set forth in the Bid Form and the Agreement.

## ARTICLE 11 SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor, if acceptable to Engineer,

application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in paragraphs 7.05 and 7.06 of the General Conditions.

#### ARTICLE 12 MANUFACTURER'S EXPERIENCE

12.01 Whenever it is written that an equipment manufacturer must have a specified period of experience with their product, equipment which does not meet the specified experience period may be considered if the equipment supplier or manufacturer is willing to provide an "Efficiency Guarantee Bond" or cash deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure.

#### ARTICLE 13 PREPARATION OF BID

13.01 The Bid Form and other attachments are included with the Bidding Documents. No substitution of forms will be allowed.

13.02 All blanks on the Bid Form must be completed by typing or printing figures where required. No substitution shall be made in the phraseology of the forms.

13.03 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown above the signature.

13.04 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear on the line below the signature.

13.05 All names must be typed or printed in black ink below the signature.

13.06 The bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

13.07 The address and telephone number for communications regarding the Bid must be shown.

#### ARTICLE 14 MODIFICATIONS AND WITHDRAWAL OF BIDS

14.01 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

14.02 If within twenty-four hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

ARTICLE 15 SUBMISSION OF BIDS

- 15.01 Bids shall be submitted at the time and place, and in the manner set forth in the Advertisement For Bids. Enclose Bids in an opaque sealed envelope, marked with the Project Title (and, if applicable, the designated portion of the Project for which Bid is submitted) and name and address of Bidder and accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.
- 15.02 Only one Bid from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the Owner that any Bidder is interested in more than one Bid for Work contemplated, all Bids in which such Bidder is interested will be rejected.

ARTICLE 16 OPENING OF BIDS

- 16.01 Contract is being bid under Chapter 30 of the Massachusetts General Law as applicable.
- 16.02 Bids will be opened and (unless obviously non responsive) read aloud publicly at the place where bids are to be submitted. An abstract of the amounts of the base bids and major alternates (if any) will be made available to Bidders within seven days after the date of Bid opening.

ARTICLE 17 BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 The time period for holding bids is thirty days, (Saturdays, Sundays, and legal holidays excluded), after the opening of bids.

ARTICLE 18 BASIS OF AWARD AND AWARD OF CONTRACT

- 18.01 If the Contract is to be awarded, Owner will give Successful Bidder a Notice of Award within thirty days after the day of the Bid opening, Saturdays, Sundays and legal holidays excluded.
- 18.02 Owner reserves the right to reject any or all Bids, including without limitation, the rights to reject any or all nonconforming, nonresponsive, unbalanced or conditional Bids and to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standards or criteria established by Owner. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- 18.03 In evaluating Bids, Owner will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form prior to the Notice of Award.
- 18.04 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders and

other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

- 18.05 If the Contract is to be awarded, it will be awarded to lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Owner.
- 18.06 In the event of failure of the Successful Bidder to sign the Agreement and provide an acceptable Performance and Payment Bond(s), insurance certificate(s), and other required documents, the Owner may award the contract to the next lowest, responsive, responsible Bidder.

#### ARTICLE 19 FILED SUB-BIDS

- 19.01 None required.

#### ARTICLE 20 CONTRACT SECURITY AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the successful Bidder delivers the executed Agreement to Owner, it must be accompanied by such bonds.

#### ARTICLE 21 EXECUTION OF AGREEMENT

- 21.01 When Owner gives a Notice of Award to Successful Bidder, it will be accompanied by unsigned copies of the Agreement and other appropriate documents. Within five days thereafter, (Saturdays, Sundays and legal holidays excluded) Bidder shall sign and deliver the copies of the Agreement and attached documents to Owner with the required Bonds. Within ten days thereafter, Owner shall deliver two fully executed copies to Contractor.

#### ARTICLE 22 SALES AND USE TAX

- 22.01 Materials and supplies used in the construction of this project will be exempt from the Commonwealth of Massachusetts sales and use tax. Owner shall provide a Certificate of Exemption Number. Bidders shall take this exemption into account in preparing their bid.

#### ARTICLE 23 SAFETY AND HEALTH REGULATIONS

- 23.01 This Project is subject to all of the Safety and Health regulations (CFR 29, Part 1926 and all subsequent amendments) as promulgated by the US Department of Labor on June 24, 1974 and CFR 29, Part 1910, General Industry safety and Health Regulations Identified as Applicable to Construction.
- 23.02 The Successful Bidder shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under the Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54).

## ARTICLE 24 GUARANTEE

- 24.01 The Contractor shall guarantee all materials and equipment furnished and Work performed for a period of one year from the date of Substantial Completion except where a longer guarantee period is required in the Contract Documents or such longer time as Owner is permitted to the maximum extent of applicable law. The Contractor warrants and guarantees for a period of one year, or for the longer guarantee period, from the date of Substantial Completion of the system, that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be necessary by such defects, within five days from the receipt of such notice the Owner may do so and charge the Contractor the cost thereby incurred. The performance bond shall remain in full force and effect through the guarantee period.
- 24.02 The Contractor guarantees that the Work and Services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Drawings, Specifications, and other Contract Documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of at least one year from and after the date of Substantial Completion and acceptance of the Work as stated in the final estimate and be applicable to the maximum amount of time allowed by law. If part of the Work is accepted in accordance with that subsection of this AGREEMENT titled "Partial Acceptance", the guarantee for that part of the Work shall be for a period of one year from the date fixed for such acceptance or such longer time as Owner is permitted to the maximum extent of applicable law.

If at any time within the said period of guarantee any part of the Work requires repairing, correction or replacement, the Owner may notify the Contractor in writing to make the required repairs, correction or replacements. If the Contractor neglects to commence making such repairs, corrections or replacements to the satisfaction of the Owner within seven days from the date of receipt of such notice, or having commenced fails to prosecute such Work with due diligence, the Owner may employ other persons to make said repairs, correction or replacements, and charge the costs, including compensation for additional professional services, to the Contractor. This remedy is in addition to any other remedy that Owner may have pursuant to the terms of the Contract Documents and the payment and performance bonds provided by the Contractor.

END OF SECTION

SECTION 00200

INFORMATION AVAILABLE TO BIDDERS

PART 1 SOIL BORINGS

- A. The soil borings show the type of material found at the exact location taken and do not necessarily indicate the type of soils or groundwater levels to be encountered in the performance of the work. It shall be the responsibility of the Contractor to determine for himself annual and seasonal variations in groundwater levels which may affect his work.
1. Each bidder is expected to examine the site and compiled record of investigations and information and then, based upon his own inspections, interpretations and such other investigations as he may desire, decide for himself the character of materials to be encountered and excavated, the suitability of the materials to be used for backfilling and such purposes, groundwater and conditions, difficulties or obstacles likely to be encountered, and other conditions affecting the work.
  2. Groundwater table observations on the pit logs were taken immediately and may or may not represent actual groundwater table at this time.
- B. Soil borings are not intended as representations or warranties and it is expressly understood that neither the Owner nor the Engineer will be responsible for the accuracy drawn therefrom by the Contractor.
1. This subsurface data is offered in good faith solely for the purpose of placing the Contractor in receipt of all information available to the Owner
  2. Soil boring logs are attached in Appendix B and locations are denoted on the Contract Drawings.

END OF SECTION

SECTION 00300

BID FORM

The bid of \_\_\_\_\_ (hereinafter called "Bidder"), organized and existing under the laws of the State of \_\_\_\_\_ doing business as

\_\_\_\_\_  
(Insert "a corporation," "a partnership", or "an individual", as applicable)

to the Town of Milford, Massachusetts, (hereinafter called "Owner")

In compliance with the Advertisement for Bids, Bidder hereby proposes to perform all work for the Construction of the Court Street Water Main Improvements in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

By submission of this Bid Form, each Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to his own organization, that this Bid Form has been arrived at independently, without consultation, communication, or agreement, as to any matter relating to this Bid Form with any other Bidder or with any competitor.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in the Notice To Proceed and to fully complete the project within 90 consecutive calendar days thereafter. Consecutive work days do not include time to allow trenches to settle prior to installation of permanent pavement. Bidder further agrees to pay as liquidated damages, the sum of \$1,300 for each consecutive calendar day thereafter.

To the Awarding Authority:

1. The undersigned proposes to furnish all labor and materials required for Construction of the Court Street Water Main Improvements, in accordance with the accompanying Contract Documents prepared by Tata & Howard, Inc., for the Proposed Contract Price specified below, subject to additions and deductions according to the terms of the Contract Documents.
2. Bidder acknowledges receipt of the following Addenda:

|            |       |        |       |
|------------|-------|--------|-------|
| Addendum # | _____ | Dated: | _____ |
| Addendum # | _____ | Dated: | _____ |
| Addendum # | _____ | Dated: | _____ |

Bidder understands that the Owner reserves the right to reject any or all bids, to waive any informalities in the bidding or to reduce the scope of the Work to stay within budget restraints.

Bid security in the form of a bid bond, cash certified check, treasurer's or cashier's check, payable to the Owner, in a dollar amount of 5 percent of the total bid, in accordance with the conditions in the Instructions To Bidders, has been attached to this bid.

Bidder may not withdraw his bid within 30 days (Saturdays, Sundays and legal holidays excluded) after the actual date of the opening of the General Bids.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within 5 days (Saturdays, Sundays and legal holidays excluded) and deliver a Surety Bond or Bonds as required by ARTICLE 6 of the General Conditions. The Bid Security, attached, in the sum of

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(Words)

Dollars (\$ \_\_\_\_\_) is to become the property of the Owner, in the event the Contract and Bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

The undersigned hereby certifies that Bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed 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 and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that Bidder will comply fully with all laws and regulations applicable to awards made subject to section 44A.

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 (29) F of Chapter twenty-nine (29) or any other applicable debarment provisions of any other Chapter of the General Law or any rule or regulation promulgated thereunder M.G.L. c.149, ss. 44E(2) and 44F(2).

Pursuant to MGL 62C, Section 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 Massachusetts General Laws.

Date \_\_\_\_\_

If the Bidder is a corporation, indicate State of incorporation, and affix corporate seal.

\_\_\_\_\_  
(Name of General Bidder)

By \_\_\_\_\_  
(Name of Person Signing Bid and Title)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(City and State)

Amounts are to be shown in both words and figures. In cases of discrepancy, the amount shown in words will govern.

The unit and lump sum prices shall include all labor, equipment, materials, overhead, profit, insurance, bond, etc. to cover the finished work of the several kinds called for.

The Contractor's attention is directed to the fact that information relative to existing structures, piping or buried cables, apparent and latent conditions and natural phenomena as furnished to him in the Contract Documents, carries no guarantee expressed or implied as to its completeness or accuracy and he has made all due allowance therefore.

The Bidder also understands that the quantities of work tabulated in this Bid Form or indicated in the Contract Documents are only approximate and are subject to increase or decrease.

The following schedule of bid items shall be completed in ink or typewritten. All unit prices must be entered in both words and figures and extended by the Bidder. In case there is a discrepancy between the total amount of bid and the correct extension and sum of the amounts for each bid item, the unit prices and their correct extension will govern.

The total bid price for the contract, correctly calculated in this Section, is to be used for the comparison of bids to determine the apparent low Bidder.

The following unit prices as defined in the Contract Documents are designated for items of work on the basis of quantities estimated by the Engineer. The unit or lump sum price shall be entered in both words and figures in the appropriate space for each item description. Actual payment for unit price items will be for actual quantity of each item, approved by the Engineer, at the unit price bid.

| <u>ITEM NO</u> | <u>ESTIMATED QUANTITY</u> | <u>ITEM DESCRIPTION AND UNIT AND LUMP SUM PRICES IN WORDS</u>      | <u>UNIT PRICES DOLLARS/CENTS IN FIGURES</u> | <u>EXTENDED AMOUNT DOLLARS/CENTS IN FIGURES</u> |
|----------------|---------------------------|--|---|---|
| 1              | L.S.                      | Mobilization and Demobilization                                    |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Lump Sum in Words  |   |   |
| 2              | 15 C.Y.                   | Test Pits  |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Cubic Yard in Words  |   |   |
| 3              | 15 C.Y.                   | Excavation Below Grade   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Cubic Yard in Words  |   |   |
| 4              | 15 C.Y.                   | Rock Removal   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Cubic Yard in Words<br><b>(\$50.00 PER CUBIC YARD MINIMUM)</b> |   |   |
| 5              | 500 LBS.                  | Fittings and Appurtenances   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Pound in Words   |   |   |
| 6              | 620 L.F.                  | 8-Inch Ductile Iron Pipe   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Linear Foot in Words   |   |   |
| 7              | 10 L.F.                   | 6-Inch Ductile Iron Pipe   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Linear Foot in Words   |   |   |
| 8              | 10 L.F.                   | 4-Inch Ductile Iron Pipe   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Linear Foot in Words   |   |   |
| 9              | 1 EA.                     | Hydrants   |   |   |
|                |                           | _____  | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words  |   |   |

| <u>ITEM NO</u> | <u>ESTIMATED QUANTITY</u> | <u>ITEM DESCRIPTION AND UNIT AND LUMP SUM PRICES IN WORDS</u> | <u>UNIT PRICES DOLLARS/CENTS IN FIGURES</u> | <u>EXTENDED AMOUNT DOLLARS/CENTS IN FIGURES</u> |
|----------------|---------------------------|---|---|---|
| 10             | 3 EA.                     | 8-Inch Gate Valves and Boxes<br><br>_____                     | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 11             | 1 EA.                     | 6-Inch Gate Valves and Boxes<br><br>_____                     | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 12             | 1 EA.                     | 16-Inch x 8-Inch Tapping Sleeve & Valve<br><br>_____          | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 13             | 1 EA.                     | 4-Inch Line Stop<br><br>_____                                 | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 14             | 6 EA.                     | 2-Inch Corporation Stop<br><br>_____                          | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 15             | 6 EA.                     | 2-Inch Curb Stop and Box<br><br>_____                         | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 16             | 60 L.F.                   | 2-Inch Service Tubing<br><br>_____                            | \$ _____                                    | \$ _____  |
|                |                           | Per Linear Foot in Words                                      |   |   |
| 17             | 8 EA.                     | 1-Inch Corporation Stop<br><br>_____                          | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |
| 18             | 8 EA.                     | 1-Inch Curb Stop and Box<br><br>_____                         | \$ _____                                    | \$ _____  |
|                |                           | Per Each in Words   |   |   |

| <u>ITEM NO</u> | <u>ESTIMATED QUANTITY</u> | <u>ITEM DESCRIPTION AND UNIT AND LUMP SUM PRICES IN WORDS</u>  | <u>UNIT PRICES DOLLARS/CENTS IN FIGURES</u> | <u>EXTENDED AMOUNT DOLLARS/CENTS IN FIGURES</u> |
|----------------|---------------------------|--|---|---|
| 19             | 120 L.F.                  | 1-Inch Service Tubing<br><br>_____<br>Per Linear Foot in Words   | \$ _____                                    | \$ _____  |
| 20             | 650 L.F.                  | Temporary Trench Pavement<br><br>_____<br>Per Linear Foot in Words   | \$ _____                                    | \$ _____  |
| 21             | 650 L.F.                  | Permanent Trench Pavement<br><br>_____<br>Per Linear Foot in Words   | \$ _____                                    | \$ _____  |
| 22             | 10 EA.                    | Repair and Replace Sewer Service and Drain Conflicts in Trench Width<br><br>_____<br>Per Each in Words           | \$ _____                                    | \$ _____  |
| 23             | 110 C.Y.                  | Controlled Density Fill (CDF)<br><br>_____<br>Per Cubic Yard in Words  | \$ _____                                    | \$ _____  |
| 24             | Allowance                 | Price Adjustment: Hot Mix Liquid Asphalt<br><br><u>One Thousand Dollars</u><br>Stated Allowance in Words         | <u>\$1,000.00</u>                           | <u>\$1,000.00</u>                               |
| 25             | Allowance                 | Price Adjustment: Fuel<br><br><u>One Thousand Dollars</u><br>Stated Allowance in Words                           | <u>\$1,000.00</u>                           | <u>\$1,000.00</u>                               |
| 26             | Allowance                 | Uniformed Police Officers<br><br><u>Twenty Eight Thousand Eight Hundred Dollars</u><br>Stated Allowance in Words | <u>\$28,800.00</u>                          | <u>\$28,800.00</u>                              |

TOTAL AMOUNT OF BID ITEMS 1 THRU 26 FOR COMPARISON OF BIDS

\_\_\_\_\_ Dollars ( \$ \_\_\_\_\_ )  
(In Words) (In Figures)

Respectfully Submitted:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
License No. (If Applicable)

Seal - (If Bid is By Corporation)

Bidders shall submit the following completed forms with their bid:

1. Bid Bond
2. Certificate of Tax Compliance

Failure to submit the Bid Bond with the Bid Form shall be cause for rejection of the Bid Form.

END OF SECTION

SECTION 00410  
BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

\_\_\_\_\_ as Principal,

and \_\_\_\_\_ as Surety,

are hereby held and firmly bound unto the Town of Milford Water Department, as

Owner in the penal sum of \_\_\_\_\_ Dollars

for the payment of which, well and truly to be made, we hereby jointly severally bind

ourselves, successors, and assigns.

Signed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

The condition of the above obligation is such that whereas the Principal has submitted to the Town of Milford Water Department, a certain Form For General Bid, attached hereto and hereby made a part hereof to enter into a contract in writing for the Construction of the Court Street Water Main Improvements.

NOW, THEREFORE,

- (a) If said Form For General Bid shall be rejected, or
- (b) If said Form For General Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid Form) and shall furnish a Bond for his faithful performance of said contract, and for the payment of all persons performing labor or for furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid Form, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event, exceed the penal amount of this obligation, as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such Bid Form, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_  
Principal (L.S.)

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

IMPORTANT - Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the Commonwealth of Massachusetts.

END OF SECTION

SECTION 00412

CERTIFICATE OF TAX COMPLIANCE

I certify under the pains and penalties of perjury that \_\_\_\_\_  
Name of individual/Company

has complied with all the laws of the Commonwealth of Massachusetts relating to taxes.

\_\_\_\_\_  
Name of Individual

\_\_\_\_\_  
Signature of Individual (Represent Company)

\_\_\_\_\_  
Name of Company

\_\_\_\_\_  
Date

END OF SECTION

SECTION 00500

NOTICE OF AWARD

DATED: \_\_\_\_\_

TO: \_\_\_\_\_  
(Bidder)

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

OWNER: Town of Milford Water Department, Massachusetts

ADDRESS: 66 Dilla Street, Milford, Massachusetts 01757

FOR CONSTRUCTION OF THE COURT STREET WATER MAIN IMPROVEMENTS

Owner has considered the Bid Form submitted by you for the above described Work in response to its Advertisement for Bids dated \_\_\_\_\_, 20\_\_\_\_ and Instructions to Bidders.

The Contract Price of your contract is:

\_\_\_\_\_ Dollars

( \$ \_\_\_\_\_ ).

Six (6) copies of the proposed Contract Documents accompany this Notice of Award.

You must comply with the following conditions precedent within five (5) days, Saturdays, Sundays and legal holidays excluded, of the date of this Notice of Award.

1. You must deliver to the Owner six (6) fully executed counterparts of the Agreement including all the Contract Documents. Each of the Contract Documents must bear your signature on the cover page.
2. You must deliver with the executed Contract Documents, the Contract Security (Bonds, and Certificates of Insurance) as specified in the Instructions to Bidders, General Conditions, and Supplementary Conditions.

If you fail to execute said Agreement and to furnish said Bonds within five (5) days (Saturdays, Sundays and legal holidays excluded) from the date of this notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid Form as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

OWNER:

By \_\_\_\_\_  
(Authorized Signature) (Title)

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged this the  
\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

By \_\_\_\_\_  
(Authorized Signature) (Title)

END OF SECTION



## STANDARD CONTRACT

This AGREEMENT made as of \_\_\_\_\_ by and between \_\_\_\_\_, hereinafter referred to as “the Contractor”, and the **TOWN OF MILFORD, MASSACHUSETTS**, a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, hereinafter referred to as “the Town.”

WITNESSETH THAT:

WHEREAS, the Town desires to engage the Contractor to render certain services hereafter described,

NOW THEREFORE, the parties hereto do mutually agree as follows;

### **\*\*GENERAL PROVISIONS\*\***

1. Employment of Contractor. The Town agrees to engage the services of the Contractor and the Contractor agrees to perform the services hereinafter set forth.
2. Scope of Services. The Contractor shall do, perform, and carry out, in a satisfactory and proper manner, as determined reasonable and fairly by the Town, the tasks described within Schedule A, Scope of Services, attached hereto and made a part hereof.

The Town shall have a reasonable opportunity to inspect all services performed by and work product of the Contractor and accept or reject such service or work product.

3. Directives Within Scope of Services. The above tasks and items are not intended to be all inclusive. The Town may add to or delete any items, provided that any added items are of a similar nature, and provided that the total cost of such work does not exceed the total cost as specified in Paragraph 8 hereof. The Contractor shall undertake such work only upon the direction of the Town. All directives and changes thereof in conformance with this Agreement shall be in written form, prepared and signed by the Town and accepted and countersigned by the Contractor or his authorized representatives. Any added tasks or items which are not agreed to be within the Scope of Services by both the Town and the Contractor, or which will incur costs beyond the total cost specified in Paragraph 8, shall be handled in accordance with Paragraph 13 hereof.

4. Data to be furnished to Contractor. All information, data and reports as are existing, available, and necessary for the carrying out of work, shall be furnished to the Contractor upon request without charge by the Town, and the Town shall cooperate with the Contractor in the carrying out of the Scope of Services.
5. Personnel. (a) The Contractor represents that he has, or will secure at his own expense, all personnel required for the performance of the services under this Agreement. Such personnel shall not be employees of or have any contractual relationship with the Town except as employees of the Contractor. (b) All of the services required hereunder will be performed by the Contractor or under his supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized under State and local law to perform such services. (c) None of the work or services covered by the Agreement shall be subcontracted without the prior written approval of the Town.
  - 5.1. The Contractor certifies that it is not disbarred, suspended, or otherwise excluded from receiving funds or bidding on any project by any State or Federal Agency.
6. Waiver of Workmen's Compensation and Unemployment Compensation Benefits. It is agreed that the Contractor and Contractor's employees, agents, servants or other persons for whose conduct the contractor is responsible shall not be deemed to be employees of the Town and shall not file any claim nor bring any action for any workmen's compensation or unemployment benefits and compensation for which they may otherwise be eligible as a result of work performed pursuant to the terms of this Agreement.
  - 6.1 The Contractor is retained solely for the purposes of and to the extent set forth in this Contract. Contractor's relationship to the Town during the term of this Contract shall be that of an independent Contractor. The Contractor shall have no capacity to involve the Town in any contract nor to incur any liability on the part of the Town. The Contractor, its agents or employees shall not be considered as having the status or pension rights of an employee; provided that the Contractor shall be considered an employee for the purpose of General Laws c. 268A (the Conflict of Interest Law). The Town shall not be liable for any personal injury to or death of the Contractor, its agents or employees.
7. Duration. The services of the Contractor are to commence as of the date first written above and shall be undertaken and completed in such sequence as to assure their expeditious completion in light of the purposes of this Agreement. All of the services required pursuant to Schedule A, Scope of Services, herein shall be completed pursuant to Schedule C, Work Program and Schedule. Any changes in performance dates shall be handled in accordance with paragraph 13, herein. Additional services may be requested at the option of the Town, which shall be completed by such date as may be established by the Town at the time of authorization subject to mutual agreement of the parties thereto.

- 7.1 It is understood and agreed that all specified times or periods of performance are of the essence of this Contract.
8. Compensation. The Town agrees to pay the contractor the compensation specified in Schedule B, Compensation and Method of Payment, which is attached hereto and made a part hereof, for the above services which shall constitute complete compensation for all services rendered and for such reimbursable expenses as authorized per paragraph 9, Reimbursable Expenses. Appropriate sums will be paid, subject to receipt of a detailed requisition for payment from the Contractor specifying that he has performed the work and incurred authorized reimbursable costs under this Agreement in conformance with the Agreement, and that he is entitled to receive the amount requisitioned under the terms of the Agreement and approval of said requisition by the Town department responsible for payment of this Contract.
- 8.1 The Contractor may, in the absence of a payment schedule, periodically submit to the Official invoices, itemizing service, labor and expenses for which compensation is due and requesting payment for services rendered by the Contractor during the period covered by the invoice.
- 8.2 Acceptance by the Contractor of payment from the Town for final services under this Contract shall be deemed to release forever the Town from all claims and liabilities.
9. Reimbursable Expenses. The Town agrees to reimburse the Contractor only for those direct costs incurred by the Contractor pursuant to the performance of work under this Agreement as set forth and authorized within Schedule B, Compensation and Method of Payment, herein. As the Town is exempt from sales tax, sales tax charges are not reimbursable by the Town.
- 9.1 In the event that this Contract provides for reimbursement by the Town to the Contractor for travel or other expenses, the Contractor shall submit such proposed expenses to the Official for approval prior to the incurrence of such expenses.
10. Termination of Agreement for Cause. If, through any cause, the Contractor shall fail to fulfill in a timely manner all obligations under this Agreement, or in the Contractor shall violate any or all of the provisions of this Agreement, the Town shall thereupon have the right to terminate this agreement by written notice to the Contractor of such termination specifying the effective date thereof at least five (5) days before the effective date of such termination. Cause shall also include, but not be limited to, dissolution, termination of existence, insolvency, appointment of receiver of any property, assignment for the benefit of creditors, or commencement of any proceeding under any bankruptcy or insolvency laws by or against the Contractor. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or

other material prepared by the Contractor under this Agreement shall, at the option of the Town, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other material.

Notwithstanding the above, the Contractor shall not be relieved of liability to the Town for damages sustained by the Town by virtue of any breach of the Agreement by the Contractor, and the Town may withhold any payments to the Contractor for the purposes of setoff until such time as the exact amount of damages due the Town from the Contractor is determined.

11. Termination for Convenience of Town. The Town may terminate this Agreement at any time by giving written notice to the Contractor of such termination and specifying the effective date of such termination. In that event, all finished or unfinished documents and other materials as described in Paragraph 10 above shall, at the option of the Town, become its property. If the Agreement is terminated by the Town as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed actually bear to the total services of the Contractor covered by this Agreement, less payments of compensation previously made.
12. Changes. The Town may from time to time require changes in the Scope of Services of the contractor to be performed hereunder. Such changes, including any increase or decrease in the amount of the Contractor's compensation or any change in the work schedule, which are mutually agreed upon by and between the Town and the Contractor, shall be incorporated in written amendments to this Agreement.
13. If the Contractor shall provide services in a manner which is not to the satisfaction of the Town, the Town may request that the Contractor refurnish services at no additional cost to the Town until approved by the Town. If the Contractor shall fail to provide services or shall provide services which are not satisfactory to the Town, the Town, in the alternative, may make any reasonable purchase or Contract to purchase services in substitution for those due from the Contractor. The Town may deduct the cost of any substitute Contract or nonperformance of services with incidental and consequential damages from the Contract price and shall withhold such damages from sums due or to become due to the Contractor.
  - 13.1 If the damages sustained by the Town exceed sums due or to become due, the Contractor shall pay the difference to the Town upon demand.
  - 13.2 The Contractor shall not be liable for any damages sustained by the Town due to the Contractor's failure to furnish services under the terms of this Contract if such failure is in fact caused by the occurrence of a contingency with the nonoccurrence of which was a basic assumption under which this Contract was made, including but not necessarily limited to a state of war, act of enemies,

embargoes, expropriation of labor strike or any unanticipated federal, state or municipal governmental regulation of order, provided that the Contractor has notified the official in writing of such cause within fourteen (14) days after its occurrence.

14. Incorporation of Non-Discrimination Laws and Requisitions. It is understood and agreed that if this Agreement is funded in whole or in part by Federal money, that the Contractor is expected, and hereby agrees, to comply with all laws, ordinances, and duly promulgated regulations applicable to contracts of such a nature.
15. Interest of Members of the Town. No officer, member, or employee of the Town and no members of its governing body of the locality or localities in which the project is situated or being carried out who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of this project, shall participate in any decision relating to this Agreement which affects his personal interest or the interest of any corporation, partnership, or association in which he is, directly or indirectly interested or has any personal or pecuniary interest, direct or indirect, in this Agreement or the proceeds thereof. The Contractor's attention is specifically called to the Conflict of Interest Law, M.G.L. c. 268A.
16. Interest of Contractor. The Contractor covenants that he has neither presently nor during the period of this Agreement shall have any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required under this Agreement. The Contractor further covenants that in the performance of this Agreement no person having any such interest shall be employed. Conflicts of interest include, but are not limited to: (a) family relationships with officials of the Town, (b) instances where the Contractor during the period covered by the Agreement was connected as an officer or employee of the Town, (c) instances where the Contractor has an interest in the Community Development Department or any parcels of land therein, covered by the work to be performed under this Agreement.
17. Assignability. The Contractor shall not assign any interest in this Agreement and shall not transfer any interest in the same (whether by assignment or novation) without the prior written consent of the Town thereto.
18. Findings Confidential. Any reports, information, data, etc. given to or prepared or assembled by the contractor under this Agreement which the Town requests to be kept as confidential shall not be made available to any individual or organization by the Contractor without the prior written approval of the Town.
19. Officials Not to Benefit. (Applicable to Contracts Pertaining to Community Development Department) No Members or Delegates to the Congress of the United States of America, and no Resident Commissioner, shall be admitted to any share or part hereof or to any benefit to arise herefrom.

20. Identification of Documents. (Applicable to Contracts Pertaining to Community Development Department) All reports, maps, and other documents completed under this Agreement other than documents exclusively for internal use within the Town, shall carry the following notation on the front cover or title page, (or in the case of maps, in the title block):
- “The preparation of this (report, map, document, etc.) was financially aided through the Planning Department of the Town of Milford.”
21. Publication, Reproduction and Use of Material. (a) Material produced in whole or in part under this Agreement shall not be subject to Copy right, except by the Town, in the United States or in any other country. The Town or its duly authorized representatives have unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, any reports, data, or other materials prepared under this Contract. (b) The Contractor hereby agrees to provide to the Town copies of the draft of the report, and associated material, in sufficient number, as may be requested by the Town for review and/or working purposes. (c) The Contractor hereby agrees to provide copies of the final report as indicated in Schedule A, Scope of Services.
22. Commission Prohibited. The Contractor warrants that he has not employed any person to solicit or secure this Agreement upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give the Town the right to terminate this Agreement, or, in its discretion, to deduct from the Contractor's fee the amount of such commission, percentage brokerage, or contingent fee.
23. This Contract is made subject to all laws of the Commonwealth of Massachusetts.
- 23.1 Jurisdiction and venue exclusively in Worcester County, Massachusetts- This contract is executed and delivered in the Commonwealth of Massachusetts and is governed by, construed, and enforced in accordance with the laws of the Commonwealth of Massachusetts. The parties hereto expressly agree that the sole and exclusive place, status, and forum of this agreement shall be the County of Worcester, Massachusetts. If either party to this contract brings any action or proceeding, including any arbitration or litigation, against the other party arising out of this agreement, that proceeding shall be solely and exclusively brought, heard, conducted, prosecuted, tried and determined within Worcester County, Massachusetts. It is the express intention of the parties to this Agreement that the exclusive venue of all legal actions and procedures of any nature whatsoever which relate in any way to this Agreement shall be either the Superior Court Department of the Trial Court of the Commonwealth of Massachusetts sitting in the County of Worcester, or the United States District Court sitting in Boston, Massachusetts. Accordingly, each party hereby irrevocably submits to the exclusive jurisdiction of the courts of Worcester County for purposes of any such

proceeding, unless the parties identify a more suitable and agreeable jurisdiction and venue and all the parties consent to the more suitable and agreeable jurisdiction and venue in writing.

24. The Contractor shall provide, all its sole expense, all necessary licenses, permits of other authorizations required by the Town, the Commonwealth of Massachusetts or any other governmental agency with proper jurisdiction.
25. The Contractor shall where applicable take out and maintain during the term of this agreement such Workmen's Compensation Insurance as may be reasonably necessary to protect the Contractor from claims under General Laws c. 152 (the Workmen's Compensation Law).
26. The Contractor agrees and shall require any subcontractor to agree not to discriminate in connection with the performance of work under the Contract against any employee or applicant for employment because of sex, race, religious creed, national origin or age. The contractor agrees and shall require any subcontractor to agree to post in conspicuous places notices to be provided by the Massachusetts Commission Against Discrimination, setting forth provisions of the Fair Employment Practice Law of the Commonwealth.
27. The Contractor shall keep himself fully informed of all Town Ordinances and Regulations, and State and Federal laws which in any manner affect the work herein specified. The Contractor shall at all times observe and comply with said ordinances, regulations or laws, and shall protect and indemnify the Town, its officers, agents and employees against any claim or liability arising from or based on the violations of such ordinances, regulations or laws, caused by the negligent actions of the Contractor, his agents or employees.
28. Audit and Inspection. (a) At any time during normal business hours, and as often as the Town, HUD/or representatives of the Comptroller General of the United States may deem it necessary, there shall be made available to audit, examine and make excerpts or transcripts, all records, contracts, invoices, materials, payrolls, records or personnel conditions of employment and other data relating to all matters covered by the Contract. (b) For a period of three years after final payment under this Agreement, the Contractor shall make its work papers, records and other evidence of audit available to the Town or its duly authorized representatives.
29. The Contractor shall furnish such information, estimate or vouchers relating to the services or to documentation of labor or expenses as may be requested by the Official.
30. The Contractor shall pay and be exclusively responsible for all debts for labor and material contracted for by Contractor for the rental of any appliance or

Contract #

Vendor:

Amount:

equipment hired by Contractor and/or for any expense incurred on account of services to be performed under this Contract.

31. The Contractor shall bear all loss resulting from any cause before performance of service if the service or work product fails to conform to specifications.
32. The Contractor shall assume the defense of and hold the Town, its officers, agents or employees, harmless from all suits and claims against them or any of them arising from any act or omission of the Contractor, its agents or employees in any way connected with performance under this Contract.
33. This Contract is subject to the availability of an appropriation therefor.
- 33.1 If the Contract is funded under a grant with the Federal Government, it is being executed without further appropriation pursuant to General Laws c.44, s. 53A.
- 33.2 When the amount of the Finance Director's certification of available funds is less than the face amount of the Contract, the Town shall not be liable for any claims or requests for payment by the Contractor which would cause total claims or payments under this Contract to exceed the amount so certified.
34. Any waiver, expressed or implied, by the Town or the Official of any rights, terms or conditions of this Contract shall not operate to waive such rights, terms or conditions or any other rights, terms or conditions, beyond the specific instance of waiver.
35. Attachments. Attached hereto are the following schedules which are incorporated into this Agreement and made a part hereof:

Schedule A - Scope of Services

Schedule B - Compensation and Method of Payment

Schedule C - Work Program and Schedule

Schedule D - Attestation Pursuant to M.G.L. c.62c, sec.49A

Schedule E - Statement of Good Standing

Schedule F - Certificate of Corporate Authority

Schedule G - Certificate of Non-Collusion

Schedule H - Performance Bond

Contract #

Vendor:

Amount:

**SCHEDULE A**  
**SCOPE OF SERVICES**

SCHEDULE A

SCOPE OF SERVICES

ARTICLE 1 WORK

- 1.01 The Work of this Contract generally consists of the construction approximately 620 linear feet of new 8-inch ductile iron water main shall be installed along Court Street from Main Street to Spring Street and shall be furnished and installed with associated valves, fittings, and hydrants. The existing water main shall be abandoned and left in place. All service connections are to be completed after the water main successfully passes pressure testing and chlorination procedures. All water main work shall be completed within 60 consecutive calendar days.

Contract #

Vendor:

Amount:

**SCHEDULE B**  
**COMPENSATION AND METHOD OF PAYMENT**

SCHEDULE B

COMPENSATION AND METHOD OF PAYMENT

ARTICLE 1 CONTRACT PRICE

1.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 1.01A below.

1.01A For the complete Work, at the price stated in Contractor's Bid Form, attached hereto as an exhibit.

ARTICLE 2 PAYMENT PROCEDURES

2.01 Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

2.02 Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Application for Payment as recommended by Engineer, monthly during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the schedule of values provided for in Paragraph 15.01 of the General Conditions.

2.03 Owner will make progress and final payments as provided in Article 15 of the General Conditions of the Contract and in accordance with the applicable Massachusetts General Law.

Contract #

Vendor:

Amount:

**SCHEDULE C**  
**DELIVERABLES AND SCHEDULE**

## SCHEDULE C

### DELIVERABLES AND SCHEDULE

#### ARTICLE 1 CONTRACT TIME

- 1.01 The Work will be substantially completed within 60 days after the date when the Contract Times commence to run as provided in paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with paragraph 15.06 of the General Conditions within 90 days after the date when the Contract Times commence to run.
- 1.02 Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 1.01 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in providing in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$1,300 for each calendar day of delay until the Work is complete.
- 1.03 Provided that Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is for reasons included in Paragraph 4.05 of the General Conditions.
- 1.04 Provided further, that Contractor shall furnish Owner the required notification of such delays in accordance with Paragraph 11.05 of the General Conditions.

Contract #

Vendor:

Amount:

### SCHEDULE D

LEGISLATION ENACTED BY THE COMMONWEALTH OF MASSACHUSETTS, EFFECTIVE JULY 1, 1983, REQUIRES THAT THE ATTESTATION BELOW BE SIGNED.

### ATTESTATION

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.

\_\_\_\_\_  
\*Signature of Individual  
or Corporate Name (Mandatory)

\_\_\_\_\_  
\*\*Social Security Number  
(Voluntary) or Federal Identification Number

By: \_\_\_\_\_  
Corporate Officer  
(Mandatory, if Applicable)

Date: \_\_\_\_\_

\* Approval of a contract or other agreement will not be granted unless this certification clause is signed by the applicant.

\*\* Your social security number will be furnished to the Massachusetts Department of Revenue to determine whether you have met tax filing or tax payment of obligations. Providers who fail to correct their non-filing or delinquency will not have a contract or other agreement issued, renewed, or extended. This request is made under the authority of Mass. G.L.C. 62C, S. 49A.

Contract #

Vendor:

Amount:

**SCHEDULE E  
STATEMENT OF GOOD STANDING**

In accordance with State and Federal regulations, I  
\_\_\_\_\_ hereby certify that we are not disbarred, suspended  
or otherwise excluded from receiving funds or bidding on any project by any State or  
Federal agency.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Contract #

Vendor:

Amount:

**SCHEDULE F  
CERTIFICATE OF CORPORATE AUTHORITY**

At a duly authorized meeting of the Board of Trustees/Directors of the

\_\_\_\_\_ held on  
*Name of Organization*

\_\_\_\_\_ at which all the Trustees/Directors were present and waived  
*Date*

notice, it was VOTED, that \_\_\_\_\_,  
*Name* *Officer*

of this organization, is authorized to execute contract in the name and behalf of said organization,  
and affix its corporate seal thereto; and such execution of any contract or obligation in this  
organization's name on its behalf by such \_\_\_\_\_ under the  
*Officer*

seal of the organization shall be valid and binding upon this organization.

I hereby certify that I am the clerk of the \_\_\_\_\_  
*Name of Organization*

and that \_\_\_\_\_ is the duly elected \_\_\_\_\_  
*Type name* *Officer*

of said organization, and that the above vote has not been amended or  
rescinded and remains

in full force and effect as of this date.

**Corporate Seal Here:**  
**(if no seal, print "none")**

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Type name*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Title*

Contract #

Vendor:

Amount:

**SCHEDULE G**

**CERTIFICATE OF NON-COLLUSION**

The undersigned certifies under the penalties of perjury that this bid or bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business partnership, corporation, union, committee, club or other organization, entity or group of individuals.

\_\_\_\_\_  
Signature of person submitting contract/bid

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Business

Contract #

Vendor:

Amount:

**SCHEDULE H**

**PERFORMANCE BOND**

**[All service contracts in excess of \$40,000.00  
Pursuant to Milford General By-Laws, Article 9, Section 1.]**

## PERFORMANCE BOND

|   |   |
|---|---|
| <p><b>Contractor</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>  | <p><b>Surety</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>  |
| <p><b>Owner</b></p> <p>Name: Town of Milford</p> <p>Mailing address (<i>principal place of business</i>):</p> <p>66 Dilla Street</p> <p>Milford, MA 01757</p>   | <p><b>Contract</b></p> <p>Description (<i>name and location</i>):</p> <p>Construction of the Court Street Water Main Improvements</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p> |
| <p><b>Bond</b></p> <p>Bond Amount: _____</p> <p>Date of Bond: _____</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p> |   |
| <p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>                                      |   |
| Contractor as Principal   | Surety  |
| _____<br><i>(Full formal name of Contractor)</i>  | _____<br><i>(Full formal name of Surety) (corporate seal)</i>   |
| By: _____<br><i>(Signature)</i>   | By: _____<br><i>(Signature)(Attach Power of Attorney)</i>   |
| Name: _____<br><i>(Printed or typed)</i>  | Name: _____<br><i>(Printed or typed)</i>  |
| Title: _____  | Title: _____  |
| Attest: _____<br><i>(Signature)</i>   | Attest: _____<br><i>(Signature)</i>   |
| Name: _____<br><i>(Printed or typed)</i>  | Name: _____<br><i>(Printed or typed)</i>  |
| Title: _____  | Title: _____  |
| <p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>  |   |

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
  - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
  - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
  - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
  - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
  - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
  - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
  - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
  - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
  - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows:

Contract #

Vendor:

Amount:

**\*\*SIGNATORIES\*\***

IN WITNESS WHEREOF the parties hereto have executed this Agreement in quadruplicate as of the day first written above in the Town of Milford, Worcester County, Massachusetts.

CONTRACTOR

TOWN OF MILFORD

By \_\_\_\_\_  
Date

Reviewed and Authorized by:

By \_\_\_\_\_  
Department Head                      Date

I hereby certify this contract complies with the provisions of M.G.L. Chapter 30B:

By \_\_\_\_\_  
Procurement Officer                      Date

By \_\_\_\_\_  
Town Administrator                      Date

APPROVED AS TO FORM:

By \_\_\_\_\_  
Town Counsel                      Date

I hereby certify that an appropriation is available for and encumbered against this contract in the amount of:  
\$  
Fund  
Account

By \_\_\_\_\_  
Finance Director                      Date

SECTION 00520

NOTICE TO PROCEED

DATED: \_\_\_\_\_

TO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

OWNER: Town of Milford Water Department

ADDRESS: 66 Dilla Street, Milford, Massachusetts 01757

FOR CONSTRUCTION OF THE COURT STREET WATER MAIN IMPROVEMENTS

You are hereby notified to commence work in accordance with the Contract dated

\_\_\_\_\_, 20\_\_\_, on or before \_\_\_\_\_, 20\_\_\_,

and you are to substantially complete the Work within 60 consecutive calendar days. All work shall be completed within 90 consecutive calendar days.

The date of completion of all Work is therefore \_\_\_\_\_, 20\_\_\_.

OWNER:

By \_\_\_\_\_ (Authorized Signature) \_\_\_\_\_ (Title)

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged this the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_

By \_\_\_\_\_ (Authorized Signature) \_\_\_\_\_ (Title)

END OF SECTION

## PAYMENT BOND

|   |   |
|---|---|
| <p><b>Contractor</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>  | <p><b>Surety</b></p> <p>Name: _____</p> <p>Address (<i>principal place of business</i>): _____</p>  |
| <p><b>Owner</b></p> <p>Name: Town of Milford</p> <p>Mailing address (<i>principal place of business</i>):</p> <p>66 Dilla Street<br/>Milford, MA 01757</p>  | <p><b>Contract</b></p> <p>Description (<i>name and location</i>):</p> <p>Construction of the Court Street Water Main Improvements</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p> |
| <p><b>Bond</b></p> <p>Bond Amount: _____</p> <p>Date of Bond: _____</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p> |   |
| <p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>  |   |
| Contractor as Principal   | Surety  |
| _____<br><i>(Full formal name of Contractor)</i>  | _____<br><i>(Full formal name of Surety) (corporate seal)</i>   |
| By: _____<br><i>(Signature)</i>   | By: _____<br><i>(Signature)(Attach Power of Attorney)</i>   |
| Name: _____<br><i>(Printed or typed)</i>  | Name: _____<br><i>(Printed or typed)</i>  |
| Title: _____  | Title: _____  |
| Attest: _____<br><i>(Signature)</i>   | Attest: _____<br><i>(Signature)</i>   |
| Name: _____<br><i>(Printed or typed)</i>  | Name: _____<br><i>(Printed or typed)</i>  |
| Title: _____  | Title: _____  |
| <p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>  |   |

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
  - 5.1. Claimants who do not have a direct contract with the Contractor
    - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2. Pay or arrange for payment of any undisputed amounts.
  - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
  - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
    - 16.1.1. The name of the Claimant;
    - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
    - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
    - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
  - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
  - 16.1.7. The total amount of previous payments received by the Claimant; and
  - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
  - 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
  - 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
  18. Modifications to this Bond are as follows:

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

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*
    - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
  - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
  - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
  - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
  - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
  - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
  - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
  - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - 1. does not conform to the Contract Documents;
  - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
  - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
  - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
  - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2—PRELIMINARY MATTERS**

### **2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance***

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

### **2.03 *Before Starting Construction***

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  - 2. a preliminary Schedule of Submittals; and
  - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
  - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

## ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
  - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
  - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

### 3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
  - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
  - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

#### B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
  - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

## **ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

### 4.02 *Starting the Work*

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

### 4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
  - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  - 2. Abnormal weather conditions;
  - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
  - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
  2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
  3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
  2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
  3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
  4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
  5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

## **ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

### **5.01 *Availability of Lands***

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

## 5.02 *Use of Site and Other Areas*

### A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
  2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
  - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

### 5.03 *Subsurface and Physical Conditions*

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

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
  2. is of such a nature as to require a change in the Drawings or Specifications;
  3. differs materially from that shown or indicated in the Contract Documents; or
  4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
  - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
  - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
- a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
  - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
  - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
  2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
  4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
  2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
  3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
  4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
  - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
  - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
  4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

#### 5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 6—BONDS AND INSURANCE**

### **6.01 *Performance, Payment, and Other Bonds***

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

#### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
  - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
  - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
  - 1. include at least the specific coverages required;
  - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
  - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
  - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
  - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
  - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
  - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
  - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

#### 6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

#### 6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
  2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

**ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

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

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

#### 7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
      - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
  - 3) has a proven record of performance and availability of responsive service; and
  - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
  - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

#### 7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
  - a. will certify that the proposed substitute item will:
    - 1) perform adequately the functions and achieve the results called for by the general design;
    - 2) be similar in substance to the item specified; and
    - 3) be suited to the same use as the item specified.
  - b. will state:
    - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
    - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
    - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
  - c. will identify:
    - 1) all variations of the proposed substitute item from the item specified; and
    - 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### 7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### 7.10 *Taxes*

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

#### 7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.12 *Record Documents*

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

### 7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

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

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
  - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determine and verify:
    - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
    - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
  - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
    - a. Contractor shall submit the number of copies required in the Specifications.
    - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
  2. *Samples*
    - a. Contractor shall submit the number of Samples required in the Specifications.
    - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
  3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
  3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
  4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

*D. Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

*E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
  - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
  - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
  - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
  2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

**7.17 Contractor's General Warranty and Guarantee**

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
  2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
  2. Recommendation by Engineer or payment by Owner of any progress or final payment;
  3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  4. Use or occupancy of the Work or any part thereof by Owner;
  5. Any review and approval of a Shop Drawing or Sample submittal;
  6. The issuance of a notice of acceptability by Engineer;
  7. The end of the correction period established in Paragraph 15.08;
  8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
  - 1. Checking for conformance with the requirements of this Paragraph 7.19;
  - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
  - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

## **ARTICLE 8—OTHER WORK AT THE SITE**

### **8.01 *Other Work***

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

#### 8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

#### 8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
  - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
  - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## **ARTICLE 9—OWNER'S RESPONSIBILITIES**

### **9.01 *Communications to Contractor***

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

### **9.02 *Replacement of Engineer***

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

### **9.03 *Furnish Data***

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

### **9.04 *Pay When Due***

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

- 9.05 *Lands and Easements; Reports, Tests, and Drawings*
- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
  - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
  - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
  - B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

## ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

### 10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

### 10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

### 10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

### 10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

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

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

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

## ARTICLE 11—CHANGES TO THE CONTRACT

### 11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

### 11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
  - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

### 11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
  - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
  - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

#### 11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

#### 11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
  2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
  3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
  2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

#### 11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

#### 11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
  - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
  - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

#### 11.10 *Notification to Surety*

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

### **ARTICLE 12—CLAIMS**

#### 12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
  1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
  3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
  4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
  - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
  - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
  - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **13.01 *Cost of the Work***

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
  - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
  3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
  4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
  5. Other costs consisting of the following:
    - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
    - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
  - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
  - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
    - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
    - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

### 13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

### 13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
  - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

**ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  3. by manufacturers of equipment furnished under the Contract Documents;
  4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
  - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

**14.07 Owner May Correct Defective Work**

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

**ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

**15.01 Progress Payments**

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
  - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
  - a. to supervise, direct, or control the Work;
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

**D. *Payment Becomes Due***

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

**E. *Reductions in Payment by Owner***

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. The Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. The Contract Price has been reduced by Change Orders;
  - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
  - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
  - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 15.06 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

#### 15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such adjacent areas;
  - 2. correct such defective Work;
  - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

### **16.02 *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
  - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
  - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
  - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
  - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

#### 16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

## **ARTICLE 17—FINAL RESOLUTION OF DISPUTES**

### **17.01 *Methods and Procedures***

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
  2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
  2. agree with the other party to submit the dispute to another dispute resolution process; or
  3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## **ARTICLE 18—MISCELLANEOUS**

### **18.01 *Giving Notice***

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
  2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
  3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

### **18.02 *Computation of Times***

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

# SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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## **SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT**

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract. The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

SC-1.01.A Insert the following after Paragraph 1.01.A.32 of the General Conditions:

“33. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.”

SC-1.01.A Delete Paragraph 1.01.A.35 of the General Conditions in its entirety and insert the following in its place:

“35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.”

SC-1.01.A Delete Paragraph 1.01.A.39 of the General Conditions in its entirety and insert the following in its place:

“39. *Specifications*—Sections included under Division 1 thru Division 16 of the Project Manual.”

SC-1.01.A Insert the following at the beginning of Paragraph 1.01.A.42 of the General:

“42. *Substantial Completion*— The Work required by the Contract has been completed except for work having a Contract Price of less than one (1) percent of the then adjusted total Contract Price, or...”

SC-1.01.A Delete Paragraph 1.01.A.43 of the General Conditions in its entirety and insert the following in its place:

“43. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.”

SC-1.01.A Delete Paragraph 1.01.A.45 of the General Conditions in its entirety and insert the following in its place:

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

SC-1.01.A Delete Paragraph 1.01.A.46 of the General Conditions in its entirety and insert the following in its place:

“46. *Technical Data*

- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) subsurface conditions at the Site, or physical conditions relating to the Site including existing surface or subsurface structures at the Site (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
- b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, , laboratory test results, and other

factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor.”

SC-1.01.A Delete Paragraph 1.01.A.47 of the General Conditions in its entirety and insert the following in its place:

“47. *Underground Facilities*—All underground pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.”

SC-1.01.A Adjust the numbering of Paragraph 1.01.A of the General Conditions as needed.

## 1.02 *Terminology*

SC-1.02.F Delete Paragraph 1.02.F of the General Conditions in its entirety.

SC-1.02 Insert the following after Paragraph 1.02.G of the General Conditions:

“H. He, Him, His, Himself:

Where references are made in the Contract Documents and/or Specifications to the terms “he, him, his, himself,” or variations thereof, these shall be construed as being gender inclusive, and reference the terms “she, her, hers, herself,” or variations thereof as well.”

SC-1.02 Adjust the lettering of Paragraph 1.02 of the General Conditions as needed.

## **ARTICLE 2—PRELIMINARY MATTERS**

### 2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

SC-2.01 Delete Paragraph 2.01 of the General Conditions in its entirety and insert the following in its place:

- “A. *Performance and Payment Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.”

## 2.02 *Copies of Documents*

SC-2.02.A Delete Paragraph 2.02.A of the General Conditions in its entirety and insert the following new paragraph in its place:

“A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in the electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.”

## 2.03 *Before Starting Construction*

SC-2.03.A Delete Paragraph 2.03.A of the General Conditions in its entirety and insert the following new paragraph in its place:

“A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
2. a preliminary Schedule of Submittals; and
3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.”

## 2.05 *Acceptance of Schedules*

SC-2.05.A Delete the first two sentences in Paragraph 2.05.A of the General Conditions in their entirety and insert the following three new sentences in their place:

“A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.”

SC-2.05.A Delete Paragraph 2.05.A.4 of the General Conditions in its entirety.

## 2.06 *Electronic Transmittals*

SC-2.06.A Delete Paragraph 2.06.A of the General Conditions in its entirety and insert the following in its place:

“A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Electronic Documents transmitted by Electronic Means.”

## **ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

### **3.01 Intent**

SC-3.01.C Delete Paragraph 3.01.C of the General Conditions in its entirety and insert the following in its place:

- “C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.”

### **3.02 Reference Standards**

SC-3.02.A Delete Paragraph 3.02.A.2 of the General Conditions in its entirety and insert the following in its place:

2. “No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their subcontractors, consultants, agents, or employees, any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.”

## **ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

### **4.02 Starting the Work**

SC-4.02.A Delete Paragraph 4.02.A of the General Conditions in its entirety and insert the following in its place:

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

### **4.05 Delays in Contractor’s Progress**

SC-4.05.A Add the following sentence immediately after Paragraph 4.05.A of the General Conditions:

- “A. Contractor’s entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor’s ability to complete the Work within the Contract Times.”

SC-4.05.C Delete Paragraph 4.05.C of the General Conditions in its entirety and insert the following in its place:

- “B. If Contractor’s performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor’s entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor’s ability to complete the Work within the Contract Times. Such an adjustment will be Contractor’s sole and

exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
2. Abnormal weather conditions;
3. Acts or failures to act of utility owners or other third-party entities (other than those performing other work at or adjacent to the Site as arranged with Owner, as contemplated in Article 8); and
4. Acts of war or terrorism.”

SC-4.05.D Delete Paragraph 4.05.D of the General Conditions in its entirety.

SC-4.05.E Delete Paragraph 4.05.E of the General Conditions in its entirety.

SC-4.05.F Delete Paragraph 4.05.F of the General Conditions in its entirety and insert the following in its place:

“F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.”

SC-4.05 Insert the following at the end of Paragraph 4.05 of the General Conditions:

“H. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.”

I. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.”

SC-4.05 Adjust the lettering of Paragraph 4.05 of the General Conditions as needed.

## **ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS**

### *5.01 Availability of Lands*

SC-5.01.A Delete Paragraph 5.01.A of the General Conditions in its entirety and insert the following in its place:

“A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.”

## 5.02 *Use of Site and Other Areas*

SC-5.02.A Delete Paragraph 5.02.A.1 of the General Conditions in its entirety and insert the following in its place:

“1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor’s operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.”

## 5.03 *Subsurface and Physical Conditions*

SC-5.03.A Delete Paragraph 5.03.A of the General Conditions in its entirety and insert the following in its place:

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

1. Those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
2. Those drawings known to Owner of physical conditions at relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
3. Technical Data contained in such reports and drawings.”

SC-5.03.B Delete Paragraph 5.03.B of the General Conditions in its entirety.

SC-5.03.C Delete Paragraph 5.03.C of the General Conditions in its entirety and insert the following in its place:

“C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Paragraph 1.01.A.46.B) contained in any geotechnical or environmental report prepared for the Project.”

SC-5.03.D Delete Paragraph 5.03.D of the General Conditions in its entirety and insert the following in its place:

“D. *Limitations of Other Data Made Available to Contractor*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and

procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.”

SC-5.03 Adjust the lettering of Paragraph 5.03 of the General Conditions as needed.

5.04 *Differing Subsurface or Physical Conditions*

SC-5.04 Delete Paragraph 5.04 of the General Conditions in its entirety and insert the following in its place:

- “A. In accordance with Massachusetts General Laws Chapter 30 Section 39N, “If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.”

5.05 *Underground Facilities*

SC-5.05 Delete Paragraph 5.05.A of the General Conditions in its entirety and insert the following in its place:

- “A. *Contractor’s Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

- b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
- c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
- d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- e. Contractor's attention is directed to the requirements of Massachusetts General Law Chapter 82 Section 40, regarding the notification of owners of underground facilities."

SC-5.05.B Delete Paragraph 5.05.B of the General Conditions in its entirety and insert the following in its place:

"B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer."

SC-5.05.C Delete Paragraph 5.05.C.1 of the General Conditions in its entirety and insert the following in its place:

"1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy;"

SC-5.05.E Delete Paragraph 5.05.E of the General Conditions in its entirety.

SC-5.05.F Delete Paragraph 5.05.F of the General Conditions in its entirety and insert the following in its place:

"F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
  - e. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
  - f. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03.
  - g. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and

- h. Contractor gave the notice required in Paragraph 5.05.B.
- 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
- 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question."

SC-5.05 Adjust the lettering of Paragraph 5.05 of the General Conditions as needed.

5.06 *Hazardous Environmental Conditions at Site*

SC-5.06.A Delete Paragraph 5.06.A of the General Conditions in its entirety and insert the following in its place:

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

- 1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
- 2. Technical Data contained in such reports and drawings."

SC-5.06.B Delete Paragraph 5.06.B of the General Conditions in its entirety and insert the following in its place:

"B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to the Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

- 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information."

SC-5.06.G Delete Paragraph 5.06.G of the General Conditions in its entirety and insert the following in its place:

"G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then

within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off."

## **ARTICLE 6—BONDS AND INSURANCE**

### *6.01 Performance, Payment, and Other Bonds*

SC-6.01.A Delete Paragraph 6.01.A of the General Conditions in its entirety and insert the following in its place:

"A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other provisions of the Contract."

SC-6.01.C Delete Paragraph 6.01.C of the General Conditions in its entirety and insert the following in its place:

"C. All bonds shall be in the form prescribed by the Contract, except as provided otherwise by Laws or Regulations, and shall be executed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond."

SC-6.01.D Delete Paragraph 6.01.D of the General Conditions in its entirety and insert the following in its place:

"D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the jurisdiction in which the Project is located, to issue bonds in the required amounts."

SC-6.01.E Delete Paragraph 6.01.E of the General Conditions in its entirety and insert the following in its place:

"E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above."

SC-6.01.H Delete Paragraph 6.01.H of the General Conditions in its entirety.

6.02 *Insurance—General Provisions*

SC-6.02.A Delete Paragraph 6.02.A of the General Conditions in its entirety and insert the following in its place:

“A. Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions. Refer to the table in SC-6.03 for these insurance requirements.”

SC-6.02.B Delete Paragraph 6.02.B of the General Conditions in its entirety and insert the following in its place:

“B. All insurance required by the Contract to be purchased and maintained by Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.”

SC-6.02.C Delete Paragraph 6.02.C of the General Conditions in its entirety.

SC-6.02.D Delete Paragraph 6.02.D of the General Conditions in its entirety and insert the following in its place:

“D. Contractor shall deliver to Owner, with copies to each named insured and additional insured identified in this Article, the Supplementary Conditions, or elsewhere in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies, coverages and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, endorsements, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.”

SC-6.02.E Delete Paragraph 6.02.E of the General Conditions in its entirety and insert the following in its place:

“E. Owner shall deliver to Contractor, with copies to each named insured and additional insured identified in this Article, the Supplementary Conditions, or elsewhere in the Contract, certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and, documentation of applicable self-insured retentions and deductibles Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.”

SC-6.02.F Delete Paragraph 6.02.F of the General Conditions in its entirety and insert the following in its place:

“F. Failure of Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify

a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.”

SC-6.02 Delete Paragraphs 6.02.G thru 6.02.N of the General Conditions in their entirety.

SC-6.02 Insert the following at the end of Paragraph 6.02 of the General Conditions:

- “F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.”

SC-6.02 Adjust the lettering of Paragraph 6.02 of the General Conditions as needed.

### 6.03 *Contractor's Insurance*

SC-6.03 Delete Paragraph 6.03 of the General Conditions in its entirety and insert the following in its place:

- “A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
  - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
  - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
  - 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
  - 1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
  - 2. claims for damages insured by reasonably available personal injury liability coverage.

3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor’s commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
    - a. Such insurance shall be maintained for three years after final payment.
    - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
  2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.
  3. Broad form property damage coverage.
  4. Severability of interest.
  5. Underground, explosion, and collapse coverage.
  6. Personal injury coverage.
  7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
  8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor’s pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Separate Owner’s Protective Liability policy:* Contractor shall purchase and maintain a separate Owner’s Protective Liability policy, issued to Owner at the expense of Contractor, including Owner and Engineer as named insured. This insurance shall provide coverage for not less than the amounts stipulated in the table in SC-6.03. A rider on the Contractor’s Liability insurance shall not be acceptable. The separate Owner’s Protective Liability policy

shall include coverage for the respective officers, directors, members, partners employees, agents, consultants, and subcontractors of each and any of all such additional insured; and the insurance afforded to these additional insured shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.

- H. *Contractor's professional liability insurance:* If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
  - 1. include at least the specific coverages provided in this Article.
  - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
  - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
  - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
  - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.
- K. The limits of liability for the insurance required by paragraph 6.03 of the General Conditions shall provide the following coverage's for not less than the following amounts or greater where required by Laws or Regulations:

| No.                 | Coverage                                     | Amounts   |
|---------------------|--|---|
| <b>6.03.A</b>       | <b>Worker's Compensation</b>                 |   |
|                     | (1) Worker's Compensation                    | in accordance with M.G.L. c.149, Sect 34A                   |
|                     | (2) Employer's Liability                     | \$1,000,000   |
|                     |  |   |
| <b>6.03.B and C</b> | <b>Commercial General Liability</b>          |   |
|                     | (1) Bodily Injury                            | \$1,000,000 Each Occurrence<br>\$1,000,000 Annual Aggregate |
|                     | (2) Property Damage                          | \$1,000,000 Each Occurrence<br>\$1,000,000 Annual Aggregate |
|                     |  |   |
| <b>6.03.D</b>       | <b>Automobile Liability</b>                  |   |
|                     | (1) Bodily Injury                            | \$1,000,000 Each Occurrence<br>\$1,000,000 Annual Aggregate |
|                     | (2) Property Damage                          | \$1,000,000 Each Occurrence                                 |
|                     |  |   |
| <b>6.03.E</b>       | <b>Umbrella or Excess Liability</b>          |   |
|                     | (1) Combined Single Limit                    | \$5,000,000 Each Occurrence<br>\$5,000,000 Annual Aggregate |
|                     |  |   |
| <b>6.03.F</b>       | <b>Contractor's Pollution Liability</b>      |   |
|                     | (1) Combined Single Limit                    | \$3,000,000 Each Occurrence<br>\$3,000,000 Annual Aggregate |
|                     |  |   |
| <b>6.03.G</b>       | <b>Separate Owner's Protective Liability</b> |   |

| No.           | Coverage                                    | Amounts   |
|---------------|---|---|
|               | (1) Bodily Injury                           | \$1,000,000 Each Occurrence                                 |
|               | (2) Property Damage                         | \$1,000,000 Each Occurrence<br>\$1,000,000 Annual Aggregate |
| <b>6.03.H</b> | <b>Professional Liability (if required)</b> |   |
|               | (1) Combined Single Limit                   | \$1,000,000 Per Claim<br>\$1,000,000 Annual Aggregate       |
| <b>6.03</b>   | <b>Railroad Insurance</b>                   |   |
|               | (1) Combined Single Limit                   | As required by Railroad Utility                             |

“

6.04 *Builder’s Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04 of the General Conditions in its entirety and insert the following in its place:

“6.04 Owner’s Liability Insurance

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner’s option, may purchase and maintain at Owner’s expense Owner’s own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.”

6.05 *Property Losses; Subrogation*

SC-6.05 Delete Paragraph 6.05 of the General Conditions in its entirety and insert the following in its place:

“6.05 *Property Insurance*

- A. *Builder’s Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder’s risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
6. extend to cover damage or loss to insured property while in transit.
7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
8. allow for the waiver of the insurer's subrogation rights, as set forth below.
9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
10. not include a co-insurance clause.

11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
  12. include performance/hot testing and start-up.
  13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount."

6.06 *Receipt and Application of Property Insurance Proceeds*

SC-6.06 Delete Paragraph 6.06 of the General Conditions in its entirety and insert the following in its place:

"6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such

policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
  - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

## **ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

### **7.02 *Supervision and Superintendence***

SC-7.02.B Delete Paragraph 7.02.B of the General Conditions in its entirety and insert the following in its place:

- "B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances."

### 7.03 *Labor; Working Hours*

SC-7.03 Add the following immediately after Paragraph 7.03.C of the General Conditions:

- "D. Regular working hours are defined as eight (8) hours per day, Monday through Friday, excluding holidays, between the hours of 7:00 AM and 6:00 PM. Requests to work other than regular working hours shall be submitted to Engineer not less than 48 hours prior to any proposed weekend work or scheduled extended work weeks. Occasional unscheduled overtime on weekdays may be permitted provided two (2) hours notice is given to Engineer.
- E. Contractor shall reimburse the Owner for additional engineering and/or inspection costs incurred as a result of overtime work in excess of the regular working hours stipulated in Article SC-7.02.C. At Owner's option, overtime costs may either be deducted from the Contractor's monthly payment request or deducted from the Contractor's retention prior to release of final payment. Overtime costs for the Owner's personnel shall be based on the individual's current overtime wage rate. Overtime costs for personnel employed by the Engineer or Owner's independent testing laboratory shall be calculated in accordance with the terms of their respective contracts with the Owner.
- F. This agreement is subject to the applicable provisions of the Contract Work Hours and Safety Standards Act, Public Law 87-581 87<sup>th</sup> Congress. No Contractor or Subcontractor contracting for any part of the Work shall require or permit any laborer or mechanic to be employed on the Work in excess of forty hours in any work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times that persons basic rate of pay for all hours worked in excess of forty hours in such work week.
- G. Contractor and Subcontractors shall, insofar as practicable, give preference in the hiring of workers for the Project to qualified local residents with first preference being given to citizens of the United States who have served in the armed forces of the United States and have been honorably discharged therefrom or released from active duty therein."

### 7.04 *Services, Materials, and Equipment*

SC-7.04.B Delete Paragraph 7.04.B of the General Conditions in its entirety and insert the following in its place:

- "B. All materials and equipment incorporated into the Work shall be of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment."

SC-7.04.C Delete Paragraph 7.04.C of the General Conditions in its entirety and insert the following in its place:

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

### 7.05 *"Or Equals"*

SC-7.05.A Delete the first sentence of Paragraph 7.05.A of the General Conditions in its entirety and insert the following sentence in its place:

- "A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material or equipment is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified."

#### 7.06 *Substitutes*

- SC-7.06.A Delete the last sentence Paragraph 7.06.A of the General Conditions in its entirety and insert the following sentence in its place:

"To the extent possible such requests shall be made before commencement of related construction at the Site."

- SC-7.06.F Delete Paragraph 7.06.F of the General Conditions in its entirety and insert the following in its place:

- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

#### 7.07 *Concerning Subcontractors and Suppliers*

- SC-7.07 Delete Paragraph 7.07 of the General Conditions in its entirety and insert the following in its place:

##### "7.07 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier or other person or organization, (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner may have reasonable objection. Acceptance of any Subcontractor, other person or organization by Owner shall not constitute a waiver of any right of Owner to reject defective Work. Contractor shall not be required to employ any Subcontractor, other person or organization against whom Contractor has reasonable objection.
- B. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- D. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- E. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade except as required otherwise by Massachusetts General Law, Chapter 149, Section 44F.

- F. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- G. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier. Owner or Engineer may furnish to any such Subcontractor, Supplier or other person or organization, to the extent practicable, information about amounts paid on their behalf to Contractor in accordance with Contractor's Application for Payment.
- H. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.
- I. Nothing in the Contract Documents:
  - 1. Shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
  - 2. Shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- J. Contractor shall make payments to Subcontractors in accordance with Massachusetts General Law, Chapter 30, Section 39F."

7.08 *Patent Fees and Royalties*

SC-7.08.A Delete Paragraph 7.08.A of the General Conditions in its entirety and insert the following in its place:

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

7.10 *Taxes*

SC-7.10 Add the following new paragraph immediately after paragraph 7.10.A of the General Conditions:

- "B. The materials and supplies to be used in the Work under this Contract are exempt from the Commonwealth of Massachusetts Sales and Use Tax. Contractor shall obtain the proper certificates, maintain the necessary records and otherwise comply with the requirements of Chapter 14 of the Acts of 1966 and any amendments thereto."

### 7.11 *Laws and Regulations*

SC-7.11 Insert the following paragraph immediately after Paragraph 7.11.C of the General Conditions:

“D. Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.”

### 7.12 *Record Documents*

SC-7.12 Insert the following paragraph immediately after Paragraph 7.12.A of the General Conditions:

“B. Contractor shall return to Engineer, one set of the Contract Drawings overmarked in colored pencil, showing all changes made during construction and including the location, by dimensions and elevations, of installed equipment, and underground facilities that will become hidden or buried by the construction. This shall include ties to all valves, fittings, couplings, corporations, etc. measured from permanent structures.”

### 7.13 *Safety and Protection*

SC-7.13.B Delete Paragraph 7.13.B of the General Conditions in its entirety and insert the following in its place:

“B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of accidents and the maintenance and supervision of safety precautions and programs.”

### 7.15 *Emergencies*

SC-7.15.A Delete Paragraph 7.15.A of the General Conditions in its entirety and insert the following in its place:

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

### 7.16 *Submittals*

SC-7.16 Delete Paragraph 7.16.A.3 of the General Conditions in its entirety and insert the following in its place:

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

SC-7.16 Add the following sentence to the end of Paragraph 7.16.B of the General Conditions:

“ Each submittal will be identified as Engineer may require.”

SC-7.16 Delete Paragraph 7.16.C.1 of the General Conditions in its entirety and insert the following in its place:

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

SC-7.16 Delete Paragraph 7.16.D.2 of the General Conditions in its entirety and insert the following in its place:

“2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than three resubmittals. Engineer will record Engineer’s time for reviewing a fourth or subsequent submittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer’s charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.”

SC-7.16 Delete Paragraph 7.16.E of the General Conditions in its entirety and insert the following in its place:

“E. *Other Submittals*: Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.”

SC-7.16 Delete Paragraph 7.16.F of the General Conditions in its entirety.

#### 7.17 *Contractor’s General Warranty and Guarantee*

SC-7.17 Delete Paragraph 7.17.A of the General Conditions in its entirety and insert the following in its place:

“A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor’s warranty and guarantee.”

SC-7.17 Delete Paragraph 7.17.B of the General Conditions in its entirety.

SC-7.17 Delete Paragraph 7.17.D of the General Conditions in its entirety and insert the following in its place:

“D. Contractor’s obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor’s obligation to perform the Work in accordance with the Contract Documents:

1. Observations by Engineer;
2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
4. Use or occupancy of the Work or any part thereof by Owner;
5. Any review and approval of a Shop Drawing or Sample submittal;
6. The issuance of a notice of acceptability by Engineer;
7. Any inspection, test, or approval by others; or
8. Any correction of defective Work by Owner.”

SC-7.17 Adjust the lettering of Paragraph 7.17 of the General Conditions as necessary

#### 7.18 *Indemnification*

SC-7.18 Delete Paragraph 7.18.A of the General Conditions in its entirety and insert the following in its place:

“A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from or relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable. If through the acts of neglect on the part of Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the Work, Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against Owner on account of any damage alleged to have been sustained, Owner shall notify Contractor, who shall indemnify and save harmless Owner against any such claims.”

SC-7.18 Add the following paragraph directly after Paragraph 7.18.B of the General Conditions:

“C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer’s officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

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

## 7.19 *Delegation of Professional Design Services*

SC-7.19.A Delete Paragraph 7.19.A of the General Conditions in its entirety and insert the following in its place:

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

SC-7.19.D Delete Paragraph 7.19.D of the General Conditions in its entirety and insert the following in its place:

“D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.”

SC-7.19.E Delete Paragraph 7.19.E of the General Conditions in its entirety and insert the following in its place:

“E. Pursuant to this Paragraph 7.19, Engineer’s review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other design drawings will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;
2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents. Engineer’s review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.”

SC-7.19.E Add the following new paragraph immediately after paragraph 7.19.E of the General Conditions:

## “7.20 Contractor’s Records

- A. Contractor shall comply with all applicable provisions of Chapter 30, Section 39R of the Massachusetts General Laws regarding Contractor’s records.”

## **ARTICLE 8—OTHER WORK AT THE SITE**

### 8.01 *Other Work*

SC-8.01.F Delete Paragraph 8.01.F of the General Conditions in its entirety.

### 8.03 *Legal Relationships*

SC-8.03.A Delete the last sentence of Paragraph 8.03.A of the General Conditions in its entirety and insert the following sentence in its place:

“Contractor’s entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor’s ability to complete the Work within the Contract.

## **ARTICLE 9—OWNER’S RESPONSIBILITIES**

### 9.06 *Insurance*

SC-9.06 Delete Paragraph 9.06 of the General Conditions in its entirety.

SC-9 Adjust the numbering of Article 9 of the General Conditions as needed.

## **ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION**

### 10.04 *Engineer’s Authority*

SC-10.04.C Delete Paragraph 10.04.C of the General Conditions in its entirety and insert the following in its place:

“C. Engineer’s authority, and limitations thereof, as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner’s delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.”

### 10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

SC-10.06.A Add the following new paragraph immediately after paragraph 10.06.A of the General Conditions:

“B. In accordance with Massachusetts General Law Chapter 30, Section 39P every contract subject to Section 39M of this Chapter or Section 44A of Chapter 149 which requires the awarding authority, or any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material, or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty-days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty-days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty-day period and the date by which the decision will be made.”

## **ARTICLE 11—CHANGES TO THE CONTRACT**

### 11.01 *Amending and Supplementing the Contract*

SC-11.01.B Delete Paragraph 11.01.B of the General Conditions in its entirety and insert the following in its place:

“B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A

Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.”

SC-11.01.C Delete Paragraph 11.01.C of the General Conditions in its entirety and insert the following in its place:

“C. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a change order.”

#### 11.09 *Change Proposals*

SC-11.09 Delete Paragraph 11.09.A of the General Conditions in its entirety and insert the following in its place:

#### 11.09 *Change Proposals*

“A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. “

SC-11.09 Delete Paragraph 11.09.B.1 of the General Conditions in its entirety and insert the following in its place:

“1. *Submittal:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision.”

SC-11.09 Delete Paragraph 11.09.B.3 of the General Conditions in its entirety and insert the following in its place:

“3. *Engineer’s Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.”

SC-11.09 Delete Paragraph 11.09.D of the General Conditions in its entirety and insert the following in its place:

“D. *Post-Completion:* Owner and Contractor shall execute appropriate Change Orders covering:

1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner’s acceptance of defective Work under Paragraph 14.04 or Owner’s correction of defective Work under Paragraph 14.07, or (c) agreed to by the

parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and

4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph, it shall be deemed to be of full force and effect, as if fully executed."

## **ARTICLE 12—CLAIMS**

### *12.01 Claims*

SC-12.01.A Delete Paragraph 12.01.A.4 of the General Conditions in its entirety.

## **ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK**

### *13.01 Cost of the Work*

SC-13.01.B Delete the first sentence of Paragraph 13.01.B of the General Conditions in its entirety and insert the following sentence in its place:

"B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those prevailing in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:"

SC-13.01.B Delete Paragraph 13.01.B.1 of the General Conditions in its entirety and insert the following in its place:

"1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees shall include foremen at the site. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner."

SC-13.01.B Delete Paragraph 13.01.B.5.c of the General Conditions in its entirety and insert the following in its place:

"c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal

thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.”

SC-13.01.C Delete Paragraph 13.01.C.1 of the General Conditions in its entirety and insert the following in its place:

“1. Payroll costs and other compensation of Contractor’s officers, executives, principals, general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor’s principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor’s fee.”

SC-13.01.D Delete Paragraph 13.01.D.1.b of the General Conditions in its entirety and insert the following in its place:

“b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor’s fee will be determined as set forth in Paragraph 11.04.”

SC-13.01.D Delete Paragraph 13.01.D.2 of the General Conditions in its entirety.

SC-13.01.E Delete Paragraph 13.01.E of the General Conditions in its entirety and insert the following in its place:

“E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices and submitted in a form acceptable to Engineer.”

### 13.02 Allowances

SC-13.02 Delete Paragraph 13.02 of the General Conditions in its entirety.

### 13.03 Unit Price Work

SC-13.03 Delete Paragraph 13.03.E of the General Conditions in its entirety and insert the following in its place:

“E. Within 30 days of Engineer’s written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:

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

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

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

SC-13 Adjust the numbering of Article 13 of the General Conditions as needed.

## **ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

### *14.06 Owner May Stop the Work*

SC-14.06 Add the following new paragraph immediately after Paragraph 14.06.A of the General Conditions:

“B. If Owner stops Work under paragraph 14.06.A, Contractor shall not be entitled to any extension of Contract Time or any increase in Contract Price.”

### *14.07 Owner May Correct Defective Work*

SC-14.07.A Delete Paragraph 14.07.A of the General Conditions in its entirety and insert the following in its place:

“A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after ten (10) days’ written notice to Contractor, correct or remedy any such deficiency.”

## **ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD**

### *15.01 Progress Payments*

SC15.01 Delete paragraph 15.01.C.1 of the General Conditions and replace it with the following:

“1. Progress Payments shall be made in accordance with Massachusetts General Laws, Chapter 30, Section 39K.”

SC-15.01 Add the following new paragraph immediately after Paragraph 15.01.B.4 of the General Conditions:

“5. Contractor shall furnish evidence that payment received on the basis of materials and equipment not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within sixty days of payment by Owner. Failure to provide such evidence of payment may result in the withdrawal of previous approval(s) and removal of the cost of related materials and equipment from the next submitted Application for Payment.”

### *15.02 Contractor’s Warranty of Title*

SC-15.02 Add the following new paragraphs immediately after Paragraph 15.02.A of the General Conditions:

“B. No materials or supplies for the Work shall be purchased by Contractor or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. Contractor warrants that Contractor has good title to all materials and supplies used by Contractor in the Work, free from all liens, claims or encumbrances.

- C. Contractor shall indemnify and save Owner harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. Contractor shall at Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If Contractor fails to do so, then Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which Owner has written notice, direct, or withhold from the Contractor's unpaid compensation, a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged; whereupon payment to Contractor shall be resumed in accordance with the terms of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligation upon Owner to either Contractor, or Contractor's Surety. In paying any unpaid bills of the Contractor, Owner shall be deemed the agent of Contractor and any payment so made by Owner shall be considered as payment made under the Contract by Owner to Contractor and Owner shall not be liable to Contractor for any such payment made in good faith."

#### 15.06 *Final Payment*

- SC-15.06.A Delete Paragraph 15.06.A.2.d of the General Conditions in its entirety and insert the following in its place:

"d. a list of all disputes that Contractor believes are unsettled; and"

- SC-15.06.B Delete Paragraph 15.06.B of the General Conditions in its entirety and insert the following in its place:

"B. *Engineer's Review of Final Application and Recommendation of Payment:*

1. If, on the basis of Engineer's observations of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. Thereupon Engineer will give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of paragraph 15.01. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment. If the Application and accompanying documentation are appropriate as to form and substance, Owner shall in accordance with the Applicable Massachusetts General Law, pay Contractor the amount recommended by the Engineer."

#### 15.07 *Waiver of Claims*

- SC-15.07.A Delete Paragraph 15.07.A of the General Conditions in its entirety and insert the following in its place:

"A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from

Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents."

#### 15.08 *Correction Period*

SC-15.08.A In the first sentence of Paragraph 15.08.A of the General Conditions delete the words "Owner gives Contractor written notice that".

SC-15.08.B Delete Paragraph 15.08.B of the General Conditions in its entirety.

SC-15.08.C Delete Paragraph 15.08.C of the General Conditions in its entirety and insert the following in its place:

"C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others)."

SC-15.08 Adjust the lettering of Paragraph 15.08 of the General Conditions as needed.

### **ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

#### 16.01 *Owner May Suspend Work*

SC-16.01.A Delete paragraph 16.01.A of the General Conditions in its entirety and insert the following in its place:

"A. Owner may order, at any time and without cause, suspension of the Work in accordance with Massachusetts General Laws, Chapter 30, Section 39O."

#### 16.02 *Owner May Terminate for Cause*

SC-16.02.A Add the following new paragraph immediately after Paragraph 16.02.A.4 of the General Conditions:

"5. If Contractor abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of Owner, or if the Contract or any claim thereunder shall be assigned by Contractor otherwise than as herein specified."

SC-16.02.B In the first sentence of Paragraph 16.02.B.1 of the General Conditions delete the word "written".

#### 16.03 *Owner May Terminate for Convenience*

SC-16.03.B Delete Paragraph 16.03.B of the General Conditions in its entirety and insert the following in its place:

"B. Contractor shall not be paid for any loss of anticipated profits or revenue, overhead, or other economic loss arising out of or resulting from such termination."

## ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

### 17.01 *Methods and Procedures*

SC-17.01 Add the following new paragraph immediately after Paragraph 17.01.B of the General Conditions:

- “C. Contractor shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings, unless otherwise agreed by Contractor and Owner in writing.”

## ARTICLE 18—MISCELLANEOUS

### 18.01 *Giving Notice*

SC-18.01 Add the following new paragraph immediately after Paragraph 18.01.A of the General Conditions:

- “B. Both the address given in the Bid Form upon which this Agreement is founded, and Contractor 's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to Contractor shall be certified, mailed, or delivered. The delivering at the above named places, or depositing in a postpaid wrapper directed to the first-named place, in any post office box regularly maintained by the post office department, of any notice, letter or other communication to Contractor shall be deemed sufficient service thereof upon Contractor; and the date of said service shall be the date of such delivery or mailing. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by Contractor, and delivered to Owner and Engineer. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon Contractor personally.”

### 18.07 *Controlling Law*

18.07 Delete Paragraph 18.07.A of the General Conditions in its entirety and insert the following in its place:

- “A. This Contract to be governed by the law of the Commonwealth of Massachusetts.”

### 18.08 *Assignment of Contract*

SC-18.08 Delete Paragraph 18.08 of the General Conditions in its entirety.

### 18.09 *Successors and Assigns*

SC-18.09 Delete Paragraph 18.09 of the General Conditions in its entirety.

SC-18.10 Add the following new paragraphs immediately after paragraph 18.10 of the General Conditions:

#### “SC-18.11 *Wage Rates*

- “A. The requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to employment of labor, and to the schedule of minimum wage rates established in compliance with laws shall be a part of these Contract Documents. A copy of the wage schedule is included in in this Specification (Section 00820 – Attachment A). If after

the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the officials administering the laws mentioned above.

Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. Contractor shall notify Owner of Contractor's intention to employ persons in trades or occupations not classified in sufficient time for Owner to obtain approved rates for such trades or occupations."

- "B. The schedule of wages referred to above are minimum rates only, and Owner will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage in excess of the applicable rate contained in these Contract Documents. All disputes in regard to the payment of wages in excess of these specified in the schedule shall be resolved by Contractor.

SC-18.12 *Commonwealth of Massachusetts Provisions*

- A. See Specification Section 00820 COMMONWEALTH OF MASSACHUSETTS SPECIAL CONDITIONS."

SC-18 Adjust the numbering of Article 18 of the General Conditions as needed.

END OF SUPPLEMENTARY CONDITIONS

SECTION 00820

COMMONWEALTH OF MASSACHUSETTS  
SPECIAL CONDITIONS

1. Labor Classifications and Minimum Wage Rates
2. Excerpts from Chapters 30 and 82 of the Massachusetts General Laws
3. Change Orders
4. Price Adjustments

ATTACHMENT A

Massachusetts Prevailing Wage Rates

ATTACHMENT B

Excerpts from Chapters 30 and 82 of the Massachusetts General Laws

ATTACHMENT C

Change Order Form

ATTACHMENT D

Price Adjustments

1. Labor Classification and Minimum Wage Rates

Minimum Wage Rates as determined by the Commissioner of the Department of Labor and Industries under the provisions of Massachusetts General Laws Chapter 149, Sections 26-27G, as amended apply to this project.

A legible copy of the Minimum Wage Rates schedule shall be kept posted in a conspicuous place at the work site, during the life of the Contract.

Contractor and all subcontractors are required by Chapter 149 of the Massachusetts General Laws, Section 27B to submit certified payrolls to Owner every week.

The Massachusetts Labor Classifications and Minimum Wage Rates are included in Attachment A.

It is the responsibility of the Contractor, before bid opening, to request, if necessary, any additional information on Massachusetts Wage Rates for those tradespeople who are not covered by the applicable Massachusetts Wage Decision, but who may be employed for the proposed work under this contract.

All construction associated with this contract will be governed by Heavy and Highway Rates.

2. Excerpts from Chapters 30 and 82 of the Massachusetts General Laws

Due to their applicability to construction contracts, excerpts from Chapter 30 and Chapter 82 of the Massachusetts General Laws are attached on pages 00820B.

3. Change Orders

All change orders to be submitted to the Engineer for review and processing shall be prepared on the Change Order Form attached on pages 00820C.

4. Price Adjustments

Special Conditions: Monthly Price Adjustments for Hot Mix Asphalt Mixtures, Diesel Fuel, and Gasoline, and Cement Concrete Mixes.

ATTACHMENT A  
MASSACHUSETTS PREVAILING WAGE RATES



**THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS  
Prevailing Wage Rates**

MAURA HEALY  
Governor

KIM DRISCOLL  
Lt. Governor

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES  
Secretary

MICHAEL FLANAGAN  
Director

**Awarding Authority:** Milford **City/Town:** MILFORD  
**Contract Number:** 8130  
**Description of Work:** The Construction of approximately 620 linear feet of 8-inch ductile iron water main in Court Street from Main Street to Spring Street.  
**Job Location:** Court Street, Milford MA

**Information about Prevailing Wage Schedules for Awarding Authorities and Contractors**

- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.
- This annual update requirement is generally not applicable to 27F “rental of equipment” contracts. For such contracts, the prevailing wage rates issued by DLS shall remain in effect for the duration of the contract term. However, if the prevailing wage rate sheet issued does not contain wage rates for each year covered by the contract term, the Awarding Authority must request updated rate sheets from DLS and provide them to the contractor to ensure the correct rates are being paid throughout the duration of the contract. Additionally, if an Awarding Authority exercises an option to renew or extend the contract term, they must request updated rate sheets from DLS and provide them to the contractor.
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

**Construction**

| Classification   | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------|---------------------------|------------|
| (2 AXLE) DRIVER - EQUIPMENT  | 1/1/2026       | \$40.95   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$78.90    |
| TEAMSTERS JOINT COUNCIL NO. 10                                     | 6/1/2026       | \$41.95   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$79.90    |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B                              | 12/1/2026      | \$41.95   | \$16.17 | \$23.52 | \$0.00  | \$0.00                    | \$81.64    |
|  | 1/1/2027       | \$41.95   | \$16.77 | \$23.52 | \$0.00  | \$0.00                    | \$82.24    |
| (3 AXLE) DRIVER - EQUIPMENT  | 1/1/2026       | \$41.02   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$78.97    |
| TEAMSTERS JOINT COUNCIL NO. 10                                     | 6/1/2026       | \$42.02   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$79.97    |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B                              | 12/1/2026      | \$42.02   | \$16.17 | \$23.52 | \$0.00  | \$0.00                    | \$81.71    |
|  | 1/1/2027       | \$42.02   | \$16.77 | \$23.52 | \$0.00  | \$0.00                    | \$82.31    |
| (4 & 5 AXLE) DRIVER - EQUIPMENT                                    | 1/1/2026       | \$41.14   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$79.09    |
| TEAMSTERS JOINT COUNCIL NO. 10                                     | 6/1/2026       | \$42.14   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$80.09    |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B                              | 12/1/2026      | \$42.14   | \$16.17 | \$23.52 | \$0.00  | \$0.00                    | \$81.83    |
|  | 1/1/2027       | \$42.14   | \$16.77 | \$23.52 | \$0.00  | \$0.00                    | \$82.43    |
| ADS/SUBMERSIBLE PILOT  | 8/1/2024       | \$117.16  | \$10.08 | \$11.62 | \$12.67 | \$0.00                    | \$151.53   |
| PILE DRIVER LOCAL 56   |                |           |         |         |         |                           |            |
| PILE DRIVER LOCAL 56 (ZONE 2)                                      |                |           |         |         |         |                           |            |
| For apprentice rates see "Apprentice- PILE DRIVER"                 |                |           |         |         |         |                           |            |
| AIR TRACK OPERATOR   | 12/1/2025      | \$41.97   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.73    |
| LABORERS   | 6/1/2026       | \$43.41   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$72.17    |
| LABORERS - ZONE 2  | 12/1/2026      | \$44.85   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.61    |
|  | 6/1/2027       | \$46.30   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$75.06    |
|  | 12/1/2027      | \$47.75   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.51    |
|  | 6/1/2028       | \$49.25   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$78.01    |
|  | 12/1/2028      | \$50.75   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.51    |
| For apprentice rates see "Apprentice- LABORER"                     |                |           |         |         |         |                           |            |
| AIR TRACK OPERATOR (HEAVY & HIGHWAY)                               | 12/1/2025      | \$41.97   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$70.83    |
| LABORERS   | 6/1/2026       | \$43.41   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$72.27    |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)                                | 12/1/2026      | \$44.85   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$73.71    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" |                |           |         |         |         |                           |            |
| ASBESTOS WORKER (PIPES & TANKS)                                    | 12/1/2025      | \$44.80   | \$14.50 | \$4.30  | \$6.75  | \$0.00                    | \$70.35    |
| HEAT & FROST INSULATORS LOCAL 6                                    |                |           |         |         |         |                           |            |
| HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)                        |                |           |         |         |         |                           |            |
| ASPHALT RAKER  | 12/1/2025      | \$41.47   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.23    |
| LABORERS   | 6/1/2026       | \$42.91   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$71.67    |
| LABORERS - ZONE 2  | 12/1/2026      | \$44.35   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.11    |
|  | 6/1/2027       | \$45.80   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$74.56    |
|  | 12/1/2027      | \$47.25   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.01    |
|  | 6/1/2028       | \$48.75   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$77.51    |
|  | 12/1/2028      | \$50.25   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.01    |
| For apprentice rates see "Apprentice- LABORER"                     |                |           |         |         |         |                           |            |
| ASPHALT RAKER (HEAVY & HIGHWAY)                                    | 12/1/2025      | \$41.47   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$70.33    |
| LABORERS   | 6/1/2026       | \$42.91   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$71.77    |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)                                | 12/1/2026      | \$44.35   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$73.21    |

**Construction**

| Classification  | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------|---------------------------|------------|
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway) |                |           |         |         |         |                           |            |
| ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE                            | 12/1/2025      | \$59.28   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$91.83    |
| OPERATING ENGINEERS LOCAL 4                                       | 6/1/2026       | \$60.58   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$93.13    |
| OPERATING ENGINEERS LOCAL 4                                       | 12/1/2026      | \$62.03   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$94.58    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"        |                |           |         |         |         |                           |            |
| BACKHOE/FRONT-END LOADER  | 12/1/2025      | \$59.28   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$91.83    |
| OPERATING ENGINEERS LOCAL 4                                       | 6/1/2026       | \$60.58   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$93.13    |
| OPERATING ENGINEERS LOCAL 4                                       | 12/1/2026      | \$62.03   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$94.58    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"        |                |           |         |         |         |                           |            |
| BARCO-TYPE JUMPING TAMPER   | 12/1/2025      | \$41.47   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.23    |
| LABORERS  | 6/1/2026       | \$42.91   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$71.67    |
| LABORERS - ZONE 2   | 12/1/2026      | \$44.35   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.11    |
|   | 6/1/2027       | \$45.80   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$74.56    |
|   | 12/1/2027      | \$47.25   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.01    |
|   | 6/1/2028       | \$48.75   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$77.51    |
|   | 12/1/2028      | \$50.25   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.01    |
| For apprentice rates see "Apprentice- LABORER"                    |                |           |         |         |         |                           |            |
| BLOCK PAVER, RAMMER / CURB SETTER                                 | 12/1/2025      | \$41.97   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.73    |
| LABORERS  | 6/1/2026       | \$43.41   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$72.17    |
| LABORERS - ZONE 2   | 12/1/2026      | \$44.85   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.61    |
|   | 6/1/2027       | \$46.30   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$75.06    |
|   | 12/1/2027      | \$47.75   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.51    |
|   | 6/1/2028       | \$49.25   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$78.01    |
|   | 12/1/2028      | \$50.75   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.51    |
| For apprentice rates see "Apprentice- LABORER"                    |                |           |         |         |         |                           |            |
| BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)               | 12/1/2025      | \$41.97   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$70.83    |
| LABORERS  | 6/1/2026       | \$43.41   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$72.27    |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)                               | 12/1/2026      | \$44.85   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$73.71    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway) |                |           |         |         |         |                           |            |
| BOILER MAKER  | 1/1/2024       | \$48.12   | \$7.07  | \$14.60 | \$6.00  | \$0.00                    | \$75.79    |
| BOILERMAKERS LOCAL 29   |                |           |         |         |         |                           |            |
| BOILERMAKERS LOCAL 29   |                |           |         |         |         |                           |            |

| Apprentice: BOILER MAKER |         |                      |        |         |         |                           |            |
|--------------------------|---------|----------------------|--------|---------|---------|---------------------------|------------|
| Effective Date: 1/1/2024 |         |                      |        |         |         |                           |            |
| Step                     | Percent | Apprentice Base Wage | Health | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                        | 65.00   | \$31.28              | \$7.07 | \$9.32  | \$3.90  | \$0.00                    | \$51.57    |
| 2                        | 65.00   | \$31.28              | \$7.07 | \$9.32  | \$3.90  | \$0.00                    | \$51.57    |
| 3                        | 70.00   | \$33.68              | \$7.07 | \$10.03 | \$4.20  | \$0.00                    | \$54.98    |
| 4                        | 75.00   | \$36.09              | \$7.07 | \$10.74 | \$4.50  | \$0.00                    | \$58.40    |
| 5                        | 80.00   | \$38.50              | \$7.07 | \$11.45 | \$4.80  | \$0.00                    | \$61.82    |
| 6                        | 85.00   | \$40.90              | \$7.07 | \$12.18 | \$5.10  | \$0.00                    | \$65.25    |

**Construction**

| Classification  | Effective Date | Base Wage                   | Health        | Pension        | Annuity        | Supplemental Unemployment        | Total Rate        |
|---|----------------|-----------------------------|---------------|----------------|----------------|----------------------------------|-------------------|
| <b>Apprentice: BOILER MAKER</b>   |                |                             |               |                |                |                                  |                   |
| <b>Effective Date: 1/1/2024</b>   |                |                             |               |                |                |                                  |                   |
| <b>Step</b>   | <b>Percent</b> | <b>Apprentice Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
| 7   | 90.00          | \$43.31                     | \$7.07        | \$12.88        | \$5.40         | \$0.00                           | \$68.66           |
| 8   | 95.00          | \$45.71                     | \$7.07        | \$13.62        | \$5.70         | \$0.00                           | \$72.10           |
| <b>Apprentice to Journeyworker Ratio: 1:4</b>                                   |                |                             |               |                |                |                                  |                   |
| BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)                    | 8/1/2025       | \$65.81                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$100.20          |
| BRICKLAYERS LOCAL 3   | 2/1/2026       | \$67.16                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$101.55          |
| BRICKLAYERS LOCAL 3 (LOWELL)  | 8/1/2026       | \$69.36                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$103.75          |
|   | 2/1/2027       | \$70.76                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$105.15          |
| <b>Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)</b> |                |                             |               |                |                |                                  |                   |
| <b>Effective Date: 8/1/2025</b>   |                |                             |               |                |                |                                  |                   |
| <b>Step</b>   | <b>Percent</b> | <b>Apprentice Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
| 1   | 50.00          | \$32.91                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$67.30           |
| 2   | 60.00          | \$39.49                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$73.88           |
| 3   | 70.00          | \$46.07                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$80.46           |
| 4   | 80.00          | \$52.65                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$87.04           |
| 5   | 90.00          | \$59.23                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$93.62           |
| <b>Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)</b> |                |                             |               |                |                |                                  |                   |
| <b>Effective Date: 2/1/2026</b>   |                |                             |               |                |                |                                  |                   |
| <b>Step</b>   | <b>Percent</b> | <b>Apprentice Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
| 1   | 50.00          | \$33.58                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$67.97           |
| 2   | 60.00          | \$40.30                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$74.69           |
| 3   | 70.00          | \$47.01                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$81.40           |
| 4   | 80.00          | \$53.73                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$88.12           |
| 5   | 90.00          | \$60.44                     | \$11.49       | \$15.57        | \$7.33         | \$0.00                           | \$94.83           |
| <b>Apprentice to Journeyworker Ratio: 1:5</b>                                   |                |                             |               |                |                |                                  |                   |
| BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4                            | 12/1/2025      | \$58.62                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$91.17           |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026       | \$59.90                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$92.45           |
|   | 12/1/2026      | \$61.34                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$93.89           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                      |                |                             |               |                |                |                                  |                   |
| CAISSON & UNDERPINNING BOTTOM MAN LABORERS                                      | 12/1/2025      | \$49.85                     | \$10.15       | \$9.50         | \$9.80         | \$0.00                           | \$79.30           |
| LABORERS - FOUNDATION AND MARINE  | 6/1/2026       | \$51.40                     | \$10.15       | \$9.50         | \$9.80         | \$0.00                           | \$80.85           |
|   | 12/1/2026      | \$52.90                     | \$10.15       | \$9.50         | \$9.80         | \$0.00                           | \$82.35           |
| For apprentice rates see "Apprentice- LABORER"                                  |                |                             |               |                |                |                                  |                   |
| CAISSON & UNDERPINNING LABORER  | 12/1/2025      | \$48.70                     | \$10.15       | \$9.50         | \$9.80         | \$0.00                           | \$78.15           |

**Construction**

| Classification                   | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|----------------------------------|----------------|-----------|---------|---------|---------|---------------------------|------------|
| LABORERS                         | 6/1/2026       | \$50.25   | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$79.70    |
| LABORERS - FOUNDATION AND MARINE | 12/1/2026      | \$51.75   | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$81.20    |

For apprentice rates see "Apprentice- LABORER"

|  |           |         |         |        |        |        |         |
|--|-----------|---------|---------|--------|--------|--------|---------|
| CAISSON & UNDERPINNING TOP MAN<br>LABORERS | 12/1/2025 | \$49.03 | \$10.15 | \$9.50 | \$9.80 | \$0.00 | \$78.48 |
| LABORERS - FOUNDATION AND MARINE           | 6/1/2026  | \$50.58 | \$10.15 | \$9.50 | \$9.80 | \$0.00 | \$80.03 |
|  | 12/1/2026 | \$52.08 | \$10.15 | \$9.50 | \$9.80 | \$0.00 | \$81.53 |

For apprentice rates see "Apprentice- LABORER"

|   |           |         |         |        |        |        |         |
|---|-----------|---------|---------|--------|--------|--------|---------|
| CARBIDE CORE DRILL OPERATOR<br>LABORERS | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$70.23 |
| LABORERS - ZONE 2                       | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.67 |
|   | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$73.11 |
|   | 6/1/2027  | \$45.80 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.56 |
|   | 12/1/2027 | \$47.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$76.01 |
|   | 6/1/2028  | \$48.75 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$77.51 |
|   | 12/1/2028 | \$50.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

|  |          |         |         |         |        |        |         |
|--|----------|---------|---------|---------|--------|--------|---------|
| CARPENTER                                  | 9/1/2025 | \$50.35 | \$10.33 | \$11.47 | \$8.50 | \$0.00 | \$80.65 |
| CARPENTERS                                 | 3/1/2026 | \$51.60 | \$10.33 | \$11.47 | \$8.50 | \$0.00 | \$81.90 |
| CARPENTERS -ZONE 2 (Eastern Massachusetts) | 9/1/2026 | \$52.85 | \$10.33 | \$11.47 | \$8.50 | \$0.00 | \$83.15 |
|  | 3/1/2027 | \$54.10 | \$10.33 | \$11.47 | \$8.50 | \$0.00 | \$84.40 |

| <b>Apprentice: CARPENTER</b>    |         |                      |         |         |         |                           |            |
|---------------------------------|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 9/1/2025</b> |         |                      |         |         |         |                           |            |
| Step                            | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                               | 45.00   | \$22.66              | \$10.33 | \$0.00  | \$1.73  | \$0.00                    | \$34.72    |
| 2                               | 45.00   | \$22.66              | \$10.33 | \$0.00  | \$1.73  | \$0.00                    | \$34.72    |
| 3                               | 55.00   | \$27.69              | \$10.33 | \$0.00  | \$3.40  | \$0.00                    | \$41.42    |
| 4                               | 55.00   | \$27.69              | \$10.33 | \$0.00  | \$3.40  | \$0.00                    | \$41.42    |
| 5                               | 70.00   | \$35.25              | \$10.33 | \$11.41 | \$5.10  | \$0.00                    | \$62.09    |
| 6                               | 70.00   | \$35.25              | \$10.33 | \$11.41 | \$5.10  | \$0.00                    | \$62.09    |
| 7                               | 80.00   | \$40.28              | \$10.33 | \$11.44 | \$6.80  | \$0.00                    | \$68.85    |
| 8                               | 80.00   | \$40.28              | \$10.33 | \$11.44 | \$6.80  | \$0.00                    | \$68.85    |

| <b>Apprentice: CARPENTER</b>    |         |                      |         |         |         |                           |            |
|---------------------------------|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 3/1/2026</b> |         |                      |         |         |         |                           |            |
| Step                            | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                               | 45.00   | \$23.22              | \$10.33 | \$0.00  | \$1.73  | \$0.00                    | \$35.28    |
| 2                               | 45.00   | \$23.22              | \$10.33 | \$0.00  | \$1.73  | \$0.00                    | \$35.28    |
| 3                               | 55.00   | \$28.38              | \$10.33 | \$0.00  | \$3.40  | \$0.00                    | \$42.11    |
| 4                               | 55.00   | \$28.38              | \$10.33 | \$0.00  | \$3.40  | \$0.00                    | \$42.11    |
| 5                               | 70.00   | \$36.12              | \$10.33 | \$11.41 | \$5.10  | \$0.00                    | \$62.96    |
| 6                               | 70.00   | \$36.12              | \$10.33 | \$11.41 | \$5.10  | \$0.00                    | \$62.96    |
| 7                               | 80.00   | \$41.28              | \$10.33 | \$11.44 | \$6.80  | \$0.00                    | \$69.85    |

**Construction**

| Classification                                | Effective Date | Base Wage            | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|---|----------------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice: CARPENTER</b>                  |                |                      |         |         |         |                           |            |
| <b>Effective Date: 3/1/2026</b>               |                |                      |         |         |         |                           |            |
| Step  | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 8   | 80.00          | \$41.28              | \$10.33 | \$11.44 | \$6.80  | \$0.00                    | \$69.85    |
| <b>Apprentice to Journeyworker Ratio: 1:5</b> |                |                      |         |         |         |                           |            |
| CARPENTER WOOD FRAME                          | 10/1/2025      | \$27.75              | \$7.02  | \$3.80  | \$1.00  | \$0.00                    | \$39.57    |
| CARPENTERS                                    | 10/1/2026      | \$28.85              | \$7.02  | \$3.80  | \$1.00  | \$0.00                    | \$40.67    |
| CARPENTERS-ZONE 3 (Wood Frame)                |                |                      |         |         |         |                           |            |
| All Aspects of New Wood Frame Work            |                |                      |         |         |         |                           |            |

| <b>Apprentice: CARPENTER WOOD FRAME</b> |         |                      |        |         |         |                           |            |
|---|---------|----------------------|--------|---------|---------|---------------------------|------------|
| <b>Effective Date: 10/1/2025</b>        |         |                      |        |         |         |                           |            |
| Step                                    | Percent | Apprentice Base Wage | Health | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                       | 60.00   | \$16.65              | \$7.02 | \$0.00  | \$0.00  | \$0.00                    | \$23.67    |
| 2                                       | 60.00   | \$16.65              | \$7.02 | \$0.00  | \$0.00  | \$0.00                    | \$23.67    |
| 3                                       | 65.00   | \$18.04              | \$7.02 | \$0.00  | \$1.00  | \$0.00                    | \$26.06    |
| 4                                       | 70.00   | \$19.43              | \$7.02 | \$0.00  | \$1.00  | \$0.00                    | \$27.45    |
| 5                                       | 75.00   | \$20.81              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$32.63    |
| 6                                       | 80.00   | \$22.20              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$34.02    |
| 7                                       | 85.00   | \$23.59              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$35.41    |
| 8                                       | 90.00   | \$24.98              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$36.80    |

| <b>Apprentice: CARPENTER WOOD FRAME</b> |         |                      |        |         |         |                           |            |
|---|---------|----------------------|--------|---------|---------|---------------------------|------------|
| <b>Effective Date: 10/1/2026</b>        |         |                      |        |         |         |                           |            |
| Step                                    | Percent | Apprentice Base Wage | Health | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                       | 60.00   | \$17.31              | \$7.02 | \$0.00  | \$0.00  | \$0.00                    | \$24.33    |
| 2                                       | 60.00   | \$17.31              | \$7.02 | \$0.00  | \$0.00  | \$0.00                    | \$24.33    |
| 3                                       | 65.00   | \$18.75              | \$7.02 | \$0.00  | \$1.00  | \$0.00                    | \$26.77    |
| 4                                       | 70.00   | \$20.20              | \$7.02 | \$0.00  | \$1.00  | \$0.00                    | \$28.22    |
| 5                                       | 75.00   | \$21.64              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$33.46    |
| 6                                       | 80.00   | \$23.08              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$34.90    |
| 7                                       | 85.00   | \$24.52              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$36.34    |
| 8                                       | 90.00   | \$25.97              | \$7.02 | \$3.80  | \$1.00  | \$0.00                    | \$37.79    |

**Apprentice to Journeyworker Ratio: 1:5**

|  |          |         |         |         |        |        |         |
|--|----------|---------|---------|---------|--------|--------|---------|
| CEMENT MASONRY/PLASTERING              | 1/1/2026 | \$53.24 | \$13.35 | \$16.43 | \$7.78 | \$1.80 | \$92.60 |
| PLASTERERS AND CEMENT MASONS LOCAL 534 | 7/1/2026 | \$54.49 | \$13.35 | \$16.43 | \$7.78 | \$1.80 | \$93.85 |
| Plasterers and Cement Masons - Zone 1  | 1/1/2027 | \$55.94 | \$13.35 | \$16.43 | \$7.78 | \$1.80 | \$95.30 |
|  | 7/1/2027 | \$57.29 | \$13.35 | \$16.43 | \$7.78 | \$1.80 | \$96.65 |
|  | 1/1/2028 | \$58.64 | \$13.35 | \$16.43 | \$7.78 | \$1.80 | \$98.00 |

**Construction**

| Classification  | Effective Date | Base Wage            | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|---|----------------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice: CEMENT MASONRY/PLASTERING</b>                            |                |                      |         |         |         |                           |            |
| <b>Effective Date: 1/1/2026</b>   |                |                      |         |         |         |                           |            |
| Step  | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 50.00          | \$26.62              | \$13.35 | \$16.43 | \$0.00  | \$0.00                    | \$56.40    |
| 2   | 60.00          | \$31.94              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$71.30    |
| 3   | 65.00          | \$34.61              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$73.97    |
| 4   | 70.00          | \$37.27              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$76.63    |
| 5   | 75.00          | \$39.93              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$79.29    |
| 6   | 80.00          | \$42.59              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$81.95    |
| 7   | 90.00          | \$47.92              | \$13.35 | \$16.43 | \$0.00  | \$0.00                    | \$77.70    |
| <b>Apprentice: CEMENT MASONRY/PLASTERING</b>                            |                |                      |         |         |         |                           |            |
| <b>Effective Date: 7/1/2026</b>   |                |                      |         |         |         |                           |            |
| Step  | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 50.00          | \$27.25              | \$13.35 | \$16.43 | \$0.00  | \$0.00                    | \$57.03    |
| 2   | 60.00          | \$32.69              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$72.05    |
| 3   | 65.00          | \$35.42              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$74.78    |
| 4   | 70.00          | \$38.14              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$77.50    |
| 5   | 75.00          | \$40.87              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$80.23    |
| 6   | 80.00          | \$43.59              | \$13.35 | \$16.43 | \$7.78  | \$1.80                    | \$82.95    |
| 7   | 90.00          | \$49.04              | \$13.35 | \$0.00  | \$7.78  | \$0.00                    | \$70.17    |
| <b>Apprentice to Journeyworker Ratio: 1:5</b>                           |                |                      |         |         |         |                           |            |
| CHAIN SAW OPERATOR LABORERS   | 12/1/2025      | \$41.47              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.23    |
| LABORERS - ZONE 2   | 6/1/2026       | \$42.91              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$71.67    |
|   | 12/1/2026      | \$44.35              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.11    |
|   | 6/1/2027       | \$45.80              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$74.56    |
|   | 12/1/2027      | \$47.25              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.01    |
|   | 6/1/2028       | \$48.75              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$77.51    |
|   | 12/1/2028      | \$50.25              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.01    |
| For apprentice rates see "Apprentice- LABORER"                          |                |                      |         |         |         |                           |            |
| CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4 | 12/1/2025      | \$60.48              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$93.03    |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026       | \$61.81              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$94.36    |
| OPERATING ENGINEERS LOCAL 4   | 12/1/2026      | \$63.29              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$95.84    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"              |                |                      |         |         |         |                           |            |
| COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4                         | 12/1/2025      | \$37.97              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$70.52    |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026       | \$38.83              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$71.38    |
| OPERATING ENGINEERS LOCAL 4   | 12/1/2026      | \$39.78              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$72.33    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"              |                |                      |         |         |         |                           |            |
| DELEADER (BRIDGE) PAINTERS LOCAL 35                                     | 1/1/2026       | \$59.56              | \$10.35 | \$12.00 | \$12.60 | \$0.00                    | \$94.51    |
| PAINTERS LOCAL 35 - ZONE 2  |                |                      |         |         |         |                           |            |

**Construction**

| Classification                       | Effective Date | Base Wage            | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--------------------------------------|----------------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice: DELEADER (BRIDGE)</b> |                |                      |         |         |         |                           |            |
| <b>Effective Date: 1/1/2026</b>      |                |                      |         |         |         |                           |            |
| Step                                 | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                    | 50.00          | \$29.78              | \$10.35 | \$0.00  | \$0.00  | \$0.00                    | \$40.13    |
| 2                                    | 55.00          | \$32.76              | \$10.35 | \$0.00  | \$6.93  | \$0.00                    | \$50.04    |
| 3                                    | 60.00          | \$35.74              | \$10.35 | \$0.00  | \$7.56  | \$0.00                    | \$53.65    |
| 4                                    | 65.00          | \$38.71              | \$10.35 | \$0.00  | \$8.19  | \$0.00                    | \$57.25    |
| 5                                    | 70.00          | \$41.69              | \$10.35 | \$12.00 | \$8.82  | \$0.00                    | \$72.86    |
| 6                                    | 75.00          | \$44.67              | \$10.35 | \$12.00 | \$9.45  | \$0.00                    | \$76.47    |
| 7                                    | 80.00          | \$47.65              | \$10.35 | \$12.00 | \$10.08 | \$0.00                    | \$80.08    |
| 8                                    | 90.00          | \$53.60              | \$10.35 | \$12.00 | \$11.34 | \$0.00                    | \$87.29    |

**Apprentice to Journeyworker Ratio: 1:1**

|                        |           |         |         |        |        |        |         |
|------------------------|-----------|---------|---------|--------|--------|--------|---------|
| DEMO: ADZEMAN LABORERS | 12/1/2025 | \$48.75 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$78.05 |
| LABORERS - ZONE 2      | 6/1/2026  | \$50.30 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$79.60 |
|                        | 12/7/2026 | \$51.80 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$81.10 |
|                        | 6/7/2027  | \$53.40 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$82.70 |
|                        | 12/6/2027 | \$55.00 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$84.30 |
|                        | 6/5/2028  | \$56.68 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$85.98 |
|                        | 12/4/2028 | \$58.35 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$87.65 |

For apprentice rates see "Apprentice- LABORER"

|   |           |         |         |        |        |        |         |
|---|-----------|---------|---------|--------|--------|--------|---------|
| DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS | 12/1/2025 | \$49.75 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$79.05 |
| LABORERS - ZONE 2                             | 6/1/2026  | \$51.30 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$80.60 |
|   | 12/7/2026 | \$52.80 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$82.10 |
|   | 6/7/2027  | \$54.40 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$83.70 |
|   | 12/6/2027 | \$56.00 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$85.30 |
|   | 6/5/2028  | \$57.68 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$86.98 |
|   | 12/4/2028 | \$59.35 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$88.65 |

For apprentice rates see "Apprentice- LABORER"

|                        |           |         |         |        |        |        |         |
|------------------------|-----------|---------|---------|--------|--------|--------|---------|
| DEMO: BURNERS LABORERS | 12/1/2025 | \$49.50 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$78.80 |
| LABORERS - ZONE 2      | 6/1/2026  | \$51.05 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$80.35 |
|                        | 12/7/2026 | \$52.55 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$81.85 |
|                        | 6/7/2027  | \$54.15 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$83.45 |
|                        | 12/6/2027 | \$55.75 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$85.05 |
|                        | 6/5/2028  | \$57.43 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$86.73 |
|                        | 12/4/2028 | \$59.10 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$88.40 |

For apprentice rates see "Apprentice- LABORER"

|                                       |           |         |         |        |        |        |         |
|---------------------------------------|-----------|---------|---------|--------|--------|--------|---------|
| DEMO: CONCRETE CUTTER/SAWYER LABORERS | 12/1/2025 | \$49.75 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$79.05 |
| LABORERS - ZONE 2                     | 6/1/2026  | \$51.30 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$80.60 |
|                                       | 12/7/2026 | \$52.80 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$82.10 |
|                                       | 6/7/2027  | \$54.40 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$83.70 |
|                                       | 12/6/2027 | \$56.00 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$85.30 |
|                                       | 6/5/2028  | \$57.68 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$86.98 |
|                                       | 12/4/2028 | \$59.35 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$88.65 |

**Construction**

| Classification  | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------|---------------------------|------------|
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |         |                           |            |
| DEMO: JACKHAMMER OPERATOR   | 12/1/2025      | \$49.50   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$78.80    |
| LABORERS  | 6/1/2026       | \$51.05   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$80.35    |
| LABORERS - ZONE 2   | 12/7/2026      | \$52.55   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$81.85    |
|   | 6/7/2027       | \$54.15   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$83.45    |
|   | 12/6/2027      | \$55.75   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$85.05    |
|   | 6/5/2028       | \$57.43   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$86.73    |
|   | 12/4/2028      | \$59.10   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$88.40    |
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |         |                           |            |
| DEMO: WRECKING LABORER  | 12/1/2025      | \$48.75   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$78.05    |
| LABORERS  | 6/1/2026       | \$50.30   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$79.60    |
| LABORERS - ZONE 2   | 12/7/2026      | \$51.80   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$81.10    |
|   | 6/7/2027       | \$53.40   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$82.70    |
|   | 12/6/2027      | \$55.00   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$84.30    |
|   | 6/5/2028       | \$56.68   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$85.98    |
|   | 12/4/2028      | \$58.35   | \$10.15 | \$9.50  | \$9.65  | \$0.00                    | \$87.65    |
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |         |                           |            |
| DIRECTIONAL DRILL MACHINE OPERATOR  | 12/1/2025      | \$58.62   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$91.17    |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026       | \$59.90   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$92.45    |
| OPERATING ENGINEERS LOCAL 4   | 12/1/2026      | \$61.34   | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$93.89    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |           |         |         |         |                           |            |
| DIVER   | 8/1/2024       | \$78.11   | \$10.08 | \$11.62 | \$12.67 | \$0.00                    | \$112.48   |
| PILE DRIVER LOCAL 56  |                |           |         |         |         |                           |            |
| PILE DRIVER LOCAL 56 (ZONE 2)   |                |           |         |         |         |                           |            |
| as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A \$69.83, 3A \$91.79,4A \$102.14 Total Rate     |                |           |         |         |         |                           |            |
| DIVER TENDER  | 8/1/2024       | \$51.97   | \$10.08 | \$11.62 | \$12.67 | \$0.00                    | \$86.34    |
| PILE DRIVER LOCAL 56  |                |           |         |         |         |                           |            |
| PILE DRIVER LOCAL 56 (ZONE 2)   |                |           |         |         |         |                           |            |
| as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A \$54.20, 3A \$73.93,4A \$82.05 Total Rate |                |           |         |         |         |                           |            |
| DIVER TENDER (EFFLUENT)   | 8/1/2024       | \$83.69   | \$10.08 | \$11.62 | \$12.67 | \$0.00                    | \$118.06   |
| PILE DRIVER LOCAL 56  |                |           |         |         |         |                           |            |
| PILE DRIVER LOCAL 56 (ZONE 2)   |                |           |         |         |         |                           |            |
| For apprentice rates see "Apprentice- PILE DRIVER"  |                |           |         |         |         |                           |            |
| DIVER/SLURRY (EFFLUENT)   | 8/1/2024       | \$117.16  | \$10.08 | \$11.62 | \$12.67 | \$0.00                    | \$151.53   |
| PILE DRIVER LOCAL 56  |                |           |         |         |         |                           |            |
| PILE DRIVER LOCAL 56 (ZONE 2)   |                |           |         |         |         |                           |            |
| For apprentice rates see "Apprentice- PILE DRIVER"  |                |           |         |         |         |                           |            |
| DRAWBRIDGE OPERATOR (Construction)  | 7/1/2020       | \$26.77   | \$6.67  | \$3.93  | \$0.00  | \$0.16                    | \$37.53    |
| DRAWBRIDGE - SEIU LOCAL 888   |                |           |         |         |         |                           |            |
| DRAWBRIDGE - SEIU LOCAL 888   |                |           |         |         |         |                           |            |
| ELECTRICIAN   | 9/7/2025       | \$48.16   | \$14.98 | \$14.30 | \$5.30  | \$0.00                    | \$82.74    |
| ELECTRICIANS LOCAL 96   | 9/6/2026       | \$49.38   | \$15.96 | \$14.57 | \$5.43  | \$0.00                    | \$85.34    |
| ELECTRICIANS LOCAL 96   |                |           |         |         |         |                           |            |



**Construction**

| Classification   | Effective Date | Base Wage                   | Health        | Pension        | Annuity        | Supplemental Unemployment        | Total Rate        |
|--|----------------|-----------------------------|---------------|----------------|----------------|----------------------------------|-------------------|
| <b>Apprentice: ELEVATOR CONSTRUCTOR</b>                            |                |                             |               |                |                |                                  |                   |
| <b>Effective Date: 1/1/2027</b>                                    |                |                             |               |                |                |                                  |                   |
|  |                | <b>Apprentice Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
| 4  | 70.00          | \$50.56                     | \$16.48       | \$11.16        | \$11.00        | \$0.00                           | \$89.20           |
| 5  | 80.00          | \$57.78                     | \$16.48       | \$11.16        | \$11.00        | \$0.00                           | \$96.42           |
| <b>Apprentice to Journeyworker Ratio: 1:1</b>                      |                |                             |               |                |                |                                  |                   |
| ELEVATOR CONSTRUCTOR HELPER  | 1/1/2026       | \$48.46                     | \$16.38       | \$11.06        | \$10.70        | \$0.00                           | \$86.60           |
| ELEVATOR CONSTRUCTORS LOCAL 41                                     | 1/1/2027       | \$50.56                     | \$16.48       | \$11.16        | \$11.00        | \$0.00                           | \$89.20           |
| ELEVATOR CONSTRUCTORS LOCAL 41                                     |                |                             |               |                |                |                                  |                   |
| For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"       |                |                             |               |                |                |                                  |                   |
| FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) LABORERS              | 12/1/2025      | \$41.47                     | \$10.15       | \$9.50         | \$9.21         | \$0.00                           | \$70.33           |
| LABORERS   | 6/1/2026       | \$42.91                     | \$10.15       | \$9.50         | \$9.21         | \$0.00                           | \$71.77           |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)                                | 12/1/2026      | \$44.35                     | \$10.15       | \$9.50         | \$9.21         | \$0.00                           | \$73.21           |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)" |                |                             |               |                |                |                                  |                   |
| FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY                            | 11/1/2025      | \$53.56                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$86.11           |
| OPERATING ENGINEERS LOCAL 4  | 5/1/2026       | \$55.00                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$87.55           |
| OPERATING ENGINEERS LOCAL 4  | 11/1/2026      | \$56.29                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$88.84           |
|  | 5/1/2027       | \$57.72                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$90.27           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"         |                |                             |               |                |                |                                  |                   |
| FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY                            | 11/1/2025      | \$55.17                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$87.72           |
| OPERATING ENGINEERS LOCAL 4  | 5/1/2026       | \$56.62                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$89.17           |
| OPERATING ENGINEERS LOCAL 4  | 11/1/2026      | \$57.92                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$90.47           |
|  | 5/1/2027       | \$59.37                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$91.92           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"         |                |                             |               |                |                |                                  |                   |
| FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY                             | 11/1/2025      | \$26.03                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$58.58           |
| OPERATING ENGINEERS LOCAL 4  | 5/1/2026       | \$26.88                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$59.43           |
| OPERATING ENGINEERS LOCAL 4  | 11/1/2026      | \$27.64                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$60.19           |
|  | 5/1/2027       | \$28.49                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$61.04           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"         |                |                             |               |                |                |                                  |                   |
| FIRE ALARM INSTALLER   | 9/7/2025       | \$48.16                     | \$14.98       | \$14.30        | \$5.30         | \$0.00                           | \$82.74           |
| ELECTRICIANS LOCAL 96  | 9/6/2026       | \$49.38                     | \$15.96       | \$14.57        | \$5.43         | \$0.00                           | \$85.34           |
| ELECTRICIANS LOCAL 96  |                |                             |               |                |                |                                  |                   |
| For apprentice rates see "Apprentice- ELECTRICIAN"                 |                |                             |               |                |                |                                  |                   |
| FIRE ALARM REPAIR / MAINT/COMMISSIONING                            | 9/7/2025       | \$48.16                     | \$14.98       | \$14.30        | \$5.30         | \$0.00                           | \$82.74           |
| ELECTRICIANS LOCAL 96  | 9/6/2026       | \$49.38                     | \$15.96       | \$14.57        | \$5.43         | \$0.00                           | \$85.34           |
| ELECTRICIANS LOCAL 96  |                |                             |               |                |                |                                  |                   |
| For apprentice rates see "Apprentice- ELECTRICIAN"                 |                |                             |               |                |                |                                  |                   |
| FIREMAN (ASST. ENGINEER)   | 12/1/2025      | \$47.69                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$80.24           |
| OPERATING ENGINEERS LOCAL 4  | 6/1/2026       | \$48.75                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$81.30           |
| OPERATING ENGINEERS LOCAL 4  | 12/1/2026      | \$49.93                     | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$82.48           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"         |                |                             |               |                |                |                                  |                   |

**Construction**

| Classification                       | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--------------------------------------|----------------|-----------|---------|---------|---------|---------------------------|------------|
| FLAGGER & SIGNALER (HEAVY & HIGHWAY) | 12/1/2025      | \$28.09   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$56.95    |
| LABORERS                             | 6/1/2026       | \$29.21   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$58.07    |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)  | 12/1/2026      | \$29.21   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$58.07    |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

|                                  |          |         |         |         |        |        |         |
|----------------------------------|----------|---------|---------|---------|--------|--------|---------|
| FLOORCOVERER                     | 3/1/2024 | \$48.93 | \$10.33 | \$11.47 | \$8.80 | \$0.00 | \$79.53 |
| FLOORCOVERERS LOCAL 2168         |          |         |         |         |        |        |         |
| FLOORCOVERERS LOCAL 2168 ZONE II |          |         |         |         |        |        |         |

| <b>Apprentice: FLOORCOVERER</b> |         |                      |         |         |         |                           |            |
|---------------------------------|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 3/1/2024</b> |         |                      |         |         |         |                           |            |
| Step                            | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                               | 50.00   | \$24.47              | \$10.33 | \$0.00  | \$1.76  | \$0.00                    | \$36.56    |
| 2                               | 55.00   | \$26.91              | \$10.33 | \$0.00  | \$1.76  | \$0.00                    | \$39.00    |
| 3                               | 60.00   | \$29.36              | \$10.33 | \$0.00  | \$3.52  | \$0.00                    | \$43.21    |
| 4                               | 65.00   | \$31.80              | \$10.33 | \$0.00  | \$3.52  | \$0.00                    | \$45.65    |
| 5                               | 70.00   | \$34.25              | \$10.33 | \$11.47 | \$5.28  | \$0.00                    | \$61.33    |
| 6                               | 75.00   | \$36.70              | \$10.33 | \$11.47 | \$5.28  | \$0.00                    | \$63.78    |
| 7                               | 80.00   | \$39.14              | \$10.33 | \$11.47 | \$7.04  | \$0.00                    | \$67.98    |
| 8                               | 85.00   | \$41.59              | \$10.33 | \$11.47 | \$7.04  | \$0.00                    | \$70.43    |

**Apprentice Notes**  
Steps are 750 hrs.

**Apprentice to Journeyworker Ratio: 1:1**

|                             |           |         |         |         |        |        |         |
|-----------------------------|-----------|---------|---------|---------|--------|--------|---------|
| FORK LIFT/CHERRY PICKER     | 12/1/2025 | \$59.28 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$91.83 |
| OPERATING ENGINEERS LOCAL 4 | 6/1/2026  | \$60.58 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$93.13 |
| OPERATING ENGINEERS LOCAL 4 | 12/1/2026 | \$62.03 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$94.58 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|                                  |           |         |         |         |        |        |         |
|----------------------------------|-----------|---------|---------|---------|--------|--------|---------|
| GENERATOR/LIGHTING PLANT/HEATERS | 12/1/2025 | \$37.97 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$70.52 |
| OPERATING ENGINEERS LOCAL 4      | 6/1/2026  | \$38.83 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$71.38 |
| OPERATING ENGINEERS LOCAL 4      | 12/1/2026 | \$39.78 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$72.33 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|  |          |         |         |         |         |        |         |
|--|----------|---------|---------|---------|---------|--------|---------|
| GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) | 1/1/2026 | \$49.06 | \$10.35 | \$12.00 | \$12.60 | \$0.00 | \$84.01 |
| GLAZIERS LOCAL 35                                  |          |         |         |         |         |        |         |
| GLAZIERS LOCAL 35 (ZONE 2)                         |          |         |         |         |         |        |         |

| <b>Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)</b> |         |                      |         |         |         |                           |            |
|---|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 1/1/2026</b>                                       |         |                      |         |         |         |                           |            |
| Step  | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 50.00   | \$24.53              | \$10.35 | \$0.00  | \$0.00  | \$0.00                    | \$34.88    |
| 2   | 55.00   | \$26.98              | \$10.35 | \$0.00  | \$6.88  | \$0.00                    | \$44.21    |
| 3   | 60.00   | \$29.44              | \$10.35 | \$0.00  | \$7.50  | \$0.00                    | \$47.29    |



**Construction**

| Classification | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|----------------|----------------|-----------|---------|---------|---------|---------------------------|------------|
|                | 7/1/2027       | \$44.98   | \$13.54 | \$11.01 | \$11.12 | \$2.13                    | \$82.78    |
|                | 1/1/2028       | \$46.48   | \$13.54 | \$11.01 | \$11.12 | \$2.13                    | \$84.28    |

For apprentice rates see "Apprentice- SHEET METAL WORKER"

|   |          |         |         |         |        |        |         |
|---|----------|---------|---------|---------|--------|--------|---------|
| HVAC (ELECTRICAL CONTROLS)<br>ELECTRICIANS LOCAL 96 | 9/7/2025 | \$48.16 | \$14.98 | \$14.30 | \$5.30 | \$0.00 | \$82.74 |
| ELECTRICIANS LOCAL 96                               | 9/6/2026 | \$49.38 | \$15.96 | \$14.57 | \$5.43 | \$0.00 | \$85.34 |

For apprentice rates see "Apprentice- ELECTRICIAN"

|   |          |         |         |         |         |        |         |
|---|----------|---------|---------|---------|---------|--------|---------|
| HVAC (TESTING AND BALANCING - AIR)<br>SHEETMETAL WORKERS LOCAL 63 | 7/1/2025 | \$43.48 | \$12.94 | \$11.01 | \$8.72  | \$2.13 | \$78.28 |
| SHEETMETAL WORKERS LOCAL 63                                       | 7/1/2026 | \$43.48 | \$13.24 | \$11.01 | \$9.92  | \$2.13 | \$79.78 |
|   | 1/1/2027 | \$43.48 | \$13.54 | \$11.01 | \$11.12 | \$2.13 | \$81.28 |
|   | 7/1/2027 | \$44.98 | \$13.54 | \$11.01 | \$11.12 | \$2.13 | \$82.78 |
|   | 1/1/2028 | \$46.48 | \$13.54 | \$11.01 | \$11.12 | \$2.13 | \$84.28 |

For apprentice rates see "Apprentice- SHEET METAL WORKER"

|   |          |         |         |        |        |        |         |
|---|----------|---------|---------|--------|--------|--------|---------|
| HVAC (TESTING AND BALANCING -WATER)<br>PLUMBERS LOCAL 4 | 9/1/2025 | \$55.00 | \$12.70 | \$9.71 | \$8.06 | \$0.00 | \$85.47 |
| PLUMBERS LOCAL 4  | 3/1/2026 | \$57.80 | \$11.30 | \$9.71 | \$8.06 | \$0.00 | \$86.87 |

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

|                                   |          |         |         |        |        |        |         |
|-----------------------------------|----------|---------|---------|--------|--------|--------|---------|
| HVAC MECHANIC<br>PLUMBERS LOCAL 4 | 9/1/2025 | \$55.00 | \$12.70 | \$9.71 | \$8.06 | \$0.00 | \$85.47 |
| PLUMBERS LOCAL 4                  | 3/1/2026 | \$57.80 | \$11.30 | \$9.71 | \$8.06 | \$0.00 | \$86.87 |

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

|                              |           |         |         |        |        |        |         |
|------------------------------|-----------|---------|---------|--------|--------|--------|---------|
| HYDRAULIC DRILLS<br>LABORERS | 12/1/2025 | \$41.97 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$70.73 |
| LABORERS - ZONE 2            | 6/1/2026  | \$43.41 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$72.17 |
|                              | 12/1/2026 | \$44.85 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$73.61 |
|                              | 6/1/2027  | \$46.30 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$75.06 |
|                              | 12/1/2027 | \$47.75 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$76.51 |
|                              | 6/1/2028  | \$49.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$78.01 |
|                              | 12/1/2028 | \$50.75 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$79.51 |

For apprentice rates see "Apprentice- LABORER"

|  |           |         |         |        |        |        |         |
|--|-----------|---------|---------|--------|--------|--------|---------|
| HYDRAULIC DRILLS (HEAVY & HIGHWAY)<br>LABORERS | 12/1/2025 | \$41.97 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$70.83 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)            | 6/1/2026  | \$43.41 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$72.27 |
|  | 12/1/2026 | \$44.85 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$73.71 |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

|  |          |         |         |        |         |        |         |
|--|----------|---------|---------|--------|---------|--------|---------|
| INSULATOR (PIPES & TANKS)<br>HEAT & FROST INSULATORS LOCAL 6 | 9/1/2025 | \$54.31 | \$14.75 | \$9.52 | \$10.09 | \$0.00 | \$88.67 |
| HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)                  | 9/1/2026 | \$57.38 | \$14.75 | \$9.52 | \$10.09 | \$0.00 | \$91.74 |

| <b>Apprentice: INSULATOR (PIPES &amp; TANKS)</b> |         |                      |         |         |         |                           |            |
|--|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 9/1/2025</b>                  |         |                      |         |         |         |                           |            |
| Step   | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1  | 50.00   | \$27.16              | \$14.75 | \$9.27  | \$5.05  | \$0.00                    | \$56.23    |
| 2  | 60.00   | \$32.59              | \$14.75 | \$9.32  | \$6.05  | \$0.00                    | \$62.71    |





**Construction**

| <b>Classification</b> | <b>Effective Date</b> | <b>Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
|-----------------------|-----------------------|------------------|---------------|----------------|----------------|----------------------------------|-------------------|
| LABORERS              | 6/1/2026              | \$42.66          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$71.42           |
| LABORERS - ZONE 2     | 12/1/2026             | \$44.10          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$72.86           |
|                       | 6/1/2027              | \$45.55          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$74.31           |
|                       | 12/1/2027             | \$47.00          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$75.76           |
|                       | 6/1/2028              | \$48.50          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$77.26           |
|                       | 12/1/2028             | \$50.00          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$78.76           |

For apprentice rates see "Apprentice- LABORER"

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|                                 |           |         |         |        |        |        |         |
|---------------------------------|-----------|---------|---------|--------|--------|--------|---------|
| LABORER: CEMENT FINISHER TENDER | 12/1/2025 | \$41.22 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$69.98 |
| LABORERS                        | 6/1/2026  | \$42.66 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.42 |
| LABORERS - ZONE 2               | 12/1/2026 | \$44.10 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$72.86 |
|                                 | 6/1/2027  | \$45.55 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.31 |
|                                 | 12/1/2027 | \$47.00 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$75.76 |
|                                 | 6/1/2028  | \$48.50 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$77.26 |
|                                 | 12/1/2028 | \$50.00 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$78.76 |

For apprentice rates see "Apprentice- LABORER"

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|   |           |         |         |        |        |        |         |
|---|-----------|---------|---------|--------|--------|--------|---------|
| LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER | 12/1/2025 | \$41.31 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$70.61 |
| LABORERS                                  | 6/1/2026  | \$42.75 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$72.05 |
| LABORERS - ZONE 2                         | 12/7/2026 | \$44.19 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$73.49 |
|   | 6/7/2027  | \$45.64 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$74.94 |
|   | 12/6/2027 | \$47.09 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$76.39 |
|   | 6/5/2028  | \$48.59 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$77.89 |
|   | 12/4/2028 | \$50.09 | \$10.15 | \$9.50 | \$9.65 | \$0.00 | \$79.39 |

For apprentice rates see "Apprentice- LABORER"

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|                       |           |         |         |        |        |        |         |
|-----------------------|-----------|---------|---------|--------|--------|--------|---------|
| LABORER: MASON TENDER | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$70.23 |
| LABORERS              | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.67 |
| LABORERS - ZONE 2     | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$73.11 |
|                       | 6/1/2027  | \$45.80 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.56 |
|                       | 12/1/2027 | \$47.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$76.01 |
|                       | 6/1/2028  | \$48.75 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$77.51 |
|                       | 12/1/2028 | \$50.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

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|   |           |         |         |        |        |        |         |
|---|-----------|---------|---------|--------|--------|--------|---------|
| LABORER: MASON TENDER (HEAVY & HIGHWAY) | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$70.33 |
| LABORERS                                | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$71.77 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)     | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$73.21 |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

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|                             |           |         |         |        |        |        |         |
|-----------------------------|-----------|---------|---------|--------|--------|--------|---------|
| LABORER: MULTI-TRADE TENDER | 12/1/2025 | \$41.22 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$69.98 |
| LABORERS                    | 6/1/2026  | \$42.66 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.42 |
| LABORERS - ZONE 2           | 12/1/2026 | \$44.10 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$72.86 |
|                             | 6/1/2027  | \$45.55 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.31 |
|                             | 12/1/2027 | \$47.00 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$75.76 |
|                             | 6/1/2028  | \$48.50 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$77.26 |
|                             | 12/1/2028 | \$50.00 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$78.76 |

For apprentice rates see "Apprentice- LABORER"

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|                       |           |         |         |        |        |        |         |
|-----------------------|-----------|---------|---------|--------|--------|--------|---------|
| LABORER: TREE REMOVER | 12/1/2025 | \$41.22 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$69.98 |
|-----------------------|-----------|---------|---------|--------|--------|--------|---------|

**Construction**

| Classification    | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|-------------------|----------------|-----------|---------|---------|---------|---------------------------|------------|
| LABORERS          | 6/1/2026       | \$42.66   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$71.42    |
| LABORERS - ZONE 2 | 12/1/2026      | \$44.10   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$72.86    |
|                   | 6/1/2027       | \$45.55   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$74.31    |
|                   | 12/1/2027      | \$47.00   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$75.76    |
|                   | 6/1/2028       | \$48.50   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$77.26    |
|                   | 12/1/2028      | \$50.00   | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$78.76    |

This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"

|                                 |           |         |         |        |        |        |         |
|---------------------------------|-----------|---------|---------|--------|--------|--------|---------|
| LASER BEAM OPERATOR<br>LABORERS | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$70.23 |
| LABORERS - ZONE 2               | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.67 |
|                                 | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$73.11 |
|                                 | 6/1/2027  | \$45.80 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.56 |
|                                 | 12/1/2027 | \$47.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$76.01 |
|                                 | 6/1/2028  | \$48.75 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$77.51 |
|                                 | 12/1/2028 | \$50.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

|   |           |         |         |        |        |        |         |
|---|-----------|---------|---------|--------|--------|--------|---------|
| LASER BEAM OPERATOR (HEAVY & HIGHWAY)<br>LABORERS | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$70.33 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)               | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$71.77 |
|   | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$73.21 |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

|  |          |         |         |         |        |        |         |
|--|----------|---------|---------|---------|--------|--------|---------|
| MARBLE & TILE FINISHERS<br>BRICKLAYERS LOCAL 3 | 8/1/2025 | \$52.08 | \$11.49 | \$15.57 | \$6.05 | \$0.00 | \$85.19 |
| BRICKLAYERS LOCAL 3 - MARBLE & TILE            | 2/1/2026 | \$53.16 | \$11.49 | \$15.57 | \$6.05 | \$0.00 | \$86.27 |
|  | 8/1/2026 | \$54.92 | \$11.49 | \$15.57 | \$6.05 | \$0.00 | \$88.03 |
|  | 2/1/2027 | \$56.04 | \$11.49 | \$15.57 | \$6.05 | \$0.00 | \$89.15 |

| Apprentice: MARBLE & TILE FINISHERS |         |                      |         |         |         |                           |            |
|-------------------------------------|---------|----------------------|---------|---------|---------|---------------------------|------------|
| Effective Date: 8/1/2025            |         |                      |         |         |         |                           |            |
| Step                                | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                   | 50.00   | \$26.04              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$59.15    |
| 2                                   | 60.00   | \$31.25              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$64.36    |
| 3                                   | 70.00   | \$36.46              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$69.57    |
| 4                                   | 80.00   | \$41.66              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$74.77    |
| 5                                   | 90.00   | \$46.87              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$79.98    |

| Apprentice: MARBLE & TILE FINISHERS |         |                      |         |         |         |                           |            |
|-------------------------------------|---------|----------------------|---------|---------|---------|---------------------------|------------|
| Effective Date: 2/1/2026            |         |                      |         |         |         |                           |            |
| Step                                | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                   | 50.00   | \$26.58              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$59.69    |
| 2                                   | 60.00   | \$31.90              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$65.01    |
| 3                                   | 70.00   | \$37.21              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$70.32    |
| 4                                   | 80.00   | \$42.53              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$75.64    |
| 5                                   | 90.00   | \$47.84              | \$11.49 | \$15.57 | \$6.05  | \$0.00                    | \$80.95    |

**Construction**

| Classification                                | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice to Journeyworker Ratio: 1:5</b> |                |           |         |         |         |                           |            |
| MARBLE MASONS,TILELAYERS & TERRAZZO MECH      | 8/1/2025       | \$67.97   | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$103.02   |
| BRICKLAYERS LOCAL 3                           | 2/1/2026       | \$69.32   | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$104.37   |
| BRICKLAYERS LOCAL 3 - MARBLE & TILE           | 8/1/2026       | \$71.52   | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$106.57   |
|   | 2/1/2027       | \$72.92   | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$107.97   |

| <b>Apprentice: MARBLE MASONS,TILELAYERS &amp; TERRAZZO MECH</b> |         |                      |         |         |         |                           |            |
|---|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 8/1/2025</b>                                 |         |                      |         |         |         |                           |            |
| Step  | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 50.00   | \$33.99              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$69.04    |
| 2   | 60.00   | \$40.78              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$75.83    |
| 3   | 70.00   | \$47.58              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$82.63    |
| 4   | 80.00   | \$54.38              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$89.43    |
| 5   | 90.00   | \$61.17              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$96.22    |

| <b>Apprentice: MARBLE MASONS,TILELAYERS &amp; TERRAZZO MECH</b> |         |                      |         |         |         |                           |            |
|---|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 2/1/2026</b>                                 |         |                      |         |         |         |                           |            |
| Step  | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 50.00   | \$34.66              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$69.71    |
| 2   | 60.00   | \$41.59              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$76.64    |
| 3   | 70.00   | \$48.52              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$83.57    |
| 4   | 80.00   | \$55.46              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$90.51    |
| 5   | 90.00   | \$62.39              | \$11.49 | \$15.57 | \$7.99  | \$0.00                    | \$97.44    |

**Apprentice to Journeyworker Ratio: 1:5**

|  |           |         |         |         |        |        |         |
|--|-----------|---------|---------|---------|--------|--------|---------|
| MECH. SWEEPER OPERATOR (ON CONST. SITES) | 12/1/2025 | \$58.62 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$91.17 |
| OPERATING ENGINEERS LOCAL 4              | 6/1/2026  | \$59.90 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$92.45 |
| OPERATING ENGINEERS LOCAL 4              | 12/1/2026 | \$61.34 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|                             |           |         |         |         |        |        |         |
|-----------------------------|-----------|---------|---------|---------|--------|--------|---------|
| MECHANICS MAINTENANCE       | 12/1/2025 | \$58.62 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$91.17 |
| OPERATING ENGINEERS LOCAL 4 | 6/1/2026  | \$59.90 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$92.45 |
| OPERATING ENGINEERS LOCAL 4 | 12/1/2026 | \$61.34 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$93.89 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|                                 |          |         |         |         |         |        |         |
|---------------------------------|----------|---------|---------|---------|---------|--------|---------|
| MILLWRIGHT (Zone 2)             | 1/5/2026 | \$47.36 | \$10.08 | \$11.47 | \$10.00 | \$0.00 | \$78.91 |
| MILLWRIGHTS LOCAL 1121          |          |         |         |         |         |        |         |
| MILLWRIGHTS LOCAL 1121 - Zone 2 |          |         |         |         |         |        |         |

| <b>Apprentice: MILLWRIGHT (Zone 2)</b> |         |                      |        |         |         |                           |            |
|--|---------|----------------------|--------|---------|---------|---------------------------|------------|
| <b>Effective Date: 1/5/2026</b>        |         |                      |        |         |         |                           |            |
| Step                                   | Percent | Apprentice Base Wage | Health | Pension | Annuity | Supplemental Unemployment | Total Rate |
|  |         |                      |        |         |         |                           |            |

**Construction**

| Classification   | Effective Date | Base Wage            | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--|----------------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice: MILLWRIGHT (Zone 2)</b>                       |                |                      |         |         |         |                           |            |
| <b>Effective Date: 1/5/2026</b>                              |                |                      |         |         |         |                           |            |
| Step   | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1  | 55.00          | \$26.05              | \$10.08 | \$0.00  | \$5.50  | \$0.00                    | \$41.63    |
| 2  | 65.00          | \$30.78              | \$10.08 | \$0.00  | \$6.50  | \$0.00                    | \$47.36    |
| 3  | 75.00          | \$35.52              | \$10.08 | \$11.47 | \$7.50  | \$0.00                    | \$64.57    |
| 4  | 85.00          | \$40.26              | \$10.08 | \$11.47 | \$8.50  | \$0.00                    | \$70.31    |
| <b>Apprentice Notes</b>                                      |                |                      |         |         |         |                           |            |
| Step 1&2 Appr. indentured after 1/6/2020 receive no pension. |                |                      |         |         |         |                           |            |
| <b>Apprentice to Journeyworker Ratio: 1:4</b>                |                |                      |         |         |         |                           |            |
| MORTAR MIXER LABORERS  | 12/1/2025      | \$41.47              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.23    |
| LABORERS - ZONE 2  | 6/1/2026       | \$42.91              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$71.67    |
|  | 12/1/2026      | \$44.35              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.11    |
|  | 6/1/2027       | \$45.80              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$74.56    |
|  | 12/1/2027      | \$47.25              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.01    |
|  | 6/1/2028       | \$48.75              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$77.51    |
|  | 12/1/2028      | \$50.25              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.01    |
| For apprentice rates see "Apprentice- LABORER"               |                |                      |         |         |         |                           |            |
| OILER (OTHER THAN TRUCK CRANES,GRADALLS)                     | 12/1/2025      | \$25.68              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$58.23    |
| OPERATING ENGINEERS LOCAL 4                                  | 6/1/2026       | \$26.27              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$58.82    |
| OPERATING ENGINEERS LOCAL 4                                  | 12/1/2026      | \$26.94              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$59.49    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"   |                |                      |         |         |         |                           |            |
| OILER (TRUCK CRANES, GRADALLS)                               | 12/1/2025      | \$31.65              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$64.20    |
| OPERATING ENGINEERS LOCAL 4                                  | 6/1/2026       | \$32.37              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$64.92    |
| OPERATING ENGINEERS LOCAL 4                                  | 12/1/2026      | \$33.17              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$65.72    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"   |                |                      |         |         |         |                           |            |
| OTHER POWER DRIVEN EQUIPMENT - CLASS II                      | 12/1/2025      | \$58.62              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$91.17    |
| OPERATING ENGINEERS LOCAL 4                                  | 6/1/2026       | \$59.90              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$92.45    |
| OPERATING ENGINEERS LOCAL 4                                  | 12/1/2026      | \$61.34              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$93.89    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"   |                |                      |         |         |         |                           |            |
| PAINTER (BRIDGES/TANKS)                                      | 1/1/2026       | \$59.56              | \$10.35 | \$12.00 | \$12.50 | \$0.00                    | \$94.41    |
| PAINTERS LOCAL 35  |                |                      |         |         |         |                           |            |
| PAINTERS LOCAL 35 - ZONE 2                                   |                |                      |         |         |         |                           |            |

| <b>Apprentice: PAINTER (BRIDGES/TANKS)</b> |         |                      |         |         |         |                           |            |
|--|---------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Effective Date: 1/1/2026</b>            |         |                      |         |         |         |                           |            |
| Step                                       | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1  | 50.00   | \$29.78              | \$10.35 | \$0.00  | \$0.00  | \$0.00                    | \$40.13    |





**Construction**

| Classification                           | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------|---------------------------|------------|
| Painter Traffic Markings (Heavy/Highway) | 12/1/2025      | \$41.22   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$70.08    |
| Laborers                                 | 6/1/2026       | \$42.66   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$71.52    |
| Laborers - Zone 2 (Heavy & Highway)      | 12/1/2026      | \$44.10   | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$72.96    |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

|                                       |           |         |         |         |        |        |         |
|---------------------------------------|-----------|---------|---------|---------|--------|--------|---------|
| Panel & Pickup Trucks Driver          | 1/1/2026  | \$40.78 | \$16.17 | \$21.78 | \$0.00 | \$0.00 | \$78.73 |
| Teamsters Joint Council No. 10        | 6/1/2026  | \$41.78 | \$16.17 | \$21.78 | \$0.00 | \$0.00 | \$79.73 |
| Teamsters Joint Council No. 10 Zone B | 12/1/2026 | \$41.78 | \$16.17 | \$23.52 | \$0.00 | \$0.00 | \$81.47 |
|                                       | 1/1/2027  | \$41.78 | \$16.77 | \$23.52 | \$0.00 | \$0.00 | \$82.07 |

|   |          |         |         |         |         |        |         |
|---|----------|---------|---------|---------|---------|--------|---------|
| Pier and Dock Constructor (Underpinning and Deck) | 8/1/2024 | \$51.97 | \$10.08 | \$11.62 | \$12.67 | \$0.00 | \$86.34 |
| Pile Driver Local 56                              |          |         |         |         |         |        |         |
| Pile Driver Local 56 (Zone 2)                     |          |         |         |         |         |        |         |

For apprentice rates see "Apprentice- PILE DRIVER"

|                               |          |         |         |         |         |        |         |
|-------------------------------|----------|---------|---------|---------|---------|--------|---------|
| Pile Driver                   | 8/1/2024 | \$51.97 | \$10.08 | \$11.62 | \$12.67 | \$0.00 | \$86.34 |
| Pile Driver Local 56          |          |         |         |         |         |        |         |
| Pile Driver Local 56 (Zone 2) |          |         |         |         |         |        |         |

| Apprentice: PILE DRIVER  |         |                      |         |         |         |                           |            |
|--------------------------|---------|----------------------|---------|---------|---------|---------------------------|------------|
| Effective Date: 8/1/2024 |         |                      |         |         |         |                           |            |
| Step                     | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                        | 45.00   | \$23.39              | \$10.08 | \$0.00  | \$2.53  | \$0.00                    | \$36.00    |
| 2                        | 55.00   | \$28.58              | \$10.08 | \$0.00  | \$5.07  | \$0.00                    | \$43.73    |
| 3                        | 70.00   | \$36.38              | \$10.08 | \$11.62 | \$7.60  | \$0.00                    | \$65.68    |
| 4                        | 80.00   | \$41.58              | \$10.08 | \$11.62 | \$10.14 | \$0.00                    | \$73.42    |

**Apprentice to Journeyworker Ratio: 1:5**

|                   |           |         |         |        |        |        |         |
|-------------------|-----------|---------|---------|--------|--------|--------|---------|
| Pipelayer         | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$70.23 |
| Laborers          | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.67 |
| Laborers - Zone 2 | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$73.11 |
|                   | 6/1/2027  | \$45.80 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.56 |
|                   | 12/1/2027 | \$47.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$76.01 |
|                   | 6/1/2028  | \$48.75 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$77.51 |
|                   | 12/1/2028 | \$50.25 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$79.01 |

For apprentice rates see "Apprentice- LABORER"

|                                     |           |         |         |        |        |        |         |
|-------------------------------------|-----------|---------|---------|--------|--------|--------|---------|
| Pipelayer (Heavy & Highway)         | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$70.33 |
| Laborers                            | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$71.77 |
| Laborers - Zone 2 (Heavy & Highway) | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$73.21 |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

|                      |          |         |         |        |        |        |         |
|----------------------|----------|---------|---------|--------|--------|--------|---------|
| Plumber & Pipefitter | 9/1/2025 | \$55.00 | \$12.70 | \$9.71 | \$8.06 | \$0.00 | \$85.47 |
| Plumbers Local 4     | 3/1/2026 | \$57.80 | \$11.30 | \$9.71 | \$8.06 | \$0.00 | \$86.87 |
| Plumbers Local 4     |          |         |         |        |        |        |         |

**Construction**

| Classification  | Effective Date | Base Wage            | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|---|----------------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice: PLUMBER &amp; PIPEFITTER</b>                               |                |                      |         |         |         |                           |            |
| <b>Effective Date: 9/1/2025</b>   |                |                      |         |         |         |                           |            |
| Step  | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 40.00          | \$22.00              | \$12.70 | \$0.00  | \$0.00  | \$0.00                    | \$34.70    |
| 2   | 50.00          | \$27.50              | \$12.70 | \$0.00  | \$0.00  | \$0.00                    | \$40.20    |
| 3   | 60.00          | \$33.00              | \$12.70 | \$0.00  | \$0.00  | \$0.00                    | \$45.70    |
| 4   | 70.00          | \$38.50              | \$12.70 | \$0.00  | \$8.06  | \$0.00                    | \$59.26    |
| 5   | 80.00          | \$44.00              | \$12.70 | \$0.00  | \$8.06  | \$0.00                    | \$64.76    |
| <b>Apprentice: PLUMBER &amp; PIPEFITTER</b>                               |                |                      |         |         |         |                           |            |
| <b>Effective Date: 3/1/2026</b>   |                |                      |         |         |         |                           |            |
| Step  | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1   | 40.00          | \$23.12              | \$11.30 | \$0.00  | \$0.00  | \$0.00                    | \$34.42    |
| 2   | 50.00          | \$28.90              | \$11.30 | \$0.00  | \$0.00  | \$0.00                    | \$40.20    |
| 3   | 60.00          | \$34.68              | \$11.30 | \$0.00  | \$0.00  | \$0.00                    | \$45.98    |
| 4   | 70.00          | \$40.46              | \$11.30 | \$0.00  | \$8.06  | \$0.00                    | \$59.82    |
| 5   | 80.00          | \$46.24              | \$11.30 | \$0.00  | \$8.06  | \$0.00                    | \$65.60    |
| <b>Apprentice to Journeyworker Ratio: 1:3</b>                             |                |                      |         |         |         |                           |            |
| PNEUMATIC CONTROLS (TEMP.)  | 9/1/2025       | \$55.00              | \$12.70 | \$9.71  | \$8.06  | \$0.00                    | \$85.47    |
| PLUMBERS LOCAL 4  | 3/1/2026       | \$57.80              | \$11.30 | \$9.71  | \$8.06  | \$0.00                    | \$86.87    |
| For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER" |                |                      |         |         |         |                           |            |
| PNEUMATIC DRILL/TOOL OPERATOR LABORERS                                    | 12/1/2025      | \$41.47              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.23    |
| LABORERS - ZONE 2   | 6/1/2026       | \$42.91              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$71.67    |
|   | 12/1/2026      | \$44.35              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.11    |
|   | 6/1/2027       | \$45.80              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$74.56    |
|   | 12/1/2027      | \$47.25              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.01    |
|   | 6/1/2028       | \$48.75              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$77.51    |
|   | 12/1/2028      | \$50.25              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.01    |
| For apprentice rates see "Apprentice- LABORER"                            |                |                      |         |         |         |                           |            |
| PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) LABORERS                  | 12/1/2025      | \$41.47              | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$70.33    |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)                                       | 6/1/2026       | \$42.91              | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$71.77    |
|   | 12/1/2026      | \$44.35              | \$10.15 | \$9.50  | \$9.21  | \$0.00                    | \$73.21    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"        |                |                      |         |         |         |                           |            |
| POWDERMAN & BLASTER LABORERS  | 12/1/2025      | \$42.22              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$70.98    |
| LABORERS - ZONE 2   | 6/1/2026       | \$43.66              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$72.42    |
|   | 12/1/2026      | \$45.10              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$73.86    |
|   | 6/1/2027       | \$46.55              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$75.31    |
|   | 12/1/2027      | \$48.00              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$76.76    |
|   | 6/1/2028       | \$49.50              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$78.26    |
|   | 12/1/2028      | \$51.00              | \$10.15 | \$9.50  | \$9.11  | \$0.00                    | \$79.76    |

**Construction**

| <b>Classification</b>   | <b>Effective Date</b> | <b>Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
|---|-----------------------|------------------|---------------|----------------|----------------|----------------------------------|-------------------|
| For apprentice rates see "Apprentice- LABORER"  |                       |                  |               |                |                |                                  |                   |
| POWDERMAN & BLASTER (HEAVY & HIGHWAY)<br>LABORERS                                     | 12/1/2025             | \$42.22          | \$9.90        | \$9.50         | \$9.21         | \$0.00                           | \$70.83           |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)   | 6/1/2026              | \$43.66          | \$9.90        | \$9.50         | \$9.21         | \$0.00                           | \$72.27           |
|   | 12/1/2026             | \$45.10          | \$9.90        | \$9.50         | \$9.21         | \$0.00                           | \$73.71           |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                    |                       |                  |               |                |                |                                  |                   |
| POWER SHOVEL/DERRICK/TRENCHING MACHINE<br>OPERATING ENGINEERS LOCAL 4                 | 12/1/2025             | \$59.28          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$91.83           |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026              | \$60.58          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$93.13           |
|   | 12/1/2026             | \$62.03          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$94.58           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                            |                       |                  |               |                |                |                                  |                   |
| PUMP OPERATOR (CONCRETE)<br>OPERATING ENGINEERS LOCAL 4                               | 12/1/2025             | \$58.62          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$91.17           |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026              | \$59.90          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$92.45           |
|   | 12/1/2026             | \$61.34          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$93.89           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                            |                       |                  |               |                |                |                                  |                   |
| PUMP OPERATOR (DEWATERING, OTHER)<br>OPERATING ENGINEERS LOCAL 4                      | 12/1/2025             | \$37.97          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$70.52           |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026              | \$38.83          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$71.38           |
|   | 12/1/2026             | \$39.78          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$72.33           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                            |                       |                  |               |                |                |                                  |                   |
| READY-MIX CONCRETE DRIVER<br>TEAMSTERS 170<br>TEAMSTERS 170 - Dauphinais (Bellingham) | 1/1/2025              | \$27.60          | \$11.26       | \$6.15         | \$0.00         | \$0.00                           | \$45.01           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                            |                       |                  |               |                |                |                                  |                   |
| RECLAIMERS<br>OPERATING ENGINEERS LOCAL 4   | 12/1/2025             | \$58.62          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$91.17           |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026              | \$59.90          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$92.45           |
|   | 12/1/2026             | \$61.34          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$93.89           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                            |                       |                  |               |                |                |                                  |                   |
| RIDE-ON MOTORIZED BUGGY OPERATOR<br>LABORERS  | 12/1/2025             | \$41.47          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$70.23           |
| LABORERS - ZONE 2   | 6/1/2026              | \$42.91          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$71.67           |
|   | 12/1/2026             | \$44.35          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$73.11           |
|   | 6/1/2027              | \$45.80          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$74.56           |
|   | 12/1/2027             | \$47.25          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$76.01           |
|   | 6/1/2028              | \$48.75          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$77.51           |
|   | 12/1/2028             | \$50.25          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$79.01           |
| For apprentice rates see "Apprentice- LABORER"  |                       |                  |               |                |                |                                  |                   |
| ROLLER/SPREADER/MULCHING MACHINE<br>OPERATING ENGINEERS LOCAL 4                       | 12/1/2025             | \$58.62          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$91.17           |
| OPERATING ENGINEERS LOCAL 4   | 6/1/2026              | \$59.90          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$92.45           |
|   | 12/1/2026             | \$61.34          | \$16.05       | \$13.25        | \$3.25         | \$0.00                           | \$93.89           |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                            |                       |                  |               |                |                |                                  |                   |
| ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg)<br>ROOFERS LOCAL 33               | 8/1/2025              | \$53.53          | \$13.28       | \$12.67        | \$9.03         | \$0.00                           | \$88.51           |
| ROOFERS LOCAL 33  | 2/1/2026              | \$54.78          | \$13.28       | \$12.67        | \$9.03         | \$0.00                           | \$89.76           |







**Construction**

| Classification   | Effective Date | Base Wage            | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--|----------------|----------------------|---------|---------|---------|---------------------------|------------|
| <b>Apprentice: TERRAZZO FINISHERS</b>                              |                |                      |         |         |         |                           |            |
| <b>Effective Date: 2/1/2026</b>                                    |                |                      |         |         |         |                           |            |
| Step   | Percent        | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1  | 50.00          | \$34.12              | \$11.49 | \$15.57 | \$8.02  | \$0.00                    | \$69.20    |
| 2  | 60.00          | \$40.94              | \$11.49 | \$15.57 | \$8.02  | \$0.00                    | \$76.02    |
| 3  | 70.00          | \$47.77              | \$11.49 | \$15.57 | \$8.02  | \$0.00                    | \$82.85    |
| 4  | 80.00          | \$54.59              | \$11.49 | \$15.57 | \$8.02  | \$0.00                    | \$89.67    |
| 5  | 90.00          | \$61.42              | \$11.49 | \$15.57 | \$8.02  | \$0.00                    | \$96.50    |
| <b>Apprentice to Journeyworker Ratio: 1:5</b>                      |                |                      |         |         |         |                           |            |
| TEST BORING DRILLER LABORERS                                       | 12/1/2025      | \$52.70              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$82.15    |
| LABORERS - FOUNDATION AND MARINE                                   | 6/1/2026       | \$54.25              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$83.70    |
|  | 12/1/2026      | \$55.75              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$85.20    |
| For apprentice rates see "Apprentice- LABORER"                     |                |                      |         |         |         |                           |            |
| TEST BORING DRILLER HELPER LABORERS                                | 12/1/2025      | \$48.82              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$78.27    |
| LABORERS - FOUNDATION AND MARINE                                   | 6/1/2026       | \$50.37              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$79.82    |
|  | 12/1/2026      | \$51.87              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$81.32    |
| For apprentice rates see "Apprentice- LABORER"                     |                |                      |         |         |         |                           |            |
| TEST BORING LABORER LABORERS                                       | 12/1/2025      | \$48.70              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$78.15    |
| LABORERS - FOUNDATION AND MARINE                                   | 6/1/2026       | \$50.25              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$79.70    |
|  | 12/1/2026      | \$51.75              | \$10.15 | \$9.50  | \$9.80  | \$0.00                    | \$81.20    |
| For apprentice rates see "Apprentice- LABORER"                     |                |                      |         |         |         |                           |            |
| TRACTORS/PORTABLE STEAM GENERATORS OPERATING ENGINEERS LOCAL 4     | 12/1/2025      | \$58.62              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$91.17    |
| OPERATING ENGINEERS LOCAL 4  | 6/1/2026       | \$59.90              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$92.45    |
|  | 12/1/2026      | \$61.34              | \$16.05 | \$13.25 | \$3.25  | \$0.00                    | \$93.89    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"         |                |                      |         |         |         |                           |            |
| TRAILERS FOR EARTH MOVING EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 | 1/1/2026       | \$41.82              | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$79.77    |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B                              | 6/1/2026       | \$42.82              | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$80.77    |
|  | 12/1/2026      | \$42.82              | \$16.17 | \$23.52 | \$0.00  | \$0.00                    | \$82.51    |
|  | 1/1/2027       | \$42.82              | \$16.77 | \$23.52 | \$0.00  | \$0.00                    | \$83.11    |
| TUNNEL WORK - COMPRESSED AIR LABORERS                              | 12/1/2025      | \$60.93              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$90.83    |
| LABORERS (COMPRESSED AIR)  | 6/1/2026       | \$62.48              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$92.38    |
|  | 12/1/2026      | \$63.98              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$93.88    |
| For apprentice rates see "Apprentice- LABORER"                     |                |                      |         |         |         |                           |            |
| TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) LABORERS                 | 12/1/2025      | \$62.93              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$92.83    |
| LABORERS (COMPRESSED AIR)  | 6/1/2026       | \$64.48              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$94.38    |
|  | 12/1/2026      | \$65.98              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$95.88    |
| For apprentice rates see "Apprentice- LABORER"                     |                |                      |         |         |         |                           |            |
| TUNNEL WORK - FREE AIR LABORERS                                    | 12/1/2025      | \$53.00              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$82.90    |
| LABORERS (FREE AIR TUNNEL)   | 6/1/2026       | \$54.55              | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$84.45    |

**Construction**

| Classification                                 | Effective Date | Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|---------|---------------------------|------------|
|  | 12/1/2026      | \$56.05   | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$85.95    |
| For apprentice rates see "Apprentice- LABORER" |                |           |         |         |         |                           |            |
| TUNNEL WORK - FREE AIR (HAZ. WASTE) LABORERS   | 12/1/2025      | \$55.00   | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$84.90    |
| LABORERS (FREE AIR TUNNEL)                     | 6/1/2026       | \$56.55   | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$86.45    |
|  | 12/1/2026      | \$58.05   | \$10.15 | \$9.50  | \$10.25 | \$0.00                    | \$87.95    |
| For apprentice rates see "Apprentice- LABORER" |                |           |         |         |         |                           |            |
| VAC-HAUL                                       | 1/1/2026       | \$41.24   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$79.19    |
| TEAMSTERS JOINT COUNCIL NO. 10                 | 6/1/2026       | \$42.24   | \$16.17 | \$21.78 | \$0.00  | \$0.00                    | \$80.19    |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B          | 12/1/2026      | \$42.24   | \$16.17 | \$23.52 | \$0.00  | \$0.00                    | \$81.93    |
|  | 1/1/2027       | \$42.24   | \$16.77 | \$23.52 | \$0.00  | \$0.00                    | \$82.53    |
| VOICE-DATA-VIDEO TECHNICIAN                    | 9/7/2025       | \$36.12   | \$14.98 | \$13.94 | \$3.97  | \$0.00                    | \$69.01    |
| ELECTRICIANS LOCAL 96                          | 9/6/2026       | \$37.04   | \$15.96 | \$14.20 | \$4.07  | \$0.00                    | \$71.27    |
| ELECTRICIANS LOCAL 96                          |                |           |         |         |         |                           |            |

| Apprentice: VOICE-DATA-VIDEO TECHNICIAN |         |                      |         |         |         |                           |            |
|---|---------|----------------------|---------|---------|---------|---------------------------|------------|
| Effective Date: 9/7/2025                |         |                      |         |         |         |                           |            |
| Step                                    | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                       | 50.00   | \$18.06              | \$14.98 | \$0.54  | \$3.97  | \$0.00                    | \$37.55    |
| 2                                       | 55.00   | \$19.87              | \$14.98 | \$0.60  | \$3.97  | \$0.00                    | \$39.42    |
| 3                                       | 60.00   | \$21.67              | \$14.98 | \$13.51 | \$3.97  | \$0.00                    | \$54.13    |
| 4                                       | 65.00   | \$23.48              | \$14.98 | \$13.56 | \$3.97  | \$0.00                    | \$55.99    |
| 5                                       | 70.00   | \$25.28              | \$14.98 | \$13.62 | \$3.97  | \$0.00                    | \$57.85    |
| 6                                       | 75.00   | \$27.09              | \$14.98 | \$13.67 | \$3.97  | \$0.00                    | \$59.71    |
| 7                                       | 80.00   | \$28.90              | \$14.98 | \$13.73 | \$3.97  | \$0.00                    | \$61.58    |
| 8                                       | 85.00   | \$30.70              | \$14.98 | \$13.78 | \$3.97  | \$0.00                    | \$63.43    |

| Apprentice: VOICE-DATA-VIDEO TECHNICIAN |         |                      |         |         |         |                           |            |
|---|---------|----------------------|---------|---------|---------|---------------------------|------------|
| Effective Date: 9/6/2026                |         |                      |         |         |         |                           |            |
| Step                                    | Percent | Apprentice Base Wage | Health  | Pension | Annuity | Supplemental Unemployment | Total Rate |
| 1                                       | 50.00   | \$18.52              | \$15.96 | \$0.56  | \$4.07  | \$0.00                    | \$39.11    |
| 2                                       | 55.00   | \$20.37              | \$15.96 | \$0.61  | \$4.07  | \$0.00                    | \$41.01    |
| 3                                       | 60.00   | \$22.22              | \$15.96 | \$13.76 | \$4.07  | \$0.00                    | \$56.01    |
| 4                                       | 65.00   | \$24.08              | \$15.96 | \$13.81 | \$4.07  | \$0.00                    | \$57.92    |
| 5                                       | 70.00   | \$25.93              | \$15.96 | \$13.87 | \$4.07  | \$0.00                    | \$59.83    |
| 6                                       | 75.00   | \$27.78              | \$15.96 | \$13.92 | \$4.07  | \$0.00                    | \$61.73    |
| 7                                       | 80.00   | \$29.63              | \$15.96 | \$13.98 | \$4.07  | \$0.00                    | \$63.64    |
| 8                                       | 85.00   | \$31.48              | \$15.96 | \$14.03 | \$4.07  | \$0.00                    | \$65.54    |

**Apprentice to Journeyworker Ratio: 1:1**

|                      |           |         |         |        |        |        |         |
|----------------------|-----------|---------|---------|--------|--------|--------|---------|
| WAGON DRILL OPERATOR | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$70.23 |
| LABORERS             | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$71.67 |
| LABORERS - ZONE 2    | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$73.11 |
|                      | 6/1/2027  | \$45.80 | \$10.15 | \$9.50 | \$9.11 | \$0.00 | \$74.56 |

**Construction**

| <b>Classification</b> | <b>Effective Date</b> | <b>Base Wage</b> | <b>Health</b> | <b>Pension</b> | <b>Annuity</b> | <b>Supplemental Unemployment</b> | <b>Total Rate</b> |
|-----------------------|-----------------------|------------------|---------------|----------------|----------------|----------------------------------|-------------------|
|                       | 12/1/2027             | \$47.25          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$76.01           |
|                       | 6/1/2028              | \$48.75          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$77.51           |
|                       | 12/1/2028             | \$50.25          | \$10.15       | \$9.50         | \$9.11         | \$0.00                           | \$79.01           |

For apprentice rates see "Apprentice- LABORER"

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|  |           |         |         |        |        |        |         |
|--|-----------|---------|---------|--------|--------|--------|---------|
| WAGON DRILL OPERATOR (HEAVY & HIGHWAY) | 12/1/2025 | \$41.47 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$70.33 |
| LABORERS                               | 6/1/2026  | \$42.91 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$71.77 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)    | 12/1/2026 | \$44.35 | \$10.15 | \$9.50 | \$9.21 | \$0.00 | \$73.21 |

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

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|                             |           |         |         |         |        |        |         |
|-----------------------------|-----------|---------|---------|---------|--------|--------|---------|
| WASTE WATER PUMP OPERATOR   | 12/1/2025 | \$59.28 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$91.83 |
| OPERATING ENGINEERS LOCAL 4 | 6/1/2026  | \$60.58 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$93.13 |
| OPERATING ENGINEERS LOCAL 4 | 12/1/2026 | \$62.03 | \$16.05 | \$13.25 | \$3.25 | \$0.00 | \$94.58 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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|                       |          |         |         |        |        |        |         |
|-----------------------|----------|---------|---------|--------|--------|--------|---------|
| WATER METER INSTALLER | 9/1/2025 | \$55.00 | \$12.70 | \$9.71 | \$8.06 | \$0.00 | \$85.47 |
| PLUMBERS LOCAL 4      | 3/1/2026 | \$57.80 | \$11.30 | \$9.71 | \$8.06 | \$0.00 | \$86.87 |
| PLUMBERS LOCAL 4      |          |         |         |        |        |        |         |

For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"

**Additional Apprentice Information**

All apprentices must be registered with the Division of Apprenticeship Training(DAS) in accordance with M.G.L.c. 23, §§ 11E-11L. Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the hourly prevailing wage rate established by the Commissioner under the provisions of M.G.L.c. 149, §§ 26-27D.

Apprentice ratios are established by DAS pursuant to M.G.L.c. 23, §§ 11E-11L. Ratios are expressed as the allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified. The ratios listed herein have been taken from relevant private collective bargaining agreements(CBAs) and are provided for illustrative purposes only. They have not been independently verified as being accurate or continuing to be accurate.

Parties having questions regarding what ratio to use should contact DAS.

ATTACHMENT B

EXCERPTS FROM CHAPTERS 30 AND 82  
OF THE MASSACHUSETTS GENERAL LAWS

SECTION 00820B

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ATTACHMENT B

EXCERPTS FROM CHAPTERS 30 AND 82  
OF THE MASSACHUSETTS GENERAL LAWS

Certain excerpts from the Massachusetts General Laws are applicable to construction contracts. Attention is directed to the following sections of Chapter 30 as amended:

SECTION 39F: CONSTRUCTION CONTRACTS; ASSIGNMENT AND SUBROGATION;  
SUBCONTRACTOR DEFINED: ENFORCEMENT OF CLAIM FOR DIRECT  
PAYMENT: DEPOSIT, REDUCTION OF DISPUTED AMOUNTS

Section 39F. “(1) Every contract awarded pursuant to sections forty-four A to L inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

- “(a) 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 subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.
- “(b) Not later than the sixty-fifth-day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontractor less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.
- “(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.
- “(d) If, within seventy-days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the

subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth-day after the subcontract work. Within ten-days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

- “(e) Within fifteen-days after receipt of the demand by the awarding authority, but in no event prior to the seventieth-day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) 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.
- “(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) 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.
- “(g) 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) 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.
- “(h) 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), 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.

“(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first-day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g), and (h).”

#### SECTION 39G: COMPLETION OF PUBLIC WORKS; SEMI-FINAL AND FINAL ESTIMATES; PAYMENTS; EXTRA WORK: DISPUTED ITEMS

Section 39G. “Upon substantial completion of the work required by a contract with the Commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and water mains, airports and other public works, the contractor shall present in writing to the awarding authority its certification that the work has been substantially completed. With twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond by presentation of a written declaration or itemized list as aforesaid, to the contractor’s certificate within the twenty-one-day period, the contractor’s certification shall take effect as the awarding authority’s declaration that the work has been substantially completed.

“Within sixty-five-days after the effective date of a declaration of substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of the work done and all but one percent retainage on that work, including the quantity, price and all but one percent retainage for the undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payment filed by subcontractors and not yet paid to subcontractors or deposited in joint accounts pursuant to section thirty-nine F, but no contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

“If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date hereinabove set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

“Within fifteen-days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five-days after the receipt of such list or before the contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, subsequent to seven-days’ written notice to the contractor by certified mail, return receipt requested, terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

“Within thirty-days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage on that work less all payments made to date, unless the awarding authority’s inspection shows that work items required by the contract remain incomplete or unsatisfactory, or that documentation required by the contract has not been completed. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty-days after the receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth-day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date of payment therefor, whichever occurs first, provided that the awarding authority’s inspection shows that no work items required by contract remain incomplete or unsatisfactory. Interest shall not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority shall include the amount of the interest required to be paid hereunder in the final estimate.

“The awarding authority shall pay the amount due pursuant to any periodic substantial completion or final estimate within thirty-five-days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth-day to the date of payment. In the case of periodic payment, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claim against the contractor, a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five percent of the approved amount of any periodic payments, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section thirty-nine F of chapter thirty; provided that a five percent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

“No periodic, substantial completion or final estimate or acceptance of payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

“Substantial completion, for the purposes of this section, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one percent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract.”

SECTION 39K: (PROMPT PAYMENT ON BUILDING CONTRACTS) PUBLIC CONSTRUCTION, ETC., CONTRACTS; PAYMENTS

Section 39K. “Progress or periodic payments shall be made in accordance with Massachusetts General Laws, Chapter 30, Section 39K. Within fifteen days after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site ( or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, less (1) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor, provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

“The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which

contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

“All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed sub-trade and each sub-sub-trade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

“A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.”

## SECTION 39M: CONTRACTS FOR CONSTRUCTION AND MATERIALS; MANNER OF AWARDING

### Section 39M.

“(a) Every contract for the construction, reconstruction, alteration, remodeling or repair of any public work, or for the purchase of any material, as hereinafter defined, by the commonwealth, or political subdivision thereof, or by an county, city, town district or housing authority and estimated by the awarding authority to cost more than five thousand dollars, and every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, as defined by subsection one of section forty-four A of chapter one hundred and forty-nine, estimated to cost more than five thousand dollars, but not more than twenty-five thousand, shall be awarded to the lowest responsible and eligible bidder on the basis of competitive bids publicly opened and read by such awarding authority forthwith upon expiration of the time for the filing thereof; provided, however, that such awarding authority may reject any and all bids, if it is in the public interest so to do. Every bid for such contract shall be accompanied by a bid deposit in the form of a bid bond, or cash, or a certified check on, or a treasurer’s or cashier’s check issued by, a responsible bank or trust company, payable to the awarding authority. The amount of such bid deposit shall be five percent of the value of the bid. Any person submitting a bid under this section shall, on such bid, certify as follows:

The undersigned certifies under penalty of perjury that this bid is in all respects bonafide, fair and made without collusion or fraud with any other person. As used in this paragraph, the word “person” shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

(Name of person signing bid)

(Company)

This paragraph shall not apply to the award of any contract subject to the provisions of section forty-four A to forty-four L, inclusive, of chapter one hundred and forty-nine and every such contract shall continue to be awarded as provided therein. In cases of extreme emergency caused by enemy attack, sabotage or other such hostile actions or resulting from explosion, fire, flood, earthquake, hurricane, tornado or other such catastrophe, an awarding authority may, without competitive bids and notwithstanding any general or special law, award contracts otherwise subject to this paragraph to perform work and to purchase or rent materials and equipment, all as may be necessary for temporary repair and restoration to service of any and all public work in order to preserve the health and safety of persons or property; provided, that this exception shall not apply to any permanent reconstruction, alteration, remodeling or repair of any public work.

- “(b) Specifications for such contracts, and specifications for contracts awarded pursuant to the provisions of said sections forty-four A to forty-four L of said chapter one hundred and forty-nine, shall be written to provide for full compensation for each item of material to be furnished under the contract; except, however, that said specifications may be otherwise written for sound reasons in the public interest stated in writing in the public records of the awarding authority or promptly given in writing by the awarding authority to anyone making a written request therefor, in either instance such writing to be prepared after reasonable investigation. Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished; and an item shall be considered equal to the items so named or described if (1) it is at least equal in quality, durability appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the said specifications. For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said named or described materials.
- “(c) The term “lowest responsible and eligible bidder” shall mean the bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who, where the provisions of section eight B of chapter twenty-nine apply, shall have been determined to be qualified thereunder; (4) who obtains within ten days of the notification of contract award the security by bond required under section twenty-nine of chapter one hundred and forty-nine; provided that, for the purposes of this section, the term “security of bond” shall mean the bond of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the awarding authority.
- “(d) The provisions of this section shall not apply (1) to the extent that they prevent the approval of such specifications by any contributing federal agency, (2) to materials

purchased under specifications of the state department of public works at prices established by the said department pursuant to advertisement and bidding in connection with work to be performed under the provision of chapter eighty-one or chapter ninety, (3) to any transaction between the commonwealth and any of its political subdivisions or between the commonwealth and any public service corporation, and (4) to any contract of not more than twenty-five thousand dollars, awarded by a governmental body, as defined by section two of chapter thirty B, in accordance with the provisions of section five of said chapter thirty B.

- “(e) The word “material” as used in this section shall mean and include any article, assembly, system, or any component part thereof.”

#### SECTION 39N: CONSTRUCTION CONTRACTS: EQUITABLE ADJUSTMENT IN CONTRACT PRICE FOR DIFFERING SUBSURFACE OR LATENT PHYSICAL CONDITIONS

Section 39N. “Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

“If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents, either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.”

#### SECTION 39O: CONTRACTS FOR CONSTRUCTION AND MATERIALS; SUSPENSION, DELAY OR INTERRUPTIONS DUE TO ORDER OF AWARDING AUTHORITY; ADJUSTMENT IN CONTRACT PRICE; REQUIRED PROVISIONS

Section 39O. “Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety.

- “(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all of 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 fifteen-days or more due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority

shall make an adjustment in the contract price for any increase in the cost of performance of this 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.

- “(b) The general contractor must submit the amount of a claim under provision (a) 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 this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty-days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim.”

SECTION 39P: CONTRACTS FOR CONSTRUCTION AND MATERIALS; DECISIONS OF AWARDING AUTHORITY ON INTERPRETATION OF SPECIFICATIONS, ETC., REQUIRED PROMPTLY UPON SUBMISSION; TIME LIMIT; NOTICE

Section 39P. “Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, or any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material, or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty-days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty-days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty-day period and the date by which the decision will be made.”

SECTION 39R: DEFINITIONS; CONTRACT PROVISIONS; MANAGEMENT AND FINANCIAL STATEMENTS; ENFORCEMENT

Section 39R. “(a) The words defined herein shall have the meaning stated below whenever they appear in this section:

- (1) “Contractor” means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to section thirty-nine M of chapter thirty, sections forty-four A through H, inclusive, of chapter one hundred and forty-nine and sections thirty B through thirty P, inclusive, of chapter seven.
- (2) “Contract” means any contract awarded or executed pursuant to sections thirty B through thirty P, inclusive, of chapter seven and any contract awarded or executed pursuant to section thirty-nine M of chapter thirty, or sections forty-four A through H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.
- (3) “Records” means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer

printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

- (4) “Independent Certified Public Accountant” means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant’s independence shall not be confined to the relationships existing in connection with the filing or reports with the awarding authority.
  - (5) “Audit,” when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.
  - (6) “Accountant’s Report,” when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he/she has made and sets forth his/her opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed, the reason therefor shall be stated. An accountant’s report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.
  - (7) “Management,” when used herein, means the chief executive officer, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.
  - (8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principals and auditing standards.
- (b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty B through thirty P, inclusive, of chapter seven, and pursuant to section thirty-nine M of chapter thirty or to section forty-five A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:
- (1) The Contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and
  - (2) Until the expiration of six years after final payment, the office of inspector general, and the deputy commissioner of capital planning and operations shall have the right to examine any books, documents, papers or records of the

contractor or of his/her subcontractors that directly pertain to, and involve transactions relating to, the contractor or his/her subcontractors, and

- (3) If the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his/her description the date of the change and reasons therefor, and shall accompany said descriptions with a letter from the contractor's independent certified public accountant approving or otherwise commenting on the changes, and
  - (4) If the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and
  - (5) If the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.
- (c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and subsidiaries reasonably assures that:
- (1) Transactions are executed in accordance with management's general and specific authorization;
  - (2) Transactions are recorded as necessary:
    - i. To permit preparation of financial statements in conformity with generally accepted accounting principles, and
    - ii. To maintain accountability for assets;
  - (3) Access to assets is permitted only in accordance with management's general or specific authorization; and
  - (4) The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he/she has examined the statement of management on internal accounting controls, and expressing an opinion as to:

- (1) Whether the representations of management in response to this paragraph, and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

- (2) Whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.
- (d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the deputy commissioner of capital planning and operations during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.
- (e) The office of inspector general, the deputy commissioner for capital planning and operations and any other awarding authority shall enforce the provisions of this section. The deputy commissioner of capital planning and operations may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine."
- (f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b).

Attention is directed to the following section of Chapter 82 of the Massachusetts General Laws as amended to date:

#### SECTION 40: EXCAVATIONS; NOTICES; PENALTIES

Section 40. No person shall, except in an emergency, contract for, or make an excavation, which shall include, but not be limited to, the discharge of explosives and the demolition of any structure but which shall not be deemed to include gardening or tilling the soil in the case of privately owned land, in any public way, any public utility company right of way or easement, or any privately owned land under which any public utility company, municipal utility department, natural gas pipeline company, or cable television company maintains underground facilities, including pipes, mains, wires or conduits, unless at least seventy-two hours, exclusive of Saturdays, Sundays and legal holidays, but not more than thirty days, before the proposed excavation is to be made such person has given an initial notice in writing of the proposed excavation to such natural gas pipeline companies, public utility companies, cable television companies and municipal utility departments as supply gas, electricity, telephone or cable television service in or to the city or town where such excavation is to be made. Such notice shall set forth the name of the street or the route number of said way and a reasonably accurate description of the location in said way or on private property the excavation is to be made. In addition, such initial notice shall indicate whether any such excavation will involve blasting and, if so, the date on which the specific location at which such blasting is to occur; provided, however, that in no event shall any excavation by blasting take place unless written notice thereof, either in the initial notice or a subsequent notice, accurately specifying the date and location of such blasting shall have been given and received at least twenty-four hours in advance, except in the case of an unanticipated obstruction requiring blasting when such notice should not

be less than four hours in advance to such natural gas pipeline companies, public utility companies, cable television companies and municipal utility departments as supply gas, electricity, telephone or cable television services in or to the city or town where such excavation by blasting is to be made. If any such notice cannot be given as aforesaid because of an emergency, it shall be given as soon as may be practicable. Copies of such notices together with a statement certifying that they have been mailed or delivered to such cable television companies and public utility companies as required by this section shall be filed with the officer or board having charge of any such public way before a permit to excavate or to blast may be approved or issued, except in case of an emergency.

Where an excavation is to be made by a contractor as part of the work required by a contract with the commonwealth or with any political subdivision thereof or other public agency, for the construction, reconstruction, relocation or improvement of a public way or for the installation of a railway track, conduit, sewer or water main, such contractor shall be deemed to have complied with the requirements of this section by giving such notices as required by this section setting forth the location and the approximate time required to perform the work involved to each of said companies.

Within seventy-two hours, exclusive of Saturdays, Sundays and legal holidays, from the time said initial notice is received or at such time as said company and the excavator agree in writing, said company shall respond to the original written notice or to subsequent oral or written notice by designating at the locus, the location of pipes, mains, wires or conduits, in that portion of the public way, public utility company right-of-way or easement or privately owned land in which the excavation is to be made; provided, however, that in the event that the excavator has given notice of proposed excavation as aforesaid at a locus at which because of its length or size the company cannot reasonably designate the location of all such pipes, mains, wires or conduits within such seventy-two hour period, then the excavator shall notify the company of the portion of the locus in which excavation is to be first made and the company shall designate the location of such pipes, mains, wires or conduits in such portion within seventy-two hours and shall designate the location of the pipes, mains, wires or conduits in the remaining portion of the locus within a reasonable time thereafter; and the providing of such designation by the company shall constitute prima facie evidence of an exercise of reasonable precaution by the company as required by this section. After a company has designated the location of such pipes, mains, wires and conduits at the locus of the excavation in accordance with the provisions of this section, the excavator shall be responsible for maintaining the designation markings at such locus, unless the said excavator requests re-marking at the locus due to the obliteration, destruction or other removal of such markings and the company shall then have twenty-four hours following the receipt of such request to re-mark such locus.

Any such excavation shall be performed in such manner, and such reasonable precautions taken to avoid damage to the pipes, mains, wires or conduits in use under the surface of said public way, public utility company right-of-way or easement, or privately owned land, including, but not limited to, any substantial weakening of structural or lateral support of such pipe, main, wire, or conduit, penetration or destruction of any pipe, main, wire or the protective coating thereof, or the severance of any pipe, main or conduit.

When any damage of any such pipe, main, wire or conduit or its protective coating occurs, the public utility company, natural gas pipeline company, cable television company or municipal utility department shall be notified immediately by the person or public agency responsible for the excavation causing the damage.

The making of an excavation without providing any or all notice or notices required by this section with respect to any proposed excavation which results in any damage to a pipe, main, wire or conduit or its protective coating shall be prima facie evidence in any legal or administrative proceeding that such damage was caused by the negligence of such person.

Notice to the public utility underground plant damage prevention system pursuant to section seventy-six D of chapter one hundred and sixty-four, which notice is given during normal business hours each day of the year exclusive of Saturdays, Sundays and legal holidays, and which notice is given with the time periods established in this section, shall constitute compliance with the written notice requirements of this section.

Nothing contained in this section shall be construed to affect or impair local ordinances or by-laws requiring permits to be obtained before excavation in a public way, except that, notwithstanding any contrary provision of local ordinances or by-laws, no permit to excavate in a public way shall be approved or issued by the officer or board having charge of any such way, except in any emergency, until such time as copies of such notices to public utility companies and cable television companies are filed by the applicant with said officer or board for a permit as required by this section and copies of such notices are served by said officer or board upon the appropriate water and sewer department.

Any person, contractor or company found by the department of public utilities, after a hearing, to have violated any provision of this section shall be punished by a fine of two hundred dollars for the first offense and not less than five hundred nor more than one thousand dollars for any subsequent offense.

ATTACHMENT C  
CHANGE ORDER FORM

**CHANGE ORDER NO.:**

Owner: Town of Milford Water Department      Owner's Project No.:

Engineer: Tata & Howard, Inc.      Engineer's Project No.: 8183

Contractor:      Contractor's Project No.:

Project: Court Street Water Main Improvements

Contract Name:

Date Issued:      Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments:

| <b>Change in Contract Price</b>   | <b>Change in Contract Times<br/>[State Contract Times as either a specific date or a number of days]</b>  |
|---|---|
| Original Contract Price:<br>\$ _____  | Original Contract Times:<br>Substantial Completion: _____<br>Ready for final payment: _____   |
| <b>[Increase] [Decrease]</b> from previously approved Change Orders No. 1 to No. <b>[Number of previous Change Order]</b> :<br>\$ _____ | <b>[Increase] [Decrease]</b> from previously approved Change Orders No.1 to No. <b>[Number of previous Change Order]</b> :<br>Substantial Completion: _____<br>Ready for final payment: _____ |
| Contract Price prior to this Change Order:<br>\$ _____  | Contract Times prior to this Change Order:<br>Substantial Completion: _____<br>Ready for final payment: _____   |
| <b>[Increase] [Decrease]</b> this Change Order:<br>\$ _____   | <b>[Increase] [Decrease]</b> this Change Order:<br>Substantial Completion: _____<br>Ready for final payment: _____  |
| Contract Price incorporating this Change Order:<br>\$ _____   | Contract Times with all approved Change Orders:<br>Substantial Completion: _____<br>Ready for final payment: _____  |

|  |       |   |       |
|--|-------|---|-------|
| <b>Recommended by Engineer (if required)</b> |       | <b>Authorized by Owner</b>                        |       |
| By: _____                                    | _____ | _____   | _____ |
| Title: _____                                 | _____ | _____   | _____ |
| Date: _____                                  | _____ | _____   | _____ |
| <b>Authorized by Owner</b>                   |       | <b>Approved by Funding Agency (if applicable)</b> |       |
| By: _____                                    | _____ | _____   | _____ |
| Title: _____                                 | _____ | _____   | _____ |
| Date: _____                                  | _____ | _____   | _____ |

ATTACHMENT D  
PRICE ADJUSTMENTS

PRICE ADJUSTMENTS FOR CERTAIN MATERIALS IN CONSTRUCTION PROJECTS  
MGL CHAPTER 30, SECTION 38A

On November 20, 2013, the Massachusetts Legislature passed a bill (Chapter 150 of the Acts of 2013) requiring that water and sewer projects bid under MGL Chapter 30 Section 39M include price adjustment clauses for **fuel** (both diesel and gasoline), **liquid asphalt** and **portland cement** contained in cast in place concrete for all projects that are advertised for bid after January 1, 2014.

The inclusion of these clauses in the construction contract is the responsibility of the awarding authority, and as such, MassDEP does not dictate what language should be used in the contract. MassDEP will, however, review the contracts to verify that price adjustment clauses have been included.

Awarding Authorities may find value from researching the *price adjustment* information on the Massachusetts Department of Transportation (MassDOT) website at <http://www.mhd.state.ma.us/default.asp?pgid=content/fuelPrices&sid=about> . MassDOT requires the use of price adjustment clauses in all of its contracts, and since 2008 has been requiring cities and towns utilizing Chapter 90 road construction funds to also include price adjustment clauses. Because of this, many cities and towns may already have drafted appropriate price adjustment language. This language would be suitable for use in SRF funded contracts. The MassDOT website has extensive information on price adjustments and required contract language for MassDOT contracts.

Attached below is the new Chapter 30, Section 38A language and the contract language that MassDOT uses in its construction contracts. The MassDOT contract language is presented as a possible starting point for borrowers that have not drafted price adjustment clauses. The LGU should consult with their legal and contract staff as appropriate in developing the price adjustment clauses.

**Chapter 150 of the Acts of 2013**  
**An Act Relative to Price Adjustment for Certain Materials in Construction Projects**

*Whereas*, the deferred operation of this act would tend to defeat its purpose, which is to establish forthwith certain price adjustments, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public convenience.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same as follows:*

SECTION 1. Chapter 30 of the General Laws is hereby amended by inserting after section 38 the following section:-

Section 38A. Contracts for road and bridge projects awarded as a result of a proposal or invitation for bids under section 39M shall include a price adjustment clause for each of the following materials: fuel, both diesel and gasoline; asphalt; concrete; and steel. Contracts for water and sewer projects awarded as a result of a proposal or invitation for bids under said section 39M shall include a price adjustment clause for fuel, both diesel and gasoline; liquid asphalt; and

*portland* cement contained in cast-in-place concrete. A base price for each material shall be set by the awarding authority or agency and shall be included in the bid documents at the time the project is advertised. The awarding authority or agency shall also identify in the bid documents the price index to be used for each material. The price adjustment clause shall provide for a contract adjustment to be made on a monthly basis when the monthly cost change exceeds plus or minus 5 per cent.

SECTION 2. Section 1 shall apply to projects which are advertised for bid after January 1, 2014.

*Approved, November 25, 2013.*

### **MassDOT Price Adjustment Clauses**

DOCUMENT 00811  
SPECIAL PROVISIONS  
MONTHLY PRICE ADJUSTMENT FOR HOT MIX ASPHALT (HMA) MIXTURES  
ENGLISH UNITS  
Revised: 02/02/2009

This provision applies to all projects using greater than 100 tons of hot mix asphalt (HMA) mixtures containing liquid asphalt cement as stipulated in the Notice to Contractors section of the bid documents.

The Price Adjustment will be based on the variance in price for the liquid asphalt 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.

#### **Base Price**

The Base Price of liquid asphalt on a project as listed in the Notice to Contractors section of the bid documents is a fixed price determined at the time of bid by the Department by using the same method as for the determination of the Period Price detailed below.

#### **Period Price**

Please note that, starting December 15, 2008, two sets of period prices will be posted each month on the MassHighway website at <http://www.mhd.state.ma.us/>. They will be labeled "New Asphalt Period Price Method" and "Old Asphalt Period Price Method".

#### **New Asphalt Period Price Method**

The "New Asphalt Period Price Method" is for contracts bid after December 15, 2008 and will show the Period Price of liquid asphalt for each monthly period as determined by MassHighway using the average selling price per standard ton of PG64-28 paving grade (primary binder classification) asphalt, FOB manufacturer's terminal, as listed under the "East Coast Market - New England, Boston, Massachusetts area" section of the Poter & Partners, Inc. "Asphalt Weekly Monitor". This average selling price is listed in the issue having a publication date of the second Friday of the month and will be posted as the Period Price for that month. MassHighway will post this Period Price on this website within two (2) business days following their receipt of the relevant issue of the "Asphalt Weekly Monitor". Poter and Partners has granted MassHighway the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

### **Old Asphalt Period Price Method**

The "Old Asphalt Period Price Method" Period Price will be for contracts bid on or before December 15, 2008 and will contain liquid asphalt prices as determined by the old or previous method. These prices will continue to be posted on MassHighway's website until all contracts using the "Old Asphalt Period Price Method" Period Price have been closed.

### **New and Old Asphalt Period Price Methods**

The paragraphs below apply to both the New and the Old Asphalt Period Price Methods. The Contract Price of the hot mix asphalt mixture will be paid under the respective item 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 applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M3.11.03.

The Price Adjustment will be a separate payment item. It will be determined by multiplying the number of tons of hot mix asphalt mixtures placed during each monthly period times the liquid asphalt content percentage times the variance in price between Base Price and Period Price of liquid asphalt.

This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department approved extension of time.

\*\*\*\*\* END OF DOCUMENT \*\*\*\*\*

DOCUMENT 00812  
SPECIAL PROVISIONS  
MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL AND GASOLINE –  
ENGLISH UNITS  
Revised: 01/26/2009

This monthly fuel price adjustment is inserted in this contract because the national and worldwide energy situation has made the future cost of fuel unpredictable. This adjustment will provide for either additional compensation to the Contractor or repayment to the Commonwealth, depending on an increase or decrease in the average price of diesel fuel or gasoline.

This adjustment will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

The Base Price of Diesel Fuel and Gasoline will be the price as indicated in the Department's web site ([www.mhd.state.ma.us](http://www.mhd.state.ma.us)) for the month in which the contract was bid, which includes State Tax.

The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made\ during each month.

This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No adjustment will be paid for work done beyond the extended completion date of any contract.

Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

The fuel price adjustment will apply only to the following items of work at the fuel factors shown:

| ITEMS COVERED  | FUEL FACTORS       |                   |
|--|--------------------|-------------------|
|  | Diesel             | Gasoline          |
| Excavation: and Borrow Work:<br>Items 120, 120.1, 121, 123, 124, 125,<br>127, 129.3, 140,<br>140.1, 141, 142, 143, 144., 150, 150.1,<br>151 and 151.1<br>(Both Factors used) | 0.29 Gallons / CY  | 0.15 Gallons / CY |
| Surfacing Work:<br>All Items containing Hot Mix Asphalt  | 2.90 Gallons / Ton | Does Not Apply    |

\*\*\*\*\* END OF DOCUMENT \*\*\*\*\*

DOCUMENT 00814  
SPECIAL PROVISIONS  
PRICE ADJUSTMENT FOR PORTLAND CEMENT CONCRETE MIXES  
January 12, 2009

This provision applies to all projects using greater than 100 Cubic Yards (76 Cubic Meters) of Portland cement concrete containing Portland cement as stipulated in the Notice to Contractors section of the Bid Documents. This Price Adjustment will occur on a monthly basis.

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.

The Base Price of Portland cement on a project is a fixed price determined at the time of bid by the Department by using the same method as for the determination of the Period Price (see below) and found in the Notice to Contractors.

The Period Price of Portland cement will be determined by using the latest published price, in dollars per ton (U.S.), for Portland cement (Type I) quoted for Boston, U.S.A. in the **Construction Economics** section of *ENR Engineering News-Record* magazine or at the ENR website <http://www.enr.com> under **Construction Economics**. The Period Price will be posted on the MassHighway website the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

The Contract Price of the Portland cement concrete mix will be paid under the respective item 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 applies only to the actual Portland cement content in the mix placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M4.02.01.

No adjustments will be made for any cement replacement materials such as fly ash or ground granulated blast furnace slag.

The Price Adjustment will be a separate payment item. 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 only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

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END OF DOCUMENT

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract generally consists of the construction of approximately 620 linear feet of new 8-inch ductile iron water in Court Street from Main Street to Spring Street and associated valves, fittings, hydrants, and service connections. The existing water main shall be abandoned and left in place. All service connections are to be completed after the water main successfully passes pressure testing and chlorination procedures. All water main work shall be completed within 60 consecutive calendar days.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

## SECTION 01013

### FACILITY INTERFERENCE WITH PROPOSED WORK

#### PART 1 GENERAL

##### 1.01 LOCATION OF UNDERGROUND FACILITIES

- A. Facilities and other underground locations shown on the Drawings are from the best sources available to the Owner at the time of this Contract preparation and are furnished only for information and convenience of the Contractor and are not guaranteed.
1. It is agreed and understood that the Owner does not warrant or guarantee that the subsurface locations of existing pipes, structures or other underground phenomena actually encountered during construction shall be the same as those shown on the Drawings.
  2. It is further agreed and understood that the Contractor shall not use or be entitled to use any of the information made available to him on the plans or obtained in any examination made by him as a basis of any claim or demand against the Owner or the Engineer, because of any variance between the information made available and the subsurface locations of natural phenomena, existing pipes or other structures as -actually encountered during the construction work, except as may otherwise be provided for this Section.
  3. In general, main line facilities only are shown and not individual connections from main line to buildings.
  4. The presence of a structure along a proposed pipeline generally indicates that there will be a corresponding connection to it from whatever main line facilities are in the street.
  5. The Contractor shall take all necessary steps, including field inspections and consultations with the Utility Owner and Property Owners, to insure that the most up to date information and accurate information available is used to mark the field location of the facilities, including service connections, prior to construction.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

##### 1.03 PIPE LOCATIONS

- A. Pipe lines and structures installed under this Contract will be located substantially as indicated on the Drawings. The Engineer reserves the right to make such modifications in location and grade as may be found desirable to avoid interference with existing structures and/or facilities or to avoid unsatisfactory locations, all as he may see fit as in the best interests of the Owner.

#### 1.04 PROTECTION OF UNDERGROUND FACILITIES AND DAMAGES THERETO

- A. The Contractor shall notify "Dig Safe" of his operations at least 72 hours prior to construction on any portion of the project.
  - 1. The Contractor shall notify all utility companies of his operations sufficiently in advance of construction and take all measures necessary to avoid damage or undue interruption to the utilities' normal services.
  - 2. Utility poles shall be braced by the Contractor as directed by the utilities' owner and all costs shall be included in the contract unit prices.
  - 3. No additional compensation shall be allowed because of damage to facilities due to test pit excavation.

#### 1.05 CONDITION OF EXISTING FACILITIES

- A. In general, poor physical condition of existing facilities shall not be an acceptable basis for claiming additional compensation.
  - 1. Further, protection or repair of existing facilities outside of the Trench Width, W, shall not be considered as a valid basis for additional compensation.
  - 2. The Contractor shall take all prudent steps to make himself aware of the physical condition of the existing facilities expected to be encountered, and to adjust his operations accordingly.

#### PART 2 PRODUCTS (not applicable)

#### PART 3 EXECUTION

##### 3.01 INTERFERENCE AND RELOCATION OF FACILITIES

- A. INTERFERENCE BY UTILITIES
  - 1. Interference shall be considered to exist when the facility intrudes within the Trench Width, W, for various depths to invert, as tabulated on the Drawings.

##### 3.02 INTERFERENCE COSTS AND CLAIMS

- A. Claims for the costs of protecting, repairing, and/or replacing facilities which interfere will only be considered when the Engineer determines that:
  - 1. The facility is not shown on the Drawings.
  - 2. The facility is shown but the facility is found in a location substantially different from the location shown.
  - 3. The Contractor has necessarily incurred additional cost because of the interference.
  - 4. In general, claims will not be considered for cross trench service connections which are not shown on the Drawings or incorrectly shown.
- B. It is routine and customary in work of this kind to encounter subsurface or other conditions which require changes in pipe line grade, alignment and/or relocation of facilities or other adjustments which may necessitate rescheduling of the Contractor's work.

1. The Contractor should allow contingency in his bid for schedule adjustments commonly encountered.
  2. The Engineer shall in general not approve claims for delay because of changes in alignment or rescheduling of construction.
- C. Where facilities are shown on the Drawings to interfere, the Contractor is required to maintain facilities in operation in their existing locations.
1. Such interferences and the protection and repair of such facilities shall not constitute the basis of an approvable claim.
  2. The cost to maintain such facilities in operation in their existing location shall be included by the Contractor in his bid.

### 3.03 RELOCATION OF FACILITIES

- A. Relocation of facilities is required:
1. Where indicated on the Drawings.
  2. When a 3-inch or less vertical and horizontal separation cannot be achieved between the existing facility and the new pipe line.
  3. To comply with minimum water/sewer separation.
  4. To comply with minimum requirements of the utility owner.

Relocation may be avoided in certain cases by line and grade adjustments.

- B. Existing facilities shall not be disturbed until the facility owner and the Engineer agree to the arrangements and the Engineer requests the relocation to proceed in writing.
1. If the owners of the facilities permit, and the Engineer so requests, the Contractor shall do the whole or any portion of the relocation work.
  2. Relocation of facilities will generally be by new pipe and appurtenances, approved and furnished by the facility owner, except where it is feasible in the opinion of the Engineer and facility owner to utilize existing materials.
  3. If so requested by the facility owner, the Engineer may direct the Contractor to furnish the material.
  4. All removed materials remain the property of the facility owner.

### 3.04 RELOCATION COSTS AND CLAIMS

- A. All costs of temporary relocations for the Contractor's convenience shall be borne by the Contractor.
- B. Relocation costs for all facilities specified on the Drawings to be relocated shall be the responsibility of the Contractor and be included in the Contractor's bid prices, including those specifically for facility relocations, if such are included.
- C. Relocation costs for publicly owned facilities not specified on the Drawings to be relocated, but directed to be relocated by the Engineer in writing, shall be paid in accordance with General Conditions Par. 4.04, B.
- D. Relocation costs for privately owned utilities for which relocation is required by the work of this Contract, will not be approved by the Engineer for payment as Extra Work.

- E. Exceptions as determined by the Engineer shall be paid in accordance with General Conditions Par. 4.04, B.

### 3.05 PRIVATE FACILITY COMPANY CLAIM DISTINCTIONS

- A. Claims against the Owner by the Contractor for the cost of delays or damage repair sustained by the Contractor because of damage to or interferences between publicly and/or privately owned facilities and the proposed work will not be considered valid for additional compensation.
  - 1. Claims involving publicly and/or privately owned facilities must be settled between the Contractor and the facility owner.
- B. The Owner reserves the right to exercise, or not to exercise, any rights he may have to require relocation of publically and/or privately owned facilities at the facility company's expense in case of interferences.
  - 1. If the Owner does not exercise such rights, no claims against the Owner for not exercising such rights shall be approved by the Engineer.

### 3.06 FACILITY SERVICE CONNECTIONS AND WORK

- A. The Contractor shall make all arrangements with the facility companies for temporary and permanent services and relocations required under this Contract, subject to the conditions described elsewhere in these Specifications.
  - 1. Facility companies in the area of work, and/or expected to provide service to the work, shall be arranged for and if required paid for at no additional expense to the Owner.

END OF SECTION

## SECTION 01019

### DRAWINGS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. The Contract Drawings may be modified by addenda and shall be issued for construction purposes.
1. These Drawings may be supplemented or superseded by such additional general and detail drawings as may be necessary and desirable as the work progresses.
  2. The Drawings issued for construction at that time or after the signing of the Contract Documents shall become the Contract Drawings.
- B. Dimensions:
1. Except where noted, the Drawings are made to scale, but all working dimensions shall be taken from the figured dimensions or by actual measurements at the work, and in no case by scaling the prints.
  2. The Contractor shall study and compare all Drawings and verify all figures before laying out or constructing the work and shall be responsible for any and all errors in the Contract work which might have been avoided thereby.
  3. The Contractor shall take all measurements of existing established conditions notwithstanding the figured dimensions on the Drawings.
  4. When figured dimensions are not in agreement with the Contractor's measurements, the Engineer shall be immediately notified and the Engineer will promptly adjust the same.
  5. Whether or not an error is believed to exist, deviations from the Drawings and the dimensions given thereon shall be made only after approval in writing is obtained from the Engineer.
- C. Diagrammatic Drawings:
1. Plans or Drawings where the work is shown diagrammatically indicate approved working systems. Every piece of material, fittings, fixtures or small equipment is not shown, nor every difficulty or interference that may be encountered to carry out the true intent and purpose of the Contract Documents.
  2. All necessary parts to make complete, approved working systems or installation shall be included as if detailed on these Drawings.
  3. The location of pipe lines and appurtenances shown on the Drawings, unless exactly dimensioned, shall be considered as approximate only.
  4. The Contractor shall adjust the position of the pipe lines and appurtenances in accordance with good working practices to meet interferences, provide proper clearance and provide proper access space for operation and maintenance.
- D. Typical Details:
1. Where shown on the Drawings, typical details shall apply to each and every item of the Contract work where such items are incorporated and the detail is applicable.
  2. Unless noted otherwise, such typical details shall be applicable in full.

- E. Copies of Drawings Furnished:
1. The Engineer shall furnish the Contractor, without charge, up to six copies of the Drawings and Specifications for execution of the Contract work.
  2. Additional copies will be furnished at the Contractor's expense when requested, except that any copies of available plans and specifications returned from the bidders in good condition will be furnished to the Contractor without charge.
  3. All Drawings and Specifications are the property of the Owner.
  4. The Contractor shall return all copies if so requested.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 EXISTING AND ADJACENT CONDITIONS

- A. Wherever existing conditions or construction not required as part of the work of the Contract are shown, they are so shown as a source of information only. The Engineer, while believing such information is substantially correct, assumes no responsibility thereof.
1. Before starting any work that might be affected by such existing construction or conditions, the Contractor shall have made himself familiar with all conditions affecting the nature and manner of performing the work, and shall not be entitled to any extra compensation for any work or expense arising from or caused by his neglect to have verified all existing conditions and requirements.

3.02 DISCREPANCIES

- A. If the Contractor during the progress of the work, discovers any discrepancies between the Drawings and the Specifications, any errors or omissions on the Drawings, or any discrepancies between the physical condition of the Work and the Drawings, then the Contractor shall immediately notify the Engineer, who will promptly adjust the same. Any work performed after such discovery without the approval of the Engineer, shall be at the risk and expense of the Contractor.

END OF SECTION

SECTION 01020

ALLOWANCES

PART 1 GENERAL

1.01 DESCRIPTION

The stated allowances for the price adjustments as specified in Section 01025 Measurement and Payment:

Price Adjustment: Hot Mix Asphalt Mixtures: One Thousand Dollars (\$1,000.00)

Price Adjustment: Fuel: One Thousand Dollars (\$1,000.00)

Price Adjustment: Uniformed Police Officers: Twenty-Eight Thousand Eight Hundred Dollars (\$28,800.00)

1.02 RELATED WORK SPECIFIED ELSEWHERE

Section 01025 - Measurement And Payment

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

## SECTION 01025

### MEASUREMENT AND PAYMENT

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. The purpose of this Section is to define the method of measurement and payment for each of the unit prices or lump sums listed in the Bid Proposal. If no bid item appears in the Bid Proposal for any of the following described items, no work of that description is anticipated on the project.
1. The Contractor shall thoroughly review the work required for each payment item.
  2. The Contractor shall have included in his various bid items, an amount to cover costs for additional work which may be necessary, to construct the water mains in the close proximity of underground facilities, services, poles and other facilities which may exist.
  3. The discovery of an underground facility during the construction, not shown on the Contract Drawings shall not constitute automatic initiation of a change order. The additional work to cross or pass this underground facility must be substantial for consideration for additional payment.
    - a. The word "substantial" as used above shall mean that an additional amount of work is required, beyond the work that is normally required in the crossing or paralleling of an underground facility.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include General Conditions, Supplementary Conditions, and all Divisions of these Specifications.

##### 1.03 TRENCH PAYMENT LIMITS

- A. The measurements for trench payment limits shall be used for the volume of computing excavation below grade.
1. Trench limits in earth and rock shall be measured within vertical lines. The measured lines shall not exceed the trench width shown on the Drawings.
  2. Depth shall be measured as shown on the Drawings for excavations in earth and/or rock.
  3. In paved roadways the trench width at the roadway surface shall not exceed the width shown on the Drawings.
  4. If the Owner orders additional width beyond the above-specified limits, or below grade excavation, the width or depth ordered will be considered for payment, as will the refill material.

##### 1.04 EARTH EXCAVATION FOR PIPELINE TRENCHES

- A. Earth excavation for pipeline trenches from the existing ground surface to pipe sub-grade shall not be paid for separately, and all costs for this excavation shall be included in the unit prices paid for the various pipe laying items.

1.05 TRENCH BRACING AND SUPPORT

- A. All costs for furnishing, installing and removing sheeting, bracing or the use of a steel support box shall be included in the various pipe laying items.

1.06 PIPE BEDDING

- A. All costs for stockpiling, loading, hauling, placing, and compacting pipe bedding shall be included in the various pipe-laying items.

1.07 SURPLUS MATERIAL

- A. All costs for stockpiling, loading, hauling, and legal disposing of surplus material shall be included in the various pipe laying items.

1.08 DEWATERING

- A. All costs for furnishing, installing and operating a dewatering system shall be included in the various pipe laying items.

1.09 EXCESS EXCAVATED MATERIAL

- A. All costs for transporting, placing, and compacting excess material obtained within this Contract shall be included in the various pipe laying items.

1.10 CRUSHED STONE BEDDING, BANK-RUN SAND AND GRAVEL

- A. There will be no separate measurement or payment for furnishing and placing, crushed stone bedding, bank run sand and gravel. The cost of such materials and work shall be included in the unit price for the various pipe laying items.

1.11 PRESSURE/LEAKAGE TESTING AND DISINFECTION

- A. No separate payment shall be made for labor, materials, tools, and equipment necessary for or incidental to the performance of the pressure/leakage tests and the disinfection of the water main and its appurtenances. The costs associated with pressure/leakage testing and disinfection shall be included in the unit price for the various pipe-laying items.

1.12 REMOVING AND STACKING OF HYDRANTS & GATE VALVES

- A. No separate payment shall be made for labor, materials, tools, and equipment necessary for or incidental to the removal of and stacking of the designated hydrant(s) or gate valves locations determined by the Owner. The cost for this item shall be included in the unit price for the various pipe-laying items.

1.13 CAPPING REMOVAL AND ABANDONMENT (IN-PLACE) OF OLD MAINS

- A. No separate payment shall be made for labor, materials, tools and equipment necessary for or incidental to the capping of and abandonment (in-place) or the removal and disposal of the water mains and valves including pavement replacement. The cost for this item shall be included in the unit price for the various pipe-laying items.

#### 1.14 RESTORATION OF DAMAGED AREAS

- A. All costs for restoration of damaged areas, including but not necessarily limited, to existing sidewalks, curbs, shrubs, trees, stone walls, lawns, loam and seed shall be included in the unit price for the various pipe-laying items.
- B. Paved gutters and driveways shall not be measured for separate payment, but shall be considered incidental to the work.
- C. All public or private monuments, iron pipes or other types of property line and geodetic markers damaged or disturbed by operations under this Contract shall be reset by a licensed land surveyor - all at no additional cost to the Owner. All other work, under this Section, shall not be paid separately, but shall be considered incidental to the work and included in the unit price and lump sum items.

#### 1.15 UNIFORMED POLICE OFFICERS

- A. The Police Department will generally bill the Contractor weekly, and the Contractor shall pay the Police Department bills within a ten (10) working day period for Uniformed Police Officers provided on the job site. The billing shall include a weekly statement outlining the days worked, hours worked, location of the work, and rate for all officers providing service during that billing period. The Police Chief must sign all bills.
- B. Traffic persons ordered by the Contractor for his convenience or unforeseen problems which are not part of the original project shall be paid at his own expense.
- C. The Contractor is responsible for contacting the Police Department in regards to scheduling requirements.
- D. Uniformed Police Officers required for purposes other than public safety and/or control of traffic shall not be eligible for reimbursement of payment. No payment will be made for overtime traffic persons unless emergency conditions exist. If the Contractor elects to work more than eight (8) hours in one day, or more than forty (40) hours in one week, he shall assume all such costs and will not be reimbursed under any bid item. However, if the Owner approves emergency overtime, the Owner shall pay the Police Department directly for services rendered.

#### 1.16 TRAFFIC REGULATION

- A. Except for the payment of uniformed police officers as outlined in 1.15, there shall be no separate measurement or payment for the work performed under Section 01570 – Traffic Regulation. All costs for furnishing lighted barricades, variable message sign and traffic protection devices and for labor, equipment and services involved in the erecting, maintaining, moving, adjusting, relocating and storing of signs, flashers, lights, barricades, traffic cones, traffic delineators and other devices furnished by the Contractor, as well as the cost of all labor and equipment involved in the maintenance of traffic lanes and detours ordered or included in the approved scheme for maintenance of traffic shall be included in the unit price bid for the various pipe laying items.

#### 1.17 MEASUREMENT OF QUANTITIES

- A. The quantities of the various items of work performed shall be determined, for purposes of progress and final payment, by the Contractor and reviewed by the Engineer.

- B. The method of measurements to be used in the determination of quantities of the work of this Contract shall be as specified in this Section.
1. Area Measurements
    - a. Unless otherwise specified, measurement for area computations shall be made along the surface and taken to the nearest half (1/2) foot.
  2. Linear Measurements
    - a. All items such as pipe, service tubing, pavement and curbing, etc., shall be made along the alignment of the item, at the surface, and taken to the nearest foot.
  3. Volume Measurements - In figuring volumes the following shall apply:
    - a. Excavation Below Grade: Measurements shall be taken to the grade actually excavated as ordered, and within the trench payment limits specified in this Section.
    - b. Test Pits: Measurements shall be taken to the lines and grade actually excavated.
    - c. Rock and Boulder: Only boulders greater than one (1) cubic yard in volume and rock as defined in Section 02227, shall be measured for payment. Measurements shall be taken to the lines and grades as specified, in the trench payment limits in this Section.
  4. Weight Measurements: Measurement for fittings shall be measured for payment by the pound excluding weight of accessories such as bolts, nuts, glands, and gaskets. Weights shall be based on approved shop drawings.
  5. Lump Sum: The term "lump sum" when used as a unit of payment, shall mean complete payment for the work described in the Contract Documents.
  6. Per Each: The term "per each" when used as a unit of payment, shall mean complete payment for each unit furnished and installed, completed and accepted, as described in the Contract Documents.
  7. Ton: When used as a pavement payment item, shall be arrived at by the following method:
    - a. Payment shall be calculated by measurements of the surface area, within the payment limits, by square yards, times the depth of the pavement, times a factor of .056, for a conversion to ton basis.
    - b. A five (5) percent service factor shall be allowed if a comparison between measurements and delivery slips indicate that additional material was placed. If a comparison between delivery slips and measurements indicate less material was placed, the slip quantity shall be used for payment. The Contractor shall submit to the Engineer, one (1) copy of the certified weight slips for all asphaltic concrete used in the Work.

## 1.18 ASPHALTIC CONCRETE PAVEMENT

### A. MEASUREMENT

1. "Trench" Pavement shall be measured by the actual linear feet installed along the full length of the street for the standard trench width as identified in the specifications and on the Drawings.
  - a. Included in this item shall be the adjustment of all castings if required to finish grade within the trench area, and a binder course.
2. No separate measurement shall be made for cutting of existing pavement, cutting of edges, tack coating, backfilling, compaction, preparation of subgrade; furnishing and installing additional gravel base course; or disposal of materials.
4. No separate measurement shall be made for repair of traffic loop detectors; furnishing and installing reflectorized pavement markings; and the removal and resetting manhole frames, gate boxes, catch basins, and private utility castings.
5. Cement Concrete or Asphaltic Concrete Sidewalks shall not be measured for separate payment. In addition, the replacement, removal and/or resetting of bituminous, granite or concrete curbing shall not be measured for separate payment. All cost associated with replacing, removing and/or resetting curbing shall be included in the cost per linear foot of Temporary Pavement.

## 1.19 DUST CONTROL

### A. MEASUREMENT

1. All costs for furnishing, stockpiling, hauling, placing, and spread materials required for dust control (i.e. calcium chloride, water) shall be included in the various pipe-laying items.

## 1.20 PAYMENT

| ITEM NO | DESCRIPTION                     |
|---------|---------------------------------|
| 1       | Mobilization and Demobilization |
| 2       | Test Pits                       |
| 3       | Excavation Below Grade          |
| 4       | Rock Removal                    |
| 5       | Fittings and Appurtenances      |
| 6       | 8-Inch Ductile Iron Pipe        |
| 7       | 6-Inch Ductile Iron Pipe        |
| 8       | 4-Inch Ductile Iron Pipe        |
| 9       | Hydrants                        |
| 10      | 8-Inch Gate Valves and Boxes    |
| 11      | 6-Inch Gate Valves and Boxes    |
| 12      | 16" x 8" Tapping Sleeve & Valve |
| 13      | 4-Inch Line Stop                |
| 14      | 2-Inch Corporation Stops        |
| 15      | 2-Inch Curb Stop and Boxes      |
| 16      | 2-Inch Service Tubing           |
| 17      | 1-Inch Corporation Stops        |
| 18      | 1-Inch Curb Stops and Boxes     |
| 19      | 1-Inch Service Tubing           |

|    |   |
|----|---|
| 20 | Temporary Trench Pavement                                       |
| 21 | Permanent Trench Pavement                                       |
| 22 | Repair and Replace Sewer and Drain Conflicts<br>in Trench Width |
| 23 | Controlled Density Fill (CDF)                                   |
| 24 | Price Adjustment: Hot Mix Liquid Asphalt                        |
| 25 | Price Adjustment: Fuel  |
| 26 | Uniformed Police Officers                                       |

Item No. 1 Mobilization and Demobilization

Payment for mobilization and demobilization shall be at the lump sum price bid under Bid Item No. 1 in the Bid Form. The total price bid for mobilization and demobilization shall not exceed five (5) percent of the total amount of the remaining bid items. Payment shall be full compensation for bonds, insurance, all permits, Town of Milford Performance Bond, transportation of equipment and materials to the construction site, furnishing, installing, and maintaining project construction signs, set up of storage yard, site stabilization, and the removal of equipment and materials and property restoration upon completion of the Work. One half of the lump sum price bid under Bid Item No. 1 in the Bid Form shall be held by the Owner until the removal of all equipment, materials, and full restoration of the project area upon completion of the Work.

Item No. 2 Test Pits

Payment shall be made at the unit price bid per cubic yard under Bid Item No. 2 in the Bid Form. The price bid shall be full compensation for all costs associated with test pits, including but not limited to pavement cutting, excavation by machine or by hand if necessary, dewatering, support and protection of facilities, backfilling and compaction of the backfill, and surface restoration, all as required by the Contract Documents.

Item No. 3 Excavation Below Grade

Payment shall be made at the unit price bid per cubic yard under Bid Item No. 3 in the Bid Form. The unit price bid shall be full compensation for below grade excavation, dewatering, removal, and disposal of unsuitable material and furnishing, placing and compaction of the refill material, all as required by the Contract Documents. Payment will not be made under this item unless the excavation below grade is ordered by the Owner/Engineer.

Item No. 4 Rock Removal

Payment shall be made at the unit price bid per cubic yard under Bid Item No. 4 in the Bid Form. The price bid shall be full compensation for all costs associated with rock removal, including but not limited to obtaining of permits, drilling and blasting, pre-blast survey, excavation, protection of persons and private property, disposal of the excavated rock/or boulders and providing, placing and compaction of the refill material, all as required by the Contract Documents.

Item No. 5 Fittings and Appurtenances

Payment shall be made at the unit price per pound of body weight under Bid Item No. 5 in the Bid Form. Body weight shall not include the weight of the accessories, such as gaskets, glands and bolts and nuts but cost per pound shall include providing those appurtenances under this unit item. Payment shall be full compensation for transition couplings, solid sleeves, or flexible couplings, fittings, bends, furnishing, placing, jointing and compacting as required by the Contract Documents.

Items No. 6, 7, 8 8-Inch, and 6-Inch, and 4-Inch Ductile Iron Pipe

Payment shall be made at the unit price bid per linear foot under Bid Items No. 6, 7, and 8 in the Bid Form. Payment shall be full compensation for pipe, excavation, removal and disposal of unsuitable material, cutting, removal, and proper disposal of existing pavement, furnishing and installing suitable refill material, laying of the pipe, pipe bedding, furnishing, installing, and compacting processed gravel subbase for roadway in 6-inch lifts, backfilling and compacting, compaction testing, dewatering, migration barriers, transition couplings, thrust blocks, joint restraints, connections to and capping and abandoning of existing water mains, removal and disposal of existing water mains, installation and capping of temporary taps for disinfection or testing, closing of predetermined gate valves and removal of gate boxes, removal and stacking and delivery of hydrants, polyethylene encasement, concrete encasement of water main at sewer crossings, insulation, furnishing and installing cold patch, dust control, loam and seed, sidewalk replacement, curb replacement, removal and resetting of granite curbing, catch basin siltation sacks, traffic regulation including detour plans, sheeting and bracing, disinfection and testing, tree protection and restoration, and preconstruction video recording all as required by the Contract Documents.

Item No. 9 Hydrants

Payment shall be made at the unit price bid per each under Bid Item No. 9 in the Bid Form. Payment shall be full compensation for furnishing and installing hydrant, joint restraint, painting, bedding, excavation, dewatering, shoring, setting of hydrant, crushed stone drainage well, thrust blocking, backfilling and compacting, temporary and permanent trench pavement, pavement cutting, removal and disposal, curb and sidewalk replacement, loam and seed, hydrant extensions (as needed), restoration of public and private property and testing all as required by the Contract Documents. Controlled density fill shall be paid for under Bid Item No. 23.

Items No. 10 and 11 8-Inch and 6-Inch Gate Valves and Boxes

Payment shall be made at the unit price bid per each under Bid Items No. 10 and 11 in the Bid Form. Payment shall be full compensation for furnishing and installing valve, valve box, bedding, excavation, dewatering, shoring, setting of valve and valve box, joint restraint, backfilling and compacting, and testing all as required by the Contract Documents.

Items No. 12 16-Inch by 8-Inch Tapping Sleeve and Valve and Boxes

Payment shall be made at the unit price bid per each under Bid Item No. 12 in the Bid Form. Payment shall be full compensation for furnishing and installing tapping sleeve and valve and valve boxes, bedding, excavation, dewatering, shoring, setting of valve and

valve box, joint restraint, backfilling and compacting, and testing all as required by the Contract Documents.

Item No. 13 4-Inch Insertion Valve

Payment shall be made at the unit price bid per each under Bid Item No. 13 in the Form for General Bid. Payment shall be full compensation for furnishing and installing the insertion valve, excavation, tapping the line, disposal of all unclassified and/or undesirable materials, all plating, shoring, dewatering, bedding, backfilling and compacting operations, testing, and all materials, tools and equipment necessary to perform this work, all as required by the Contract Documents.

Items No. 14 and 15 2-Inch Corporations and Curb Stops and Boxes

Payment shall be made at the unit price bid per each under Bid Items No. 14 and No. 15 in the Bid Form. Payment shall be full compensation for corporations, pressure taps, curb stops with box, service saddles, excavation, dewatering, shoring, jointing with tubing, backfilling and compacting, loam and seed, temporary and permanent trench paving, pavement cutting, removal and disposal, sidewalk and curb replacement, restoration, and testing all as required by the Contract Documents.

Items No. 16 2-Inch Service Tubing

Payment shall be made at the unit price bid per linear foot under Bid Item No. 16 in the Bid Form. Payment shall be full compensation for scheduling and coordination, tubing, excavation, dewatering, shoring, connections to corporation stops and curb stops, couplings, bedding, backfilling and compacting, loam and seed, removal, replacement, and or setting of curb, curb and sidewalk replacement, restoration of public and private property to original condition, protection of property, temporary and permanent trench paving, pavement cutting, removal and disposal, and testing all as required by the Contract Documents. Controlled density fill shall be paid for under Bid Item No. 23.

Items No. 17 and 18 1-Inch Corporations and Curb Stops and Boxes

Payment shall be made at the unit price bid per each under Bid Items No. 17 and No. 18 in the Bid Form. Payment shall be full compensation for corporations, pressure taps, curb stops with box, service saddles, excavation, dewatering, shoring, jointing with tubing, backfilling and compacting, loam and seed, temporary and permanent trench paving, pavement cutting, removal and disposal, sidewalk and curb replacement, restoration, and testing all as required by the Contract Documents.

Items No. 19 1-Inch Service Tubing

Payment shall be made at the unit price bid per linear foot under Bid Item No. 19 in the Bid Form. Payment shall be full compensation for scheduling and coordination, tubing, excavation, dewatering, shoring, connections to corporation stops and curb stops, couplings, bedding, backfilling and compacting, loam and seed, removal, replacement, and or setting of curb, curb and sidewalk replacement, restoration of public and private property to original condition, protection of property, temporary and permanent trench paving, pavement cutting, removal and disposal, and testing all as required by the Contract Documents. Controlled density fill shall be paid for under Bid Item No. 23.

Item No. 20 Temporary Trench Pavement

Payment shall be made at the price bid per linear foot as measured along the centerline of the main under Bid Item No. 20 in the Bid Form. Payment shall be full compensation for all preparatory work and furnishing, placing and compacting the asphaltic concrete pavement as required by the Contract Documents. The price shall include the cost of the bituminous material placement and maintenance of the construction to include additional materials and labor required due to settlement and/or maintenance over a winter shut down, tack coat, cutting or keying of the pavement, removal and resetting all manhole frames, gate boxes, curbs, catch basins, etc.; and the repair of traffic loop detectors and reflectorized pavement markings. Payment for temporary trench pavement required for service and hydrant installations shall be included in the respective items.

Item No. 21 Permanent Trench Pavement

Payment shall be made at the unit price per linear foot as measured along the centerline of the main under Bid Item No. 21 in the Bid Form. Payment shall be full compensation for all preparatory work, milling, and furnishing, placing and compacting the asphaltic concrete pavement as required by the Contract Documents. The price shall include the cost of the bituminous material placement and maintenance of the construction to include additional materials and labor required due to settlement and/or maintenance over a winter shut down, tack coat, line striping, cutting or keying of the pavement, removal and resetting all manhole frames, gate boxes, curbs, catch basins, etc. and the repair of traffic loop detectors and reflectorized pavement markings, as required by the Contract Documents. Payment for permanent trench pavement required for service and hydrant installations shall be included in the respective items.

Item No. 22 Repair and Replace Sewer and Drain Conflicts in Trench Width

Payment shall be made at the unit price bid per each under Bid Item No. 22 in the Bid Form. Payment shall be full compensation for repair or replacement of existing sewer services and drain lines damaged within the trench limits during construction as a result of the location not being marked or the location being mismarked by more than 5 feet, and shall include SDR 35 PVC Pipe, Fernco couplings, excavation, dewatering, shoring, bedding, backfilling and compacting, restoration of private and public property to original condition, pavement cutting, temporary and permanent paving, leveling course, restoration of driveways and sidewalks to original condition, removal and disposal of existing concrete or pavement, and testing all as required by the Contract Documents.

Item No. 23 Controlled Density Fill (CDF)

Payment shall be made at the unit price per cubic yard under Bid Item No. 23 in the Bid Form, measured as the actual quantity furnished and placed within the trench limits where requested by the Owner or required on the drawings. The unit price shall be full compensation for furnishing, placing, grading, and compacting of controlled density fill within the trench payment limits, and furnishing, installing, and removing temporary plates all as required by the Contract Documents.

Item No. 24 Price Adjustment: Hot Mix Liquid Asphalt

Payment shall be made from the cash allowance noted under Bid Item No. 24 in the Bid Form. Payment shall be full compensation for adjusting the unit cost per ton upward, for asphaltic concrete installed and in place, as a result of an increase in the price of liquid

asphalt as described in specification sections 00030 and 00820D. The price increase shall only be applied to the liquid asphalt percentage of the asphalt tons installed. If the price decreases, a credit shall be applied by change order to the Contract.

Item No. 25      Price Adjustment: Fuel

Payment shall be made from the cash allowance noted under Bid Item No. 25 in the Bid Form. Payment shall be full compensation for adjusting the unit cost per gallon, per cubic yard or gallon, or per ton upwards, for fuel usage (diesel and gasoline) from excavation, backfilling, and surfacing work, as a result of an increase in the price of fuel as described in specification sections 00030 and 00820D. If the price decreases, a credit shall be applied by change order to the Contract.

Item No. 26      Uniformed Police Officers

Payment shall be made from the cash allowance under Bid Item No. 26 in the Bid Form. Payment shall be full compensation for all costs associated with providing uniformed police officers and cruisers for public safety as required by the Contract Documents. Contractor shall be reimbursed the actual cost of police details based upon paid invoices submitted in advance, without mark-up.

PART 2      PRODUCTS (Not Applicable)

PART 3      EXECUTION (Not Applicable)

END OF SECTION

SECTION 01027

APPLICATION FOR PAYMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Comply with procedures described in this Section when applying for progress payment and final payment under this Contract.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.
- B. Progress payments are described in the General Conditions.
- C. Payments upon Substantial Completion and Completion of the Work are described in the General Conditions.

1.03 QUALITY ASSURANCE

- A. Prior to start of construction, secure the Engineer's approval of the Schedule of Values required to be submitted under Section 01026, Schedule of Values.
  - 1. During progress of the Work, modify the Schedule of Values as approved by the Engineer to reflect changes in the Contract Sum due to change orders or other modifications to the Contract.
  - 2. Base requests for payment on the approved Schedule of Values.

1.04 SUBMITTALS

- A. Informal Submittal: Unless otherwise directed by the Engineer;
  - 1. Make an informal submittal of Request for Payment by filling in, with erasable pencil, pertinent portions of AIA Document G702, "Application and Certificate for Payment," plus continuation sheet or sheets.
  - 2. Make this preliminary submittal to the Engineer at the end of each month.
  - 3. Revise the informal submittal of Request for Payment as agreed, between both parties, initialing all copies.
- B. Formal Submittal: Unless otherwise directed by the Engineer;
  - 1. Make formal submittal of Request for Payment by filling in the agreed data, by typewriter or neat lettering in ink, on AIA Document G702, "Application and Certificate for Payment," plus continuation sheet or sheets.
  - 2. Sign and notarize the Application and Certificate for Payment.
  - 3. Submit the original of the Application and Certificate for Payment, plus six (6) identical copies of the continuation sheet or sheets, to the Engineer.

4. The Engineer shall compare the formal submittal with the approved informal submittal and when approved, shall sign the Application and Certificate of Payment, will make required copies and will distribute:
  - a Two copies to Contractor
  - b Two copies to Owner
  - c Two copies to Engineer's file.

PART 2 PRODUCTS (Not Applicable).

PART 3 EXECUTION (Not Applicable).

END OF SECTION

## SECTION 01050

### FIELD ENGINEERING

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Provide such field engineering services as are required for proper completion of the work including, but not necessarily limited to:
  - 1. Establishing and maintaining lines and levels.
  - 2. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.

##### 1.02 RELATED WORK

- A. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
- B. Additional requirements for field engineering may also be described in other Sections of these Specifications.

##### 1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for the proper performance of the work of this Section.

##### 1.04 PROCEDURES

- A. In addition to procedures directed by the Contractor for proper performance of the Contractor's responsibilities:
  - 1. Locate and protect control points before starting work on the site.
  - 2. Preserve permanent reference points during progress of the work.
  - 3. Verification of all reference points.
    - a. If a discrepancy is found, promptly notify the Engineer.
  - 4. Promptly advise the Engineer when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.
    - a. Upon direction of the Engineer, require the Field Engineer to replace reference stakes or markers.
    - b. Locate such replacements according to the original survey control.

##### 1.05 SURVEY REQUIREMENTS

- A. Contractor shall establish a minimum of two permanent benchmarks on site; referenced to data established by survey control points.
- B. Contractor to establish and maintain control lines and levels. Locate and lay out by instrumentation and similar appropriate means:

1. Site improvements, including pavements, stakes for grading, fill and topsoil placement, utility locations, slopes, and invert elevations.
2. Grid or axis for structures.
3. Building foundation, column locations, and floor elevations.
4. Controlling lines and levels required for mechanical and electrical trades.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

## SECTION 01092

### ABBREVIATIONS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Listing of Abbreviations: The listing of abbreviations in this Specification Section represent the Standard Organization named.
- B. Related Work:
  - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. All related Specification Sections shall be used in conjunction with this Section.

##### 1.02 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the Standard, except when more stringent requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date for receiving bids.

##### 1.03 LISTING OF STANDARD ORGANIZATIONS AND THEIR ABBREVIATIONS

|        |  |
|--------|--|
| AA     | Aluminum Association   |
| AAN    | American Association of Nurserymen   |
| AASHTO | American Association of State Highway and Transportation Officials         |
| ACI    | American Concrete Institute  |
| ACPA   | American Concrete Pipe Institute   |
| ADC    | Air Diffusion Council  |
| AGA    | American Gas Association   |
| AGCA   | Associated General Contractors of America                                  |
| AHDGA  | American Hot Dip Galvanizers Association                                   |
| AI     | Asphalt Institute  |
| AIA    | American Institute of Architects   |
| AISC   | American Institute of Steel Constructors                                   |
| AISI   | American Iron and Steel Institute  |
| ANSI   | American National Standards Institute                                      |
| APA    | American Plywood Association   |
| API    | American Petroleum Institute   |
| ASCE   | American Society of Civil Engineers  |
| ASHRAE | American Society of Heating, Refrigerating, and Air Conditioning Engineers |
| ASME   | American Society of Mechanical Engineers                                   |
| ASTM   | American Society of Testing and Materials                                  |
| AWPA   | American Wood Preservers Association                                       |
| AWS    | American Welding Society   |

|            |   |
|------------|---|
| AWWA       | American Water Works Association  |
| BIA        | Brick Institute of America  |
| CRSI       | Concrete Reinforcing Steel Institute                                    |
| CSA        | Canadian Standards Association  |
| DCAM       | Comm. of Massachusetts Division of Capital Asset Management             |
| DEP        | Department of Environmental Protection                                  |
| DHI        | Door and Hardware Institute   |
| DIPRA      | Ductile Iron Pipe Research Association                                  |
| EJCDC      | Engineers Joint Contract Documents Committee                            |
| EPA        | Environmental Protection Agency   |
| FM         | Factory Mutual  |
| Fed. Spec. | Federal Specification   |
| HI         | Hydraulic Institute   |
| IEEE       | Institute of Electrical and Electronics Engineers                       |
| ISA        | Instrument Society of America   |
| ISO        | International Standards Organization                                    |
| MHD        | Massachusetts Highway Department  |
| MIA        | Masonry Institute of America  |
| MIL.       | Military Specification  |
| MSBC       | Massachusetts State Building Code                                       |
| MSS        | Manufacturers Standardization Society of the Valve and Fitting Industry |
| NAAMM      | National Association of Architectural Metal Manufacturers               |
| NCMA       | National Concrete Masonry Association                                   |
| NEC        | National Electrical Code  |
| NEMA       | National Electrical Manufacturers Association                           |
| NFPA       | National Fire Protection Association                                    |
| NRCA       | National Roofing Contractors Association                                |
| NSPC       | National Standard Plumbing Code   |
| OSHA       | Occupational Safety and Health Administration                           |
| PCA        | Portland Cement Association   |
| PCI        | Prestressed Concrete Institute  |
| PPI        | Plastic Pipe Institute  |
| PS         | Product Standards of the National Bureau of Standards                   |
| SDI        | Steel Door Institute  |
| SIGMA      | Sealed Insulating Glass Manufacturers Association                       |
| SMACNA     | Sheet Metal and Air Conditioning Contractors National Association       |
| SPI        | Society of the Plastics Industry  |
| SSPC       | Steel Structures Painting Council                                       |
| TCA        | Tile Council of America   |
| TPI        | Truss Plate Institute   |
| UL         | Underwriters Laboratories   |

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01100

SPECIAL PROJECT PROCEDURES

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work of this section consists of special project procedures during construction including:
1. Construction Sequence
  2. Permits
  3. Contractor's Emergency Service
  4. Pipe Locations
  5. Delivery of Ductile Iron Water Mains
  6. Protection of Underground Facilities and Damages Thereto
  7. Disposal of Excavated Pipe and Construction Debris
  8. Disposal of Native Excavated Material
  9. Groundwater Conditions
  10. Separation of Water Lines from Sewers
  11. Pavement Schedule
  12. Sidewalks & Curb Restoration

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 CONSTRUCTION SEQUENCE

- A. The construction sequence will be established at the preconstruction conference. Contractor shall construct water mains in sequence as requested by the Owner. No additional compensation will be provided due to the sequence selected or modification thereof during construction.
- B. The Contractor shall schedule work to avoid rush hour traffic in Downtown Milford on Main Street. Contractor shall complete the Main Street tie-in during overnight hours. All costs associated with night work shall be included in various bid items found in the Bid Form.
- C. If water main shutdown cannot be achieved during the tie-in at the Court Street and Spring Street intersection, an insertion valve shall be used.

3.02 PERMITS

- A. The Contractor is required to obtain a Street Opening Permit from the Town of Milford. The cost of the permit shall be included under the mobilization pay item.

- B. The Contractor is required to obtain a Trench Opening Permit from the Town of Milford. The cost of the permit shall be included under the mobilization pay item.
- C. Prior to the issuance of a Town permit, the Contractor is responsible for obtaining a Performance Bond in the amount of \$15,000. The Performance Bond shall be held for a duration of three (3) years from the date the Town of Milford receives notice of final completion of all work. The cost of the bond shall be included under the mobilization pay item.

### 3.03 CONTRACTOR'S EMERGENCY SERVICE

- A. Any Contractor whose place of business is located beyond the vicinity of the site of the Work and who does not maintain local headquarters 24 hours a day must provide the following:
  - 1. Make satisfactory arrangements with the Owner to service emergencies or complaints which may occur at night, over the weekend, or when the job is shut down. If he does not, the Owner may make arrangements and the cost will be charged to the Contractor.
- B. Before the final estimate is certified for payment, the Contractor shall make similar arrangements to cover the guarantee period.

### 3.04 PIPE LOCATIONS

- A. New water main appurtenances installed under this Contract will be located substantially as indicated on the Drawings, but the Engineer reserves the right to make such modifications in location and grade as may be found desirable to avoid interference with existing structures and/or underground facilities or to avoid unsatisfactory locations, all as he may see fit as in the best interests of the Owner.

### 3.05 DELIVERY OF DUCTILE IRON WATER MAINS

- A. New water mains shall be delivered to the site with plugs sealing the ends of all pipe lengths. Pipe plugs shall remain in place until the pipe is installed.

### 3.06 PROTECTION OF UNDERGROUND FACILITIES AND DAMAGES THERETO

- A. The Contractor shall notify all utility companies of his operations sufficiently in advance of construction and take all measures necessary to avoid damage or undue interruption to the utilities' normal services.
- B. Where indicated on the Drawings, directed, or permitted at the Contractor's request, the Contractor shall dig test pits to locate the various underground facilities.
  - 1. Size of test pit and method of payment shall be as specified in Section 02015 of these Specifications.
- C. The Contractor shall pay, at no additional expense to the Owner, all costs associated with:
  - 1. Protecting and supporting underground facilities.

2. Repairing, replacing, or relocating underground facilities which are damaged by the Contractor's operations.
  3. Temporarily or permanently relocating underground facilities for the Contractor's convenience.
- D. The Contractor shall take all prudent steps to make himself aware of the physical condition of the existing underground facilities expected to be encountered.
1. Claims by the Contractor for repair of damages alleged to be the result of the physical condition or faulty installation workmanship of the existing underground facilities, outside of the specified trench width, will in general not be considered by the Owner for extra work payment.
  2. For such underground facilities within the specified trench width, claims will be considered if, in the opinion of the Engineer, such damage was unavoidable.
- E. Silt Sacks to be used in all catch basins within project limits to minimize silt deposits into drainage system.
- F. All lateral cross trenches shall be backfilled with excavatable controlled density fill (CDF) per Town of Milford Highway Department.

### 3.07 DISPOSAL OF EXCAVATED PIPE AND CONSTRUCTION DEBRIS

- A. The Contractor shall contact the Department of Environmental Protection, Division of Solid Waste, for approval of the demolition waste landfill chosen for disposal of the excavated pipe and construction debris. All excavated pipe and construction debris shall be disposed legally by the Contractor at no expense to the Owner.

### 3.08 DISPOSAL OF NATIVE EXCAVATED MATERIAL

- A. Suitable excavated material shall be used by the Contractor for backfilling, with any excess material being disposed of by the Contractor.

### 3.09 GROUNDWATER CONDITIONS

- A. Exact groundwater conditions due to season fluctuations shall be verified by the Contractor. It is the Contractor's responsibility to perform all work related to dewatering at no additional cost to the Owner.

### 3.10 SEPARATION OF WATER LINES FROM SEWERS

- A. Parallel Installation: Water mains shall in general be laid at least 10 feet horizontally from any existing sewer. The distance shall be measured edge to edge.
1. In cases where it is not practical to maintain a ten foot separation, it is permitted to install a water main closer to a sewer, provided that the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer.
- B. Crossings: Water mains and services crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer.

1. At the crossing, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. The water main shall then be encased in a minimum of 6-inches of concrete for a distance of 6 feet on both sides of the sewer line.
- C. Sewer Manholes: No water pipe shall pass through or come in contact with any part of a sewer manhole.

### 3.11 PAVEMENT SCHEDULE

- A. The Contractor is responsible for the installation of temporary hot-mix trench pavement on a weekly basis. Temporary trench shall be as shown on the Trench Paving Details. Top of temporary pavement shall be flush with existing pavement. The Contractor shall maintain all temporary trench pavements for the duration of the contract.
- B. Temporary pavement shall be installed weekly and maintained throughout the duration of the project. The Contractor shall install temporary pavement at intersections and cross trenches within one (1) day of backfilling and shall pave all open-cut trench areas every Friday. Paving may be required more often if rain is expected. The Owner reserves the right to request pavement installation at more frequent intervals if weather or other conditions make it necessary. There will be no additional compensation for changes in the paving schedule.
- C. Permanent pavement shall be installed after a six month settling period.
- D. The Contractor shall respond to all trench maintenance requests by the Owner or Town within two (2) working days.
- E. No bituminous concrete shall be installed between November 15<sup>th</sup> and April 15<sup>th</sup> without prior approval from the Owner.

### 3.12 SIDEWALKS & CURB RESTORATION

- A. Any sidewalks, curbs, and walks disturbed by the Contractor shall be replaced in kind throughout the project area.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 GENERAL

1.01 DESCRIPTION

A. Preconstruction Conference:

1. The Contractor shall not commence work until a conference has been held at which representatives of the Contractor, Engineer, and Owner are present. The preconstruction conference will be arranged by the Engineer.
2. The sequence of construction will be established during the preconstruction conference.

B. Progress Meetings:

1. The Contractor shall be available for progress meetings on site during construction every two weeks, or as determined by the Engineer/Owner, dependent on the status of the project.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

## SECTION 01300

### SUBMITTALS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work Included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Individual requirements for submittals also may be described in pertinent Sections of these Specifications.
- B. Work Not Included:
  - 1. Submittals which are not required shall not be reviewed by the Engineer.
  - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer unless specifically called for within the Contract Documents.

##### 1.03 SHOP DRAWINGS AND SAMPLES

- A. The Contractor shall submit to the Engineer for review all shop drawings, catalog cuts, setting schedules and such other drawings as may be necessary for the prosecution of the work in the shop and in the field as required by the Contract Documents.
  - 1. Submittals which are incomplete or difficult to read shall be rejected.
  - 2. Deviations from the Contract Documents shall be called to the attention of the Engineer at the time of the first submission of shop drawings and other drawings for consideration.
  - 3. The Engineer's review of any drawings shall not release the Contractor from responsibility for such deviations.
  - 4. Shop drawings shall be submitted with such promptness as to cause no delay in the Contractor's work or the work of any other Contractor.
  - 5. Schedules for reinforcing steel shall receive the Contractor's immediate attention, upon award of Contract.
- B. When submitted for the Engineer's review, all shop drawings shall bear the Contractor's certification that he has reviewed, checked and approved the shop drawings, that they are in compliance with the requirements of the Contract Documents, and that he has verified all field measurements and construction criteria, materials, catalog numbers and similar data.
- C. All samples called for in the Specifications or required by the Engineer shall be furnished by the Contractor and shall be submitted to the Engineer for his review.

1. Samples shall be furnished so as not to delay fabrication, and to allow the Engineer reasonable time for the consideration of the samples submitted.
- D. Checking of submittals is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents.
1. Any action shown is subject to the requirements of the Contract Documents.
  2. Contractor is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the satisfactory performance of his work.
- E. The Contractor may only proceed with fabrication and construction for items on returned submittals marked “1-No Exception Taken” or “2-Make Corrections Noted – Resubmittal Not Required.”
1. Resubmit submittals if marked “3-Amend and Resubmit” or “4-Rejected.”
  2. Submittals provided for information purposes only will be marked “5-Not Subject to Review – Receipt Acknowledged.”
- F. The Contractor shall identify each submittal numerically in accordance with the following format: [SPECIFICATION SECTION] - [SUBMITTAL NUMBER] - [RESUBMITTAL].
1. The first number corresponds to the specification section under which the particular shop drawing is submitted.
  2. The second number is the numerical order of the submittal within a particular specification section based on when the submittal is transmitted.
  3. The third number is zero for an original submittal. The first resubmittal of a shop drawing previously reviewed by the Engineer, if necessary, shall be identified by the same numbering system with (-A) used as a suffix to indicate it is a resubmittal. Each additional resubmittal shall be identified by the same numbering system with the following letter alphabetically used as the suffix.
  4. For example, 02200-1-0 is the original submittal for the first shop drawing submitted under specification section 02200. 02200-2-A is the resubmittal for the second shop drawing submitted under specification section 02200.
- H. The Contractor shall furnish such samples of material as may be required for examination and testing.
1. All samples of materials for tests shall be taken according to ASTM specifications or as provided in the Contract Documents.
- I. Within 14 days of the date fixed in the Notice to Proceed, the Contractor shall submit a Schedule of Submittals to the Engineer for review and approval in accordance with the General Conditions. The Schedule of Submittals including, but not limited to, shop drawings and samples shall include a list of required submittals, the date when each submittal will be transmitted for review and approval, and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

3.01 GENERAL

- A. The Contractor shall transmit all shop drawings to the Engineer in electronic (PDF) format.
- B. The intent of the electronic submittals is to expedite the construction process reducing paperwork, improving information transfer, and decreasing administration time.
- C. The electronic submittal process is not intended to replace the requirement to submit actual color samples or physical material samples for review and approval by the Engineer.

END OF SECTION

## SECTION 01310

### CONSTRUCTION SCHEDULES

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. To assure adequate planning and execution of the work so that the Work is completed within the number of calendar days allowed in the Contract, and to assist the Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work, prepare and maintain the schedules and reports described in this Section.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Construction period: Contract Agreement
- B. Definitions:
  - 1. "Day," as used throughout the Contract unless otherwise stated, means "calendar day."

##### 1.03 QUALITY ASSURANCE

- A. Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data and in preparing and issuing periodic reports as required by this Specification.
- B. Perform data preparation, analysis, charting and updating in accordance with standards approved by the Engineer.
- C. Reliance upon the approved schedule:
  - 1. The construction schedule as approved by the Engineer shall be an integral part of the Contract and shall establish interim completion dates for the various activities under the Contract.
  - 2. Should any activity not be completed within 15 days after the stated scheduled date, the Engineer may request the reason for the delay in schedule from the Contractor. The Contractor shall supply the requested information and the steps which he intends to take to get back on schedule.
  - 3. It is expressly understood and agreed that failure by the Engineer to exercise the option either to order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered to set a precedent for any other activities.

##### 1.04 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.

- B. Preliminary Analysis: Within ten (10) calendar days after the Contractor has received the Owner's Notice to Proceed, submit four (4) prints of a preliminary construction schedule to Owner and Engineer.
- C. Construction Schedule: Within thirty (30) calendar days after the Contractor has received the Owner's Notice to Proceed submit a Critical Path Method (CPM) network and a computer generated print out of a construction schedule prepared in accordance with Part 2 of this Section to Owner and Engineer.
- D. Periodic Reports: See paragraph 2.02-B of this Section.

## PART 2 PRODUCTS

### 2.01 CONSTRUCTION ANALYSIS

- A. Supplemental to the critical path schedule, the Contractor shall provide a detailed work schedule, projected at least a month in advance. The implementation of the work schedule and the coordination required shall constitute the basic agenda of the coordination and planning meetings.
- B. The order of new construction shall be discussed with the Engineer well in advance of the contemplated construction and the intended schedule shall meet with his approval. The Contractor, prior to starting work, shall submit to the Engineer a written description of the methods he plans to use in doing the work, including any necessary plans depicting the proposed details as well as a schedule of expected dates for beginning and completing the various buildings, structures and appurtenances which make up the work. Work shall not commence on a given portion of the project until the schedule for that portion (and preferably the entire schedule) has been approved by the Engineer. The Contractor shall be required to update this schedule periodically as necessary.
- C. A guideline CPM network shall be submitted for approval to include the following items: A feasible plan to complete the project within the time specified in this contract; Mandatory milestone dates - Milestones shall be designated in the guideline CPM network by asterisks; Calendar dates will be substituted when the construction start date is established.

### 2.02 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. This schedule shall include a Critical Path Network and a computer generated print out. The schedule shall account for all subcontracts in addition to the work of the Contractor.
- B. The network shall be provided in the form of a time scaled schedule. The computer print out shall include as a minimum, the earliest starting, earliest finish, latest starting, latest finish dates, and the total float for each activity. The Contractor shall update (monitor) and run the schedule at least monthly and shall submit to the Engineer both the network and computer print out, both in duplicate, at the same time the pay estimate is prepared. The schedule shall contain all of the items of the periodic estimate and pay schedule.

PART 3 EXECUTION

3.01 SCHEDULE AND UPDATES

- A. The monthly schedule update (monitoring) shall include the following items.
1. Network: Activities that are completed or in process are to be identified on the network by contrasting heavy lines. Each activity and work done should be proportional to the percentage of progress achieved to date.
  2. Computer print out: The percentage progress status of each activity shall be shown on the computer print out. The percentage progress status will be used to support the Contractor's periodic pay estimate. Actual start and completion dates are to be included in the computer print out. All activities started and in process should be flagged in the computer print out.
  3. The Engineer reserves the right to modify any schedule as required to meet the prevailing conditions. Review of the work schedules by the Engineer shall not relieve the Contractor of responsibilities regarding specified project completion times and liquidated damages.

END OF SECTION

SECTION 01385

PRE-CONSTRUCTION VIDEO RECORDING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: The Contractor shall provide all labor, materials, tools, and equipment necessary to furnish a video recording of the site prior to the start of the work.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and all Divisions of these Specifications.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 VIDEO RECORDING

- A. Equipment
  - 1. The equipment employed in the video recording shall be sufficient to provide a clear, full color and detailed visual description of the site along with a detailed narrative description of physical conditions and location.
- B. Area Included
  - 1. The area included in the video recording shall include the actual location of the work, the adjacent property and all other areas which could reasonably be anticipated to be affected by the work.
  - 2. Particular attention should be paid to the existing condition of private property immediately adjacent to the work.
- C. Documentation
  - 1. The video recordings shall be conducted at a slow walking pace and shall record the physical conditions in the area described above.
  - 2. The narrative description shall be recorded simultaneously and shall supplement the visual description particularly with regard to location.
  - 3. Contractor shall furnish three (3) complete copies of the video recording to the Engineer prior to the start of the work.

4. Contractor shall provide the Owner with one (1) complete copy of the video recording prior to start of work.

D. Personnel

1. All personnel employed by the Contractor in video recording shall be experienced in all aspects of the process, including recognition of important physical conditions in and around the site of the Work.

END OF SECTION

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Includes: The transportation and storage of all equipment and materials necessary to the Work and the field offices.
- B. RELATED WORK
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 thru Division 3 of these Specifications.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 STORAGE AREA

- A. It shall be the Contractor's sole responsibility to procure and maintain a suitable storage area for tools, materials, and equipment necessary to perform the work.
  - 1. The storage area obtained by the Contractor shall not obstruct or interfere with pedestrian or vehicular movement, and shall not occupy any space within the public right-of-way, except with specific permission from the Owner.
  - 2. The storage area shall be kept neat at all times.
  - 3. The Owner shall not be a party to negotiations related to acquisition of areas for storage or cleanup of the same (unless the storage area is on Owner's property), but reserves the right to inspect such area(s) for compliance with Owner regulatory requirements.
  - 4. Contractor shall not use storage area for bulk storage of hazardous materials (e.g., gasoline, solvents, oil).

3.02 EQUIPMENT

- A. Contractor shall transport all equipment to the site, assemble the equipment as needed to proceed with the work and maintain the equipment as needed during the work.

END OF SECTION

SECTION 01510

TEMPORARY FACILITIES

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work of this Section shall consist of providing the following temporary facilities:
  - 1. Water,
  - 2. Sanitary Facilities,
  - 3. Drainage.

PART 2 PRODUCTS

2.01 TEMPORARY WATER

- A. Drinking water shall be provided by the Contractor for his personnel and the personnel of his sub-contractors.
  - 1. Drinking water shall be tested and approved by the State Agency as "safe drinking water suitable for human consumption."
  - 2. Contractor shall furnish water for construction.

2.02 TEMPORARY SANITARY FACILITIES

- A.
  - 1. Sanitary conveniences, properly screened from public observation, for the use of all persons employed on the work and beginning with the first man engaged in preliminary operations, shall be provided and maintained by the Contractor in sufficient numbers through the completion of the work.
  - 2. Contractor shall be diligent in maintaining sanitary facilities; pumping weekly, or more often as required to protect soil and water quality.

2.03 TEMPORARY DRAINAGE

- A. Temporary drainage, as necessary shall be provided by the Contractor to keep the working area dry.

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01545

PROTECTION OF PROPERTY

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: The Contractor shall provide all necessary protection of existing property to prevent any damage to property adjacent to the construction.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 thru 3 of these Specifications.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 PROTECTION OF PROPERTY

- A. The Contractor shall, at his own expense, preserve and protect from injury all property either public or private along and adjacent to the line of work, and be responsible for and repair any and all damage and injury thereto, arising out of or in consequence of any act or omission of the Contractor.
  - 1. All existing pipes, culverts, poles, wires, fences, mailboxes, stone walls, curbs, bounds, etc., shall be temporarily removed, supported in place or otherwise protected from injury, and shall be restored to at least as good condition as that in which they were found immediately prior to the start of work.
  - 2. Lawns, shrubs, bushes, planting beds and decorative trees disturbed or damaged shall be restored to a condition equal to that found prior to the start of construction, either by temporary transplant or replacement in kind, except as otherwise indicated on the Drawings.
  - 3. Property which has been damaged and replaced shall be equal in quality and workmanship to the damaged property and shall be subject to the approval of the property owner.
  - 4. Branches which interfere with construction may be removed, only upon approval of the Owner.
    - a. Limbs and branches shall be trimmed off neatly and cleanly, close to the trunk of the tree or to its main branch. The cut surfaces shall be coated with an approved tree wound coating.

END OF SECTION

SECTION 01567

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, equipment and services, and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.
- B. The requirements set forth in this section of the specifications apply to any areas adjacent to wetlands, unless otherwise specifically stated or directed by Engineer, Owner, or Town of Milford.
- C. All work under this Contract shall be in accordance with the conditions stated herein and in the GENERAL CONDITIONS.
- D. All erosion control devices shall be constructed or installed prior to beginning any form of excavation, grading, placement of materials, or general construction.
- E. Insofar as possible, construction activities shall be confined to those areas defined by the plans and specifications. All land resources within the project shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work.
- F. The location of storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared, as approved.
- G. Adequate measures for erosion and sediment control such as the placement of baled hay or straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.
- H. Any water that is pumped and discharged from an excavation shall be filtered by an approved method prior to its discharge into a receiving water or drainage system.
- I. The pumped water shall be filtered through baled hay, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction operations. The vegetated channel shall be constructed such that the discharge flow rate shall not exceed a velocity of more than one foot per second. The sediment shall be cleared from the channel periodically.
- J. In order to trap sediment and to prevent sediment from clogging drainage systems, baled hay or straw or straw wattles shall be used as shown on the following detail(s) or as directed by the Owner. Care shall be taken to keep them from breaking apart. The bales should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically.

- K. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, drains, pipes or structures, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

## PART 2 PRODUCTS

### 2.01 HAY BALES

- A. Hay bales shall be made of hay with forty pounds minimum weight and one hundred and twenty pounds maximum weight. Wood stakes shall be a minimum of one inch by one inch nominal size by a minimum of three feet long.

### 2.02 MULCH SOCKS

- A. Mulch socks shall be constructed with a mesh tube filled with biodegradable material, with a tube diameter of 8-inches, as manufactured by Silt Sock Erosion Control Products, Inc. or approved equal. The sock shall be installed as indicated in the Contract Documents.

### 2.03 SILT FENCE

- A. The silt fence shall consist of a 3-foot wide continuous length sediment control fabric, stitched to a 25-foot wide continuous length support netting, and stapled to preweathered oak posts spaced at a maximum of 7-feet. The oak posts shall be 2-inches by 2-inches by 4-feet 6-inches and shall be tapered. The support netting shall be industrial strength polypropylene. The sediment control fabric should conform to the following properties:
  - 1. Minimum weight of 2.5 oz/sy (ASTM D3776-79)
  - 2. Minimum thickness of 17 mils (ASTM D1777-79)
  - 3. Minimum tear strength of 65 lbs. (ASTM D1117-80)
  - 4. Minimum burst strength of 210 psi (ASTM D3786-80)
  - 5. Minimum coeff. of permeability of 0.0009 cm/sec.
  - 6. Equivalent opening size (EOS) 20 (U.S. Standard Sieve)
  - 7. Water flow rate of 40 gal/min/st.
- B. Sediment control fabric shall be non-rotting, acid and alkali resistant and have sufficient strength and permeability for the purpose intended, including handling and backfilling operations. Fibers shall be low water absorbent. The fiber network must be dimensionally stable and resistant to delamination. The fabric shall be free of any chemical treatment or coating that will reduce its permeability. The fabric shall also be free of any flaws or defects which will alter its physical properties. Torn or punctured fabrics shall not be used. For each specific use, only commercially available fabric which is certified in writing by the manufacturer for the purpose intended shall be used. The Contractor shall submit a two-foot square sample of each type of fabric to be used, along with technical data sheet and certified test reports. The Owner reserves the right to reject any fabric which he deems unsatisfactory for a specific use. The brand name shall be labeled on the fabric or the fabric container.

- C. Fabrics which are susceptible to damage from sunlight or heat shall be so identified by suitable warning information on the packaging material. Fabrics susceptible to sunlight damage shall not be used in any installations where exposure to light will exceed 30 days, unless specifically authorized in writing by the Owner.

## 2.04 CATCH BASIN SILT FILTERING SYSTEM

- A. Silt filtering system for catch basins accepting drainage from the site shall be Siltsack as manufactured by ACF Environmental Inc. Richmond, VA. and distributed by A. H. Harris, or approved equal.
  - 1. Manufactured to fit opening of catch basins or drop inlet.
  - 2. Two dump straps attached to the bottom to facilitate emptying the sack.
  - 3. Lifting loops as an integral part of the Siltsack to be used in lifting the Siltsack from the basin.
  - 4. A restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls.
  - 5. Manufactured from woven polypropylene fabric with the following properties:
    - a. Grab Tensile                   ASTM D-4632 300 lbs.
    - b. Grab Elongation               ASTM D-4632 20%
    - c. Puncture                       ASTM D-4833 120 lbs.
    - d. Mullen Burst                  ASTM D-3786 800 psi.
    - e. Trapezoid Tear                ASTM D-4533 120 lbs.
    - f. Apparent Opng.                ASTM D-4751 40 US Sieve
    - g. Flow Rate                     ASTM D-4491 40 gpm/sf

## PART 3 EXECUTION

### 3.01 NOTIFICATION

- A. The Owner will notify the Contractor in writing of any non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work until satisfactorily corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop orders shall be made unless it was later determined that the Contractor was in compliance.

### 3.02 AREAS OF CONSTRUCTION ACTIVITY

- A. Insofar as possible, the Contractor shall confine his construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

### 3.03 PROTECTION OF WATER RESOURCES

- A. The Contractor shall not pollute streams, wetlands, or ponds with fuels, oils, bitumens, calcium chloride, acids or harmful materials. It is the Contractor's responsibility to

comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers, wetlands and streams.

- B. Special measures should be taken to insure against spillage of any pollutants into public waters.

#### 3.04 LOCATION OF STORAGE AREAS

- A. The location of the Contractor's storage areas for equipment and/or materials shall be upon portions of the job site and shall require written approval of the Owner. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Owner.
- B. Adequate measures for erosion and sediment control, such as the placement of baled hay or straw around the downstream perimeter of stockpiles, shall be employed to protect any downstream areas from siltation.
- C. The Owner may designate a particular area or areas where the Contractor may store materials used in his operations.

#### 3.05 DISCHARGE OF DEWATERING OPERATIONS

- A. Any water that is pumped and discharged from an excavation as part of the Contractor's water handling shall be filtered by an approved method prior to its discharge into a receiving water or drainage system.
- B. The pumped water shall be filtered through baled hay, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction operations. The vegetated channel shall be constructed such that the discharge flow rate shall not exceed a velocity of more than 1 foot per second. The sediment shall be cleared from the channel periodically.

#### 3.06 PROTECTION OF AIR RESOURCES

- A. During the progress of work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of water as necessary, so as to minimize the creation and dispersion of dust.
  - 1. If the Engineer decides that it is necessary to use calcium chloride for more effective dust control, then the Contractor shall furnish and apply the material as directed.
  - 2. Calcium chloride shall be commercial grade, furnished in 100-pound, 5-ply bags, stored under weatherproof cover and stacked alternately for ventilation.
  - 3. Application for dust control shall be at the rate of about 1/2 pound per square yard per application.
- B. Burning of rubbish and waste material on the site shall not be permitted.

3.07 SEPARATION AND REPLACEMENT OF TOPSOIL

- A. Topsoil shall be carefully removed and separately stored to be used again as directed. The topsoil shall be stored in an area acceptable to the Owner and adequate measures shall be employed to prevent erosion of said material.

3.08 BALED HAY, STRAW, OR MULCH TUBES

- A. To trap sediment and to prevent sediment from clogging drainage systems, baled hay, straw, or mulch tubes shall be used where indicated on the drawings or where directed by the Owner. Care shall be taken to keep them from breaking apart. The bales or tubes should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically.
- B. Bales or tubes shall be maintained or replaced until they are no longer necessary for the program intended or are ordered removed by the Owner.

3.09 SILT FENCE

- A. Where indicated on the drawings or where directed by the Owner, the Contractor shall erect and maintain a temporary silt fence. The silt fence shall be used specifically to contain sediment from runoff water and to minimize environmental damage caused by construction.
- B. The 4.5 foot oak posts shall be driven so that 2-feet remain above the ground. A 6-inch by 6-inch trench shall then be excavated at the base of the fence for the purpose of laying, backfilling and tamping, a minimum of 6-inches of the filter fabric.
- C. The Contractor shall remove the trapped sediment as soon as it reaches a depth of 1-foot or when directed by the Owner.
- D. The silt fence systems will be completely removed from the project at the completion of the project, unless specifically authorized by the Owner to be left in place.

END OF SECTION

SECTION 01570

TRAFFIC REGULATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work under this Section shall consist of maintaining and protecting traffic in the project area to the satisfaction of the applicable Local Regulatory Agencies, and the Owner.
  - 1. Unless otherwise specified within the Contract Documents, the Contractor must maintain pedestrian and vehicular traffic and permit access to businesses, factories, residences, and intersecting streets.

PART 2 PRODUCTS

2.01 TRAFFIC SIGNS

- A. The Contractor shall furnish light(s) and maintain traffic signs as may be directed, or may be necessary for the safe regulation, or convenience of traffic.
  - 1. Said signs shall be as shown or noted on the Contract Drawings or elsewhere herein, or if not specified, they shall be adequate for the regulation, safety, and convenience of traffic and in conformance with the applicable requirements of the State/Federal Manual on Uniform Traffic Control Devices.

2.02 BARRICADES

- A. Suitably lighted barriers or barricades shall be furnished by the Contractor and put up and maintained at all times during the night or daytime, around all open ditches, trenches, excavation, or other work potentially dangerous to traffic.
  - 1. Such barricades shall be as shown on the Contract Drawings, or if not shown, shall be constructed of 2 inch by 8 inch rough lumber, securely supported, braced and at least 3 feet high above the ground.
  - 2. Barricades shall be placed on all sides and throughout the entire length and breadth of all open ditches, trenches, excavations, or other work which must be barred to the general public.
  - 3. Barricades shall be properly painted to the satisfaction of the Local Regulatory Agency in order to retain a high degree of visibility to vehicular and pedestrian traffic.

2.03 FLASHERS

- A. The Contractor shall furnish and securely fasten flashing units to signs, barricades, and other objects in such numbers and for such lengths of time as are required for the maintenance and protection of traffic.
  - 1. The flashers shall be in operation during all hours between sunset and sunrise, and during periods of low visibility.

2. Suitably lighted barricades shall be defined as barricades lit by flashers in accordance with this Section or other lighting methods approved by the Local Regulatory Agency in lieu thereof.
3. Flashers shall be placed along the entire length of the barricades at an interval no greater than 8 feet, center to center. Flashers shall be power operated, lens directed, enclosed light units which shall provide intermittent light from 70 to 120 flashers per minute, with the period of light emittance occurring not less than 25 percent of each on-off cycle, regardless of temperature.
4. The emitted light shall be yellow in color and the area of light on at least one face of the unit shall be not less than 12 square inches. The discernible light shall be bright enough to be conspicuously visible during the hours of darkness at a minimum distance of 800 feet from the unit under normal atmospheric conditions.
5. For units which beam light in one or more directions, the foregoing specifications shall apply 10 degrees or more to the side and 5 degrees or more above and below the photometric axis.

#### 2.04 TEMPORARY BRIDGING

- A. The Contractor shall include in his bid, bridging for trenches at all street and driveway crossings in such manner as the Local Regulatory Agency may direct for the accommodation and safety of the traveling public, to provide facilities for access to private driveways for vehicular use, and to prevent blocking of intersecting traffic.
  1. He shall erect suitable barriers around the excavation to prevent accidents to the public and shall place and maintain, during the night, sufficient lights on or near the work.
  2. A space of 20 feet must be left so that free access may be had at all times to fire hydrants and proper precautions shall be taken so that the entrances to fire hydrants and fire stations shall not be blocked or obstructed.

#### 2.05 DETOURS

- A. Temporary detours shall be constructed on the site as proposed by the Contractor and approved by the Applicable State and/or Local Authorities required by the Contract Drawings or specified elsewhere herein.
  1. Detours shall not have grades in excess of 10% anywhere along their lanes unless otherwise shown on the Contract Drawings. Detours shall be smooth riding.
  2. Suitable barricades shall be installed continuously along both sides of a detour where:
    - a. The adjacent side slope is steeper than 1 on 6 inches.
    - b. The Contractor's operations or equipment may operate within 20 feet of the detour.
    - c. Other unsafe conditions requiring them for the protection of traffic along the line of detour.

#### 2.06 MISCELLANEOUS

- A. The Contractor may be required to employ traffic persons and take other such reasonable means or precautions as the Local Regulatory Agency may direct, or as may be needed to prevent damage or injury to persons, vehicles, or other property, and to minimize the inconveniences and danger to the public by his construction operations.

PART 3 EXECUTION

3.01 CONTROL OF TRAFFIC

- A. It shall be the sole responsibility of the Contractor to keep the Local Regulatory Agencies (including but not limited to the Police and Fire Departments) pre-warned at least 72 hours in advance of changes in traffic patterns due to reduction of pavement widths or closing of streets.
- B. The Contractor shall supply, install, maintain, adjust, move, relocate, and store all signs, suitably lighted barricades, traffic cones, and traffic delineators, as necessary to carry out the traffic routing plan and maintain vehicular and pedestrian traffic.
  - 1. All of this work shall meet with the requirements of the Local Regulatory Agencies.
  - 2. The Contractor shall maintain, relocate and operate barricades and flashers throughout the life of this Contract.
- C. Should the Contractor or his employees neglect to set out and maintain barricades or lights, as required in these Specifications, the Owner immediately, and without notice, may furnish, install and maintain barricades or lights.
  - 1. The cost thereof shall be borne by the Contractor and may be deducted from any amount due or to become due to the Contractor under this Contract.

3.02 ACCESS TO PROPERTY AND UTILITIES

- A. The Contractor shall arrange his operations to provide access to properties along the street including temporary bridges to driveways, and provide access to fire hydrants, manholes, gate boxes, or other utilities.
  - 1. Whenever any trench obstructs traffic in or to any public street, private driveway, or property entrance, the Contractor shall take such steps as required to maintain necessary traffic and access including temporary bridging if required.
  - 2. The Contractor shall confine his occupancy of public or traveled ways to the smallest space compatible with the efficient and safe performance of the work contemplated by the Contract.
  - 3. If the Contractor's operations or occupancy of any public street or highway, or the uneven surfaces over any trenches being maintained by the Contractor, interfere with the removal or sanding of snow or ice by the public authorities or adjoining land owners, in an ordinary manner with regular highway equipment, the Contractor shall be required to perform such services for the public authorities or adjoining owners without charge.
  - 4. If the Contractor fails to do so, he shall reimburse the said authorities or adjoining owners or the Owner for any additional cost to them for doing such work occasioned by conditions arising from the Contractor's operations, occupancy, or trench surfaces, together with any damage to the equipment of said parties by those conditions or claims of any parties for damage or injury or less by reason of failure to remove snow or ice or to sand icy spots under these conditions.
  - 5. The Contractor shall observe and obey all local and state laws, ordinances, regulations and permits in relation to the obstruction of streets and highways, keeping passageways open and protecting traffic where there may be danger from blasting or other construction activities.

- B. The Contractor shall be held responsible for any damages that the Engineer, Owner, Governmental units, or their heirs or assigns may have to pay as a consequence of the Contractor's failure to protect the public from injury, and the same may be deducted from any payments that are due or may become due to the Contractor under this Contract.

END OF SECTION

SECTION 01572

UNIFORMED POLICE OFFICERS

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Contractor shall make all arrangements with the Local Chief of Police for the services of Uniformed Police Officers.

PART 2 PRODUCTS

2.01 UNIFORMED POLICE OFFICERS

- A. The Chief of Police will assign Uniformed Police Officers from his department in the quantity and at the location(s) as determined to be necessary by the Chief of Police and as Uniformed Police Officers are available.

PART 3 EXECUTION

3.01 ARRANGEMENTS

- A. The Contractor shall make all arrangements with the Chief of Police for the services of Uniformed Police Officers. If, in the opinion of the Chief of Police, Uniformed Police Officers are required for the protection of persons and control of traffic, the Contractor shall be responsible for making all arrangements with the Chief of Police as may be required.
- B. Traffic persons ordered by the Contractor for his convenience, unforeseen problems, changes in construction scheduling due to inclement weather, etc. which are not part of the original project shall be paid at the Contractor's expense.

3.02 PAYMENT

- A. The Contractor shall pay for all Uniformed Police Officers and cruisers, if applicable, in the amount invoiced by the Chief of Police and/or the State Police for Uniformed Police Officers, and the Contractor shall be reimbursed by the Owner.
- B. Uniformed Police Officers required for purposes other than public safety and/or control of traffic shall not be paid by Milford Water Department. No payment will be made for overtime traffic persons unless emergency conditions exist. If the Contractor elects to work more than eight (8) hours in one day, or more than forty (40) hours in one week, he shall assume all such costs and Milford Water Department shall not be billed by the Milford Police Department. However, if the Owner approves emergency overtime, the Owner shall pay the Police Department directly for services rendered.

END OF SECTION

## SECTION 01610

### PRODUCT HANDLING

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

##### 1.02 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

##### 1.03 MANUFACTURER'S RECOMMENDATIONS

- A. Comply with manufacturers' recommendations on product handling, storage, and protection.

##### 1.04 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container(s), with labels intact and legible.
  - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
  - 2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.
- B. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to manufacturer, grade, quality and other pertinent information.

##### 1.05 PROTECTION

- A. Mechanical equipment subject to damage by the atmosphere if stored outdoors, shall be stored in a building with a controlled environment. The building may be a temporary structure on the site or a building off the site.
- B. PVC pipe shall be covered to protect it from UV degradation.

##### 1.06 REPAIRS AND REPLACEMENTS

- A. In event of damage, promptly make replacements and repairs to the approval of the Engineer at no additional cost to the Owner.

- B. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the Contract Time of Completion.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work of this Section consists of procedures and requirements for contract closeout, such as cleaning, restoration of project site to original condition, inspections, and guarantees.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.01 CLEANING UP

- A. During its progress, the work and the adjacent areas affected thereby shall be kept cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.
- B. Where material or debris has washed or flowed into or been placed in water-courses, ditches, gutters, drains, catch basins, or elsewhere as a result of the Contractor's operations, such material or debris shall be entirely removed and legally disposed of during progress of the work, and the ditches, channels, drains, etc., kept in a neat, clean and functioning condition.
- C. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operation in a neat and satisfactory condition.
- D. Unless otherwise specifically directed or permitted in writing, the Contractor shall perform the following tasks:
  - 1. Tear down and remove all temporary buildings and structures built by him.
  - 2. Remove all temporary works, tools, and machinery or other construction equipment furnished by him.
  - 3. Remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him.
    - a. Subsequent to disinfection, remove or suitably neutralize disinfectant residuals from treated area(s).
  - 4. Remove all rubbish from any grounds which he has occupied.
  - 5. Leave roads and all parts of premises and adjacent property affected by his operations in a neat and satisfactory condition.

### 3.02 RESTORATION

- A. The Contractor shall restore or replace, when and as directed by the Engineer, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations.
  - 1. To this end, the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work.
  - 2. Suitable materials, equipment, and methods shall be used for such restoration, or as required in other divisions of this Specification.
  
- B. In restoring the disturbed areas the Contractor shall:
  - 1. Replace to an equivalent depth any loam that has been removed during the excavation.
  - 2. Remove from the property and legally dispose of in an approved fashion all trees, brush, and other items that the Contractor has cut in order to prosecute his work.
  - 3. Remove from the property upon completion of the work thereon, all excess materials of construction such as stone, pipe, concrete block, gravel, etc., that the Contractor may have stockpiled for use during the course of the work.
  - 4. Leave the land in a smooth, even condition. All ruts, holes or other undesirable grading conditions which resulted from work under this Contract shall be filled and the area so graded to eliminate ponding.
  - 5. All drainage course(s) shall be restored to their pre-existing condition or better.
  - 6. Reset all public or private monuments, iron pipes or other types of property line and geodetic markers damaged or disturbed by operations under this Contract. This work shall be done by a licensed land surveyor at no additional cost.
  - 7. Repair, reset or replace as directed all pipes, walls, utilities, fences, railings, stone walls, etc., and ornamental or utilitarian domestic accessories, such as, but not limited to, arbors, fireplaces, sheds and incinerators, or other surfaces, structures, or property which may have been damaged, either directly or indirectly by his operations under this Contract.
  - 8. Restore to a condition at least equal to that in which they were found immediately prior to the beginning of construction all sidewalks, gutters, driveways and curbs which have been damaged by the Contractor's operations.

### 3.03 FINAL INSPECTION

- A. At completion of all work, the Owner and Engineer, along with the General Contractor and each of the subcontractors shall conduct a final inspection jointly for "punch list" purposes and to determine the exact status of the project before final acceptance.

### 3.04 GUARANTEES

- A. The Contractor shall take notice of special guarantees required in the technical Sections of these Specifications.
  - 1. If, in the opinion of the Owner, any item requires excessive maintenance during guarantee periods, the item shall be considered defective and the Contractor shall correct the defects.
  - 2. All defects so corrected shall be at the expense of the Contractor.

END OF SECTION

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## SECTION 02015

### TEST PITS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Provide test pits where noted/shown on the Drawings or at locations requested by the Engineer.
  - 1. In general the work under this Section shall consist of the excavation of test pits or other miscellaneous excavations not specified for payment elsewhere, by the Contractor where it may be necessary to locate or examine soils, groundwater, drains, pipes, rock, public utilities, subsurface structures, or any other possible obstacle or condition.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 02140 Site Drainage and Dewatering
  - 2. Section 02222 Earthwork for Water Distribution Systems

#### PART 2 PRODUCTS (Not Applicable)

#### PART 3 EXECUTION

##### 3.01 COORDINATION WITH UTILITY OWNERS

- A. The Contractor shall coordinate the excavation of all test pits with the respective utility owners having facilities in the vicinity of the location of test pits.
  - 1. All utilities shall be informed of the necessity of work under this Section and the Contractor shall give sufficient notice to the respective utility owners to afford reasonable time for coordination.
  - 2. If so desired by respective utility owners, all or part of the work under this Section may be accomplished by their crews and/or supervised by them.

##### 3.02 EXCAVATION

- A. Unless otherwise specified, the Contractor shall dig test pits as required by the Contract Documents, and the Contractor shall notify the Engineer of the results immediately and prior to the start of any underground installations within said test pit areas.
  - 1. The Owner/Utility Companies shall be notified well in advance of excavation so that they also may make the necessary measurements to locate all objects within test pits.

2. Excavation of test pits shall be accomplished by such means as are required to ensure that any underground utilities or structures that may be encountered are not damaged
3. It shall be the Contractor's responsibility for any damages incurred during the excavation operations. Any such damages shall be repaired by him (if permitted) to the satisfaction of the Responsible Agency at the Contractor's own expense. Where the repair and/or replacement must be done by the Responsible Agency, any and all costs thereof shall be borne by the Contractor.
4. The Contractor shall notify the Engineer and/or utility companies of any conflicts uncovered which may require design revisions, relocations and/or adjustment.
5. No work shall be started within these areas of conflict until so authorized by the Engineer.
6. Test pit excavation and backfill shall comply with the applicable provisions of Section 02222.
7. Hand excavation shall be performed where necessary to prevent damage to the existing utilities.

### 3.03 MEASUREMENT

- A. The Contractor shall measure and record the size, configuration, horizontal and vertical location of all utilities, pipes or other obstacles uncovered in the various test pits dug under this Section.
  1. Size of test pits shall be as directed by the Engineer.

### 3.04 RESTORATION

- A. Where an existing pavement has been removed for the test pit excavation, the surface shall be restored to grade. The top 12 inches shall be compacted gravel.
  1. In all other areas, the surface of test pit areas shall be restored to a condition equal to or better than original.

END OF SECTION

## SECTION 02140

### SITE DRAINAGE AND DEWATERING

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Provide drainage and dewatering as required by the Contract Documents.
  - 1. In general the Contractor shall furnish all materials, equipment, labor and incidentals necessary to provide dewatering and drainage control during construction.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 01567 Environmental Protection
  - 2. Section 02222 Earthwork for Water Distribution Systems
  - 3. Section 02611 Ductile Iron Pipe and Fittings

##### 1.03 SUBMITTALS

- A. None required.

#### PART 2 PRODUCTS

##### 2.01 EROSION AND SEDIMENTATION CONTROL

- A. Devices for erosion and sedimentation control for effluent of dewatering operations shall be as specified in Section 01567 Environmental Protection.

#### PART 3 EXECUTION

##### 3.01 INSTALLATION

- A. To insure proper conditions at all times during construction the Contractor shall provide and maintain ample means and devices with which to remove and dispose of all water entering trenches and other excavations.
  - 1. Means of water removal and disposal shall include but not be limited to wells, surface pumps, and/or well point systems, to the extent required to prevent "boils" or softening of the foundation soils.
  - 2. The Contractor shall pitch the ground around the excavation to prevent water from running into excavated areas and to prevent damage to other structures or work on adjacent property.

3. The Contractor shall remove immediately any surface or seepage water or water from sewers, drains, creeks, or other sources, which may accumulate during the excavation and construction work.
- B. Excavations shall be kept dry until the structures, pipes and appurtenances, to be built or installed therein, have been completed and backfilled to such extent that they shall not float or otherwise be damaged by water in the excavation.
1. In no event shall water rise to cause unbalanced pressure on the pipe or other structures. The Contractor shall prevent flotation of the pipe or structures.
  2. Pipe, masonry and concrete shall not be placed in water. Water shall not submerge new masonry or concrete within four (4) hours after placement.
- C. Sufficient stand-by pumping equipment shall be installed and mounted for immediate use in case of emergencies. The Contractor shall be responsible for the adequacy of their dewatering equipment and system in controlling the water and for protection to adjacent public and private property from damage. Any damage to permanent work or existing property resulting from the failure of the Contractor to provide an adequate dewatering system shall be repaired by the Contractor at their expense.
1. Wells, well points and pump sumps shall be installed with adequate filters to prevent loss of fine grained soils.

### 3.02 DISPOSAL OF DRAINAGE WATER

- A. All water pumped or drained from the work shall be disposed of in such a manner as to not cause injury to public health, damage to public or private property, interference with other work or adverse impacts to adjacent wetlands.
1. Effluent from dewatering operations shall not be discharged directly to wetlands or waterways and shall not be discharged to storm drain systems prior to being filtered through a siltation basin.
  2. Discharge shall be such that no erosion occurs. Erosion protection shall be as specified in Section 01567, Environmental Controls.

END OF SECTION

## SECTION 02160

### SUPPORT OF EXCAVATION

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Provide excavation support as required by the Contract Documents.
  - 1. In general this work shall consist of furnishing and placing timber and/or steel sheeting and shoring of the types and dimensions required for proper excavation support.

##### 1.02 DEFINITIONS

- A. Shoring shall mean the use of a steel trench box, steel sheeting, or timber sheeting braced as required.
- B. Timber sheeting shall mean the use of tongue and groove wood sheeting or steel soldier beams with wood lagging braced as required.
- C. Steel sheeting shall mean the use of steel sheet pilings with interlocking joints, braced by steel members as required.

##### 1.03 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 02140 Site Drainage and Dewatering
  - 2. Section 02222 Earthwork for Water Distribution Systems
  - 3. Section 02611 Ductile Iron Pipe and Fittings
- B. As established in the General Conditions of the Contract, the Contractor is solely responsible for means and methods of construction and for the sequence and procedures to be used.

##### 1.04 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
  - 1. The Contractor shall not perform excavations in unstable ground and shall employ a positive means of containing the unstable ground behind shoring, before excavation may proceed.
- B. Employ a qualified Engineer, properly permitted to provide such services at the location of the work, to design the shoring system and to inspect and report on the quality of its construction.

- C. Comply with all pertinent requirements of governmental agencies having jurisdiction.

#### 1.05 STANDARDS

- A. The following Standards form a part of this Specification as referenced:
  - 1. ASTM A328, Specification for Steel Sheet Piling
  - 2. Massachusetts DPW Standard Specifications, Section 950 Sheeting.
  - 3. Code of Federal Regulations (CFR), 29 CFR 1926, OSHA Standards - Excavation.

#### 1.06 SUBMITTALS

- A. Submit shoring design to Engineer for record purposes only.

### PART 2 PRODUCTS

#### 2.01 DESIGN

- A. Design a shoring system which will safely and adequately prevent collapse of adjacent materials and which will permit construction of the Work to the arrangement shown on the Drawings.
- B. All shoring systems shall be designed so as to support all vertical and lateral loads and other surcharge loads imposed on the system during construction, including earth pressures, utility loads and other surcharged loads in order to provide safe and expeditious construction of the permanent structures and prevent movement and/or damage to adjacent soil, buildings, structures and utilities.
- C. Secure all needed approvals, including those of governmental agencies having jurisdiction and of adjacent property owners if required, at no additional cost to the Owner.

#### 2.02 MATERIALS

- A. Material shall include, but not necessarily be limited to sheet piling, soldier piles, lagging, bracing members such as wales, struts, shores and tieback anchors.
- B. Lumber for timber sheeting and shoring:
  - 1. Shall be sound Spruce, Douglas Fir, white or yellow Lodgepole, Ponderosa pine, or western hemlock plank, planed on one side and either tongue and grooved or splined.
- C. Steel sheeting:
  - 1. Shall be of approved section and quality, either new or secondhand, conforming to the requirements of ASTM A328.

## PART 3 EXECUTION

### 3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 INSTALLATION

- A. Construct and install the shoring system in strict accordance with the design engineer's requirements.
  - 1. When using soldier piles and lagging, where boulders or cobbles are encountered, soldier piles shall be installed in pre-augered holes over the full depth as required to prevent misalignment and damage.
  - 2. Vibration monitoring during installation and extraction of braced excavation shall be provided wherever the excavation is within 100 feet of existing structures.

### 3.03 SHEETING LEFT IN PLACE

- A. Sheeting left in place, for the purpose of preventing injury to structures, utilities or other property, shall be cut-off 3 feet below finished grade.
  - 1. The right of the Engineer to order sheeting left in place shall not be construed as creating any obligation on his part to issue such orders. His failure to exercise his right to do so shall not relieve the Contractor from liability for damages to persons or property occurring from or upon the work occasioned by negligence or otherwise growing out of a failure, on the part of the Contractor, to leave in place sufficient sheeting to prevent movement of the ground.

### 3.04 SHEETING REMOVED

- A. All sheeting not left in place shall be carefully removed in such manner as to not endanger the construction or other structures, utilities, or property.
  - 1. All voids left or caused by withdrawal shall be immediately refilled with approved material, and compacted with tools especially adapted to that purpose.
  - 2. Vibratory extraction methods shall be used only when it can be demonstrated that settling of pipe and structures will not occur. If such settling occurs, it shall be corrected at the Contractor's expense.

### 3.05 TRENCH BOX OR SHIELD

- A. Use of a trench box or shield shall not relieve the Contractor of any liability for damages to persons or property growing out of a failure of the Contractor to leave in place sufficient sheeting and bracing to prevent the caving or moving of the ground or disturbance of the completed work.
  - 1. Care shall be taken, when a trench box or shield is moved ahead, so as not to pull apart the joints of pipe already placed or leave voids around the pipe wall.
  - 2. At no time shall the portable box or shield be allowed to be positioned below the spring line of the pipe.

3. The width of the trench box or shield shall be such that a minimum 6 inch horizontal clearance is maintained between the pipe and shield at all times
4. If the pipe has moved, it shall be reset to the proper line and grade.
5. Any voids between the trench box or shield and the undisturbed trenchwall within the pipe zone (bottom of trench to top of cover material) shall be filled with crushed stone, bank run gravel, or approved material, immediately after the box or shield is positioned.

END OF SECTION

## SECTION 02222

### EARTHWORK FOR WATER DISTRIBUTION SYSTEMS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work Included: Provide all earthwork as required by the Contract Documents.
- B. In general the work of this Section shall include but not necessarily be limited to, excavation, trenching, filling, backfilling, compaction and grading for water distribution systems.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 01013 Facility Interference with Proposed Work
  - 2. Section 01300 Submittals
  - 3. Section 02140 Site Drainage and Dewatering
  - 4. Section 02160 Support of Excavation
  - 5. Section 02227 Rock Removal
  - 6. Section 02513 Asphaltic Concrete Pavement
  - 6. Section 02611 Ductile Iron Pipe and Fittings
  - 7. Section 02640 Buried Valves and Appurtenances
  - 9. Section 02930 Loam and Seed

##### 1.03 SITE INVESTIGATION

- A. The grades and other site information have been compiled by field surveys.
  - 1. The Contractor acknowledges that he has satisfied themselves as to the nature and location of the work.
  - 2. Failure by the Contractor to acquaint himself with all available information concerning the site will not relieve him from the responsibility, for estimating properly, the difficulty or cost of successfully performing the work.

##### 1.04 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
  - 1. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.

##### 1.05 PROTECTION OF PROPERTY AND UTILITIES

- A. Extreme care shall be exercised to prevent damage to existing trees, shrubs, utilities, walls, sidewalks, fences and private property.
  - 1. Any damage to these items as a result of work performed by the Contractor shall be repaired by the Contractor at his own expense.

2. Existing property boundary markers, control points and datum elevation markers or bench marks shall be preserved.
  - a. All such items which are displaced or destroyed by the Contractor shall be replaced by a registered Engineer or Land Surveyor, as required, with all expenses paid by the Contractor.
- B. Utility agencies shall be contacted and advised of proposed work prior to the start of work by the Contractor.
  1. Notify Dig Safe.
  2. Obtain information from the proper sources and authorities concerning locations of all utilities within the scope of this work.
  3. If and when encountered, utilities shall be supported and protected, and the Engineer shall be notified.
    - a. Ample time shall be allowed for entrance and taking such measures as may be required for the continuance of such services by the utility owner.
  4. Rules and regulations governing the respective utilities shall be observed. The Contractor's responsibilities with respect to utility locations, protection, interferences and relocations shall be as further specified in Section 01013.

#### 1.06 REFERENCE STANDARDS

- A. The Contractor shall comply with the provisions of the following agencies as they apply to this project.
  1. Associated General Contractors of America, Inc. (AGCA) "Manual of Accident Prevention in Construction."
  2. Occupational Safety and Health Administration, United States Department of Labor Requirements
  3. ANSI "Safety Regulations for Construction and Demolition".
  4. American Society for Testing & Materials (ASTM)
  5. American Water Works Association Standards
  6. Massachusetts Department of Transportation "Standard Specifications for Highways and Bridges"

#### 1.07 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Testing and Samples:
  1. Test reports on backfill materials, moisture density tests, in place density tests (ASTM D1557 and D6938).
  2. Representative backfill and bedding samples and gradation tests (ASTM D6913).
  3. Tests shall be in conformance with paragraph 3.16; compaction requirements and testing as specified herein.

#### 1.08 TRAFFIC

- A. While excavating and backfilling is in progress, traffic shall be maintained in a manner as specified in Section 01570 Traffic Regulations.

PART 2 Products

2.01 GENERAL

- A. Except as specified for pipe bedding, pipe cover, roadway subbase, and refill for rock and unsuitable materials, backfill materials may be as follows:
1. Suitable materials for trench backfill shall be the material excavated during the course of construction, but excluding debris, pieces of pavement, frozen materials, organic matter, silt, top soil, ledge excavation and rocks over six inches in largest dimension.
  2. Gradation of material shall be generally as specified for gravel borrow except that maximum size of stone shall be 6 inches.
  3. The suitability of existing material for use as backfill will be determined by the Engineer.
  4. All unsuitable materials shall be disposed of as per paragraph 3.18 A.

2.02 PIPE BEDDING AND COVER MATERIAL

- A. Ductile Iron Pipe:
1. Gravel borrow shall be a granular material, well graded from fine to coarse, with gradation as specified in paragraph 2.05 of this specification section, obtained from approved natural deposits and unprocessed except for the removal of unacceptable material and stones larger than the maximum size permitted.
  2. It shall not contain vegetation, masses of roots, or individual roots.
  3. It shall be free from loam and other organic matter, clay, and other fine or harmful substances.
  4. Gravel borrow shall conform to requirements as specified in paragraph 2.05 herein.
  5. The compacted bed shall be rounded so that at least the bottom quadrant of the pipe shall rest firmly for the full length of the barrel. Suitable holes for bells or couplings shall be dug around the pipe joints to provide ample space for making tight joints.
  6. The trench bottom shall be straight, free of bumps or hollows and at the proper depth. Any irregularities in the trench bottom shall be leveled off or filled in with a selected gravel or sand thoroughly tamped.
  7. If determined by the Inspector the trench bottom shall be prepared by digging at least 6 inches deeper than pipe grade and back-filling to proper grade with a selected gravel or sand back-fill properly tamped.
  8. All unsuitable material shall be removed from the bottom of the trench excavation as directed by the Inspector to the depths ordered. The trench shall be back-filled with an approved gravel back-fill material, placed in 6 inch layer of selected gravel or sand shall be placed and tamped for proper pipe support.
- B. Plastic Pipe or Copper Tubing:
1. Sand borrow shall consist of clean inert, hard, durable grains of quartz or other hard durable rock free from loam or clay, surface coatings and deleterious materials.
  2. The allowable amount of material passing a No. 200 sieve as determined by AASHTO shall not exceed 10 percent by weight.
  3. The maximum particle size shall be 3/8 inch.

2.03 CONCRETE SAND

- A. Concrete sand shall meet ASTM C-33 for fine aggregate.

2.04 STRUCTURAL FILL

- A. Structural fill shall generally range from gavelly sand to gravel, free of organic material, trash, loam, ice, snow, frozen soil and other objectionable material, and shall conform to the following:

| <u>Sieve Size</u> | <u>Percent Passing by Weight</u> |
|-------------------|----------------------------------|
| 6 inch            | 100                              |
| No. 4             | 30-80                            |
| No. 40            | 5-35                             |
| No. 200           | 0-8                              |

2.05 GRAVEL BORROW

- A. Gravel borrow shall be a granular material, well graded from fine to coarse, with a maximum size of 3 inches, obtained from approved natural deposits and unprocessed except for the removal of unacceptable material and stones larger than the maximum size permitted. Gravel borrow shall meet the requirements of the Commonwealth of Massachusetts Department of Transportation Standard Specifications for Highways and Bridges, latest edition, M1.03.0 Type b.
1. It shall not contain vegetation, masses of roots, or individual roots.
  2. It shall be substantially free from loam and other organic matter, clay, and other fine or harmful substances.
  3. Gravel borrow shall have the following gradation:

| <u>Sieve Size</u> | <u>Percent Passing by Weight</u> |
|-------------------|----------------------------------|
| 3 inch            | 95-100                           |
| 1/2 inch          | 50-85                            |
| No. 4             | 40-75                            |
| No. 50            | 8-28                             |
| No. 200           | 0-10                             |

2.06 PROCESSED GRAVEL FOR ROADWAY BASE

- A. Shall meet the requirements of the Commonwealth of Massachusetts Department of Transportation Standard Specifications for Highways and Bridges, latest edition, M1.03.1.

| <u>Sieve Size</u> | <u>Percent Passing by Weight</u> |
|-------------------|----------------------------------|
| 3 inch            | 100                              |
| 1 1/2 inch        | 70-100                           |
| 1/4 inch          | 50-85                            |
| No. 4             | 30-60                            |
| No. 200           | 0-10                             |

2.07 CRUSHED STONE (Hydrant Drains)

- A. Crushed Stone: Shall consist of durable crushed stone or durable crushed gravel stone, washed, free from ice and snow, stone dust, sand, clay, loam, or other deleterious material. Crushed stone shall meet the requirements of the Commonwealth of

Massachusetts Department of Transportation Standard Specifications for Highways and Bridges, latest edition, M2.01.5. The crushed stone shall be uniformly blended and conform to the following:

| <u>Sieve Size</u> | <u>Percent Passing by Weight</u> |
|-------------------|----------------------------------|
| 5/8 inch          | 100                              |
| 1/2 inch          | 85-100                           |
| 3/8 inch          | 15-45                            |
| No. 4             | 0-15                             |
| No. 8             | 0-5                              |

2.08 CONTROLLED DENSITY FILL (CDF)

- A. Shall be Type 2E, batched at a concrete plant, flowable, requires no vibrating, the finished product must be excavatable without the use of power tools, and meet the following specifications:
  - 1. Portland Cement Meeting AASHTO M85
  - 2. Fly Ash Meeting AASHTO M4.05.02
  - 3. Sand Meeting M4.02.02
  - 4. Water Meeting M4.02.04
  - 5. Air Entraining Admixtures Meeting M4.02.05
  - 6. Compressive Strength 28 day = 30 – 80 psi  
90 day = 100 psi
  - 7. Slump 10-12 inches

PART 3 EXECUTION

3.01 TRENCH EXCAVATION

- A. The Contractor shall make all excavation in earth and in rock, necessary or incidental to the proposed construction under the terms of this Contract and as herein specified or indicated on the Drawings.
  - 1. All trench excavation shall be accomplished by open cut method.
  - 2. All excavation shall be made in such manner and to such widths as will give ample room for properly installing, constructing and inspecting pipe lines and structures they are to contain.
  - 3. The width of trenches shall be sufficient to allow thorough compacting of the refill adjacent to the lower quarters of the pipe. At pipe joints such additional width and depth shall be excavated as is necessary to give ample room for properly making and inspecting the pipe joint.
  - 4. Bracing and support of all trench excavation shall meet all requirements of Local and State ordinances and OSHA regulations.
    - a. Sheeting and bracing, or the use of a steel support box shall be used where required to maintain a safe working condition and provide protection from collapse of the trench walls.
  - 5. During excavations, material determined by the Engineer to be suitable for backfilling, shall be placed a sufficient distance from the banks of the trench to avoid slides or cave-ins. Unsuitable material shall be disposed of as specified and replaced with surplus suitable material and gravel borrow to the extent necessary.
  - 6. Should conditions make it impractical or unsafe to place material along the trench, it shall be hauled and stored at a location provided by the Contractor.

When required, it shall be re-handled and used in backfilling the trench. No additional compensation will be made for re-handling this material.

7. Pipe trenches shall be backfilled as soon as practical after the pipes have been laid, jointed, and inspected by the Engineer. The extent of excavation open at any one time shall be no more than 50 linear feet of trench during working hours and no more than 20 linear feet during non-working hours. All trenches left open overnight to be secured with steel plates.

### 3.02 EXCAVATION CLASSIFICATION

- A. Earth excavation shall comprise all materials not classified as rock excavation and shall include clay, silt, sand, muck, gravel, hardpan, loose shale, pavement, pavement bases, loose stone in masses and boulders measuring less than one cubic yard in volume.
- B. Rock: See Section 02227 Rock Removal.

### 3.03 TRENCH EXCAVATION IN PAVED ROADWAYS

- A. In excavating trenches in roadways having an improved pavement, the Contractor shall cut the pavement twice; once prior to excavation and again prior to permanent resurfacing.
  1. The first cut may be made using a water cooled abrasive saw, pneumatic chisel or a wheel cutter attached to a front end loader.
  2. The second and final cut shall be made with a water cooled abrasive saw.
  3. In all cases a trial section shall be cut to indicate the performance of the equipment to be used.
  4. Pavement removed shall not be mixed with other excavated materials, but shall be disposed of away from the site of the work before the remainder of the excavation is made.
  5. Existing pavement and base course to remain shall be protected by the Contractor. All existing pavements and base courses which are to remain and have been damaged, shall be restored or replaced by Contractor to match existing pavements, base courses and grades, at no additional expense to the Owner.

### 3.04 UNSUITABLE MATERIAL

- A. All pipes and structures are to be laid on a stable foundation. If material at grade is determined to be unsuitable by the Engineer, the Contractor shall excavate a further depth and/or width, and refill with an approved material. Refill material shall be structural fill, gravel borrow or crushed stone as determined by the Engineer.
  1. Where fine sand and silt are encountered at the bottom of the trench, it shall be the option of the Engineer to require a 6-inch compacted depth of concrete sand meeting ASTM C-33 for fine aggregate to be installed beneath the pipe bedding to the full width of trench.
  2. Payment width limits shall be the same as specified for trench excavation, unless an additional width of trench is ordered by the Engineer.
  3. Any excavation in excess of the amount ordered by the Engineer shall be backfilled and compacted with an approved granular material, at the Contractors expense.

### 3.05 ROCK REMOVAL

- A. See Specification Section 02227.

### 3.06 DEWATERING

- A. See Specification Section 02140.

### 3.07 BACKFILLING AND COMPACTING

- A. Backfill shall be placed in uniform layers. Each layer shall be thoroughly compacted by tamping or vibrating with mechanical compacting equipment.
  - 1. Care shall be taken to compact the backfill materials throughout the full width of the excavation and beneath all pipes and structures.
  - 2. The backfilling of trenches shall proceed as soon as the laying of the pipe (s) or installation of the structures will allow.
  - 3. Pipe bedding shall be required below and up to the springline of all pipe.
    - a. Pipe bedding shall be placed to the full width of the trench and to a depth of 6 inches below the bottom of the pipe barrel as indicated on the Drawings.
  - 4. Pipe bedding shall be placed 12 inches beyond the widths of a utility structure foundation (base) and to a depth of 6 inches below the foundation (base) or as indicated on the Drawings.
  - 5. After a pipe has been placed and bedded, the trench shall be filled to the centerline of the pipe with pipe bedding and compacted.
    - a. Material under and around the pipe shall be carefully and thoroughly compacted and tamped with approved compacting equipment.
  - 6. From the centerline of the pipe to a point 12 inches above the top of the pipe, the fill shall be pipe bedding.
- B. Placement of Backfill Above the Pipe Bedding
  - 1. Above the pipe bedding, backfill shall be suitable material from the excavation or, if ordered by the Engineer, gravel borrow.
    - a. This backfill shall be placed in layers 6 inches deep in loose measure, and each layer shall be thoroughly compacted.
    - b. This backfill shall be placed up to the bottom of materials specified to be placed for surfacing requirements.
- C. Roadway Trench
  - 1. The following additions shall apply specifically to trenches within roadways:
    - a. The top twelve (12) inches of trench refill, roadway sub-base, shall be comprised of processed gravel furnished, placed, graded and compacted by the Contractor. This material shall be placed during the backfilling operation.
    - b. The Contractor shall fine grade the surface, apply dust control treatment and maintain the surface in a condition which will allow safe vehicular traffic until resurfacing is placed.
  - 2. The length of unsurfaced trench shall not exceed 500 linear feet, and shall be maintained to the Owner's satisfaction, in a condition to allow safe vehicular traffic.
    - a. If the trench is not maintained in a satisfactory condition, the allowable length of unsurfaced trench shall be reduced accordingly.

### 3.08 TRENCH SIZE

- A. Trenches shall be excavated to the necessary width and depth for proper laying of pipe and placement of concrete and other materials and shall have vertical sides to 12 inches above the pipe.

1. Widths of trenches shall be as shown on the drawings.
2. The depth of trench shall be a minimum 6 inches below the pipe barrel, or as shown on the Drawings

### 3.09 STRIPPING TOPSOIL

- A. Topsoil shall be carefully stripped and separately stored to be used again for topsoiling and seeding on off-pavement areas within which excavations are to be made.

### 3.10 EXCAVATION NEAR EXISTING STRUCTURES AND UTILITIES

- A. It is called to the attention of the Contractor that there are utilities and other underground pipes along the course of the work. Information shown on the Drawings as to the location of said utilities and pipes is from the best available sources, but no guarantee is implied, nor is it to be assumed that such information is accurate or complete. Utility lines shall be crossed in the course of the work.
- B. The Contractor shall exercise special care during his operations to avoid injury to all such underground utilities and structures.
  1. When necessary, the Contractor shall cooperate with, and consult with representatives of the Owner and the utility companies in order to avoid damage to the utilities.
  2. The Contractor shall arrange for or furnish and erect suitable supports and shoring or other means of protection where required to protect the utilities, all at no additional cost to the Owner.
  3. Hand methods of excavating shall be used around buried utilities and is included in the work to be done under this Contract, at no additional cost to the Owner.
  4. Interference between the proposed work and existing utilities, relocation of existing utilities, repair or damage to existing utilities, and protection and support of existing utilities during construction of the proposed work will be as specified in Section 01013.

### 3.11 PROTECTION OF PROPERTY

- A. The Contractor shall, at his own expense, preserve and protect from injury all property either public or private along and adjacent to the line of work, and be responsible for and repair any and all damage and injury thereto, arising out of or in consequence of any act or omission of the Contractor.
  1. All existing pipes, culverts, poles, wires, fences, mailboxes, stone walls, curbs, bounds, etc., shall be temporarily removed, supported in place or otherwise protected from injury, and shall be restored to at least as good condition as that in which they were found immediately prior to the start of work.
  2. Lawns, shrubs, bushes, planting beds and decorative trees disturbed or damaged shall be restored to a condition equal to that found prior to the start of construction, either by temporary transplant or replacement in kind, except as otherwise indicated on the Drawings.

### 3.12 SAFETY AND ACCOMMODATION

- A. The Contractor shall provide, at his own expense, suitable bridges over trenches where required for the accommodation and safety of the traveling public, and provide facilities for access to private driveways for vehicular use.

1. He shall erect suitable barriers around the excavation to prevent accidents to the public and shall place and maintain during the night, sufficient lights on or near the work.
2. A space of twenty (20) feet shall be left so that free access may be had at all times to fire hydrants and proper precautions shall be taken so that the entrances to fire hydrants and fire stations shall not be blocked or obstructed.

### 3.13 DETOURS

- A. It is the intent of this Contract to keep the roadways open to two way traffic at all times. In order to obtain permission for the closing of the roadway, the Contractor shall satisfy the Owner, Police Chief and Fire Chief, that his operations will allow emergency access at all times.
  1. See Section 01570, Traffic Regulations.

### 3.14 UNIFORMED POLICE OFFICERS

- A. The Contractor shall make all arrangements with the local Police Chief and/or the State Police for the services of uniformed police officers.
  1. If, in the opinion of the State Police, Police Chief or the Owner, uniformed police officers are required for protection of persons and control of traffic, the Contractor shall be responsible for making all arrangements for said uniformed police officers as may be required.

### 3.15 COMPACTION REQUIREMENTS AND TESTING

- A. All backfill materials shall be thoroughly compacted by rolling, tamping or vibrating with approved mechanical or pneumatic compacting equipment so that pipe, structures, paving and other construction will not settle at the time of construction or in the future. The responsibility for thorough compaction is that of the Contractor irrespective of methods of backfill and depth of backfill layers placed.
- B. All percentages of compaction specified herein shall be of the maximum dry density at the optimum moisture content as established by Method D of AASHTO Standard T180 (ASTM D1557) (Modified Proctor) and verified by AASHTO Standard T147 (ASTM D 1556). When the term "thoroughly compacted" is used in these specifications, it shall mean compaction to at least 95% of the maximum density of the soils at optimum moisture content.
- C. The following numbers and types of soil tests shall be made where directed by the Engineer. These tests shall be made by qualified personnel of an independent testing laboratory, acceptable to the Engineer and paid by the Contractor. Three copies of all test results shall be delivered to the Engineer.
  1. Particle-Size analysis of Soils and Backfill Materials in accordance with ASTM D422. A total of 5 satisfactory tests.
  2. Moisture-Density Relationship of soil in accordance with ASTM D1557, Method D. A total of 5 satisfactory tests.
  3. In-Place Density Tests of materials in accordance with ASTM D1556. One in-place density test shall be performed every 300 linear feet, or as directed by the Engineer. Compaction tests will be taken at random on compaction layers below and at finished surfaces.
  4. Failed tests shall be repeated at the Contractor's expense.

- D. The Owner reserves the right to have additional compaction tests performed by an independent laboratory with testing costs borne by the Owner, except that failed tests shall be repeated at the Contractor's expense.
- E. If any of the field density test results fail to meet the density as specified herein for the earthwork involved, then the Contractor shall remove all of the earthwork in that portion of the work involved as determined by the Engineer, and shall replace it in accordance with these Specifications to the required density. After the work is replaced, additional field density tests will be made by an independent testing laboratory retained by the Owner, and the Contractor shall reimburse the Owner for all costs for such additional testing.
  - 1. Compaction shall be to the following densities:
 

| <u>Fill and Backfill Location</u>  | <u>Modified Proctor Density (Percent)</u> |
|------------------------------------|---|
| Under structures and pipes         | 95  |
| Beside structure foundation walls  | 95  |
| Top two feet under pavements       | 95  |
| Under pavements below top two feet | 95  |
| Trenches through unpaved areas     | 90  |
| In embankment                      | 90  |
- F. Puddling and jetting of the backfill shall not be permitted except in special cases approved by the Engineer.

3.16 TRENCH EXCAVATION IN FILL

- A. Where the existing ground surface does not permit at least 4 feet of cover over the finished pipe, and where indicated on the Drawings, the Contractor shall place and compact suitable fill material to the depth necessary to provide the 4 foot minimum cover, including loam to a minimum top width of 6 feet, or as otherwise shown on the Drawings
  - 1. Minimum side slopes shall be two horizontal to one vertical.
  - 2. Fill material shall be from surplus suitable material or gravel borrow, and be clean, dry, and capable of satisfactory compaction, all as approved by the Engineer, and shall be placed in layers not exceeding 8 inches thick and compacted.
  - 3. The trench shall be excavated in the compacted fill and the remainder of the work shall be in accordance with other portions of these Specifications.

3.17 DISPOSAL OF SURPLUS AND UNSUITABLE EXCAVATED MATERIAL

- A. All surplus excavated material and any material unsuitable for use shall be disposed of in disposal areas provided by the Contractor.
  - 1. It is the Contractor's responsibility to dispose of unsuitable excavated material in an approved manner.
  - 2. The Contractor shall not dispose of surplus materials on wetlands or other areas prohibited by the Corps of Engineers or the Commonwealth of Massachusetts Department of Environmental Protection, or any other local authority having jurisdiction.

3.18 DUST CONTROL

- A. The Contractor shall perform dust control operations as specified in Section 01120.

3.19 CLEAN-UP

- A. The Contractor shall remove all surplus materials (earth, pipe, fittings, storage and office trailers, barricades, etc.), from the construction site.
  - 1. All paved roadways affected by the construction shall have their full width swept clean (paved edge to paved edge) using methods which control the dust at the end of each week or more frequently as directed by Engineer.
  - 2. Before the Contractor may proceed to another roadway, clean up of the previous roadway must be complete.

END OF SECTION

SECTION 02227

ROCK REMOVAL

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: Remove all rock encountered while excavating for structures, roadways, or utility trenches as required by the Contract Documents.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 02140 Site Drainage and Dewatering
  - 2. Section 02222 Earthwork for Water Distribution Systems

1.03 DEFINITIONS

- A. Rock excavation: Rock which requires explosives, wedging or impact hammer for its removal. Concrete shall be classified as rock.
- B. Boulders, slabs or other single pieces of material encountered, which are less than one (1) cubic yard shall not be considered rock.

1.04 STANDARDS

- A. All handling of explosives and blasting shall be in compliance with the pertinent sections of Commonwealth of Massachusetts Regulations (CMR) 13.00.

1.05 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. Comply with all pertinent requirements of governmental agencies having jurisdiction.

1.06 SUBMITTALS

- A. Submit plans for proposed pre-blast survey (Record purposes only).

PART 2 PRODUCTS (Not Applicable)

## PART 3 EXECUTION

### 3.01 NOTIFICATION

- A. When rock is encountered, it shall be uncovered and the Engineer notified.
  - 1. The Contractor shall provide the Engineer with cross sections of the rock surface or a profile of the rock where trenches are concerned.
  - 2. The Engineer shall be present when the cross sections or profiles are taken.
  - 3. The average end area method shall be used in computing the volumes wherever practicable.

### 3.02 LIMITS OF EXCAVATION IN ROCK

- A. Excavation in rock shall be performed, so that no projection shall come within vertical planes twelve (12) inches outside of the structure being built or twelve (12) inches below the bottom of the structure base slab and footings.
- B. In trenches, the rock shall be removed to the limits shown on the typical trench section.
  - 1. Where excavation is carried beyond the above determined limits, the additional space shall be refilled at the Contractor's expense with concrete or other specified materials.

### 3.03 BLASTING

- A. Pre-Blast Survey: Prior to any blasting, the Contractor shall submit a pre-blast survey.
  - 1. The survey shall satisfy the insurance requirements of the Contractor and be acceptable to the Contractor's insurance carrier, as well as provide data to assess damages to personal property and real estate due to blasting operations.
  - 2. The survey shall be complete as warranted by the nature of the work.
- B. Take all precautions necessary to warn and/or protect any individuals exposed to his operations. Such precautions shall include but not be restricted to the following:
  - 1. Present written certificate of insurance showing evidence that his insurance includes coverage for blasting operations, before doing any blasting work.
  - 2. Make necessary arrangements as may be required by the applicable Federal, State, County or Municipal codes, rules, regulations and laws, and shall be responsible for compliance.
  - 3. Obtain a permit from the local authorities to perform blasting operations.
    - a. The Engineer shall be notified in writing that such permit has been obtained.
  - 4. Schedules for blasting shall be thoroughly coordinated with the proper authorities – Federal, State and Local.
    - a. No blasting shall be done unless the Contractor has notified all concerned parties that he may blast.
    - b. The Contractor shall also notify any commercial installation in the immediate area whose operations or instrumentation may be affected by blasting, at least twenty four (24) hours prior to blasting operations.
  - 5. Seismographic recordings shall be made of all blasting operations on the project by a qualified testing agency hired and coordinated by the Contractor.
    - a. A copy of these recordings shall be made available to the Engineer.
  - 6. Blasting shall be performed by persons who are licensed to use explosives.

7. The Contractor shall keep an accurate record of each blast and submit a copy to the Engineer. The record shall show the date, time, exact stationing of the blast, the depth and number of drill holes, and kind and quantity of explosive used, and any other data required for a complete record.
8. The Contractor shall be fully responsible for damages caused by his blasting operations.
9. If rock below the limits of excavation is shattered by blasting, caused by holes drilled to deep, too heavy a charge of explosives or any other circumstance due to blasting, the shattered rock shall be removed and the void refilled with gravel borrow at the expense of the Contractor.
  - a. Gravel borrow shall be as specified in Section 02222 Earthwork for Water Distribution Systems.

### 3.04 DISPOSAL AND REPLACING OF ROCK

- A. Remove and dispose of all pieces of rock which are not suitable for use in other parts of the Work.
  1. Rock disposed of by hauling away to spoil areas shall be replaced by surplus excavation obtained elsewhere on the site, insofar as it is available.
- B. Fragments of rock approximately twenty five (25) pounds or less may be used in the fill areas of the site (roadway areas excluded).
  1. The Contractor shall place these pieces of rock in thin layers alternating them with layers of earth to be sure that all voids between the rock are completely filled with earth.
  2. If in the opinion of the Engineer the quantity is excessive, he may order the removal and disposal of the rock.
- C. Be responsible for obtaining spoil locations and the removal of all excess rock from the site.

END OF SECTION

## SECTION 02435

### REMOVING AND RELAYING EXISTING DRAINS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. The work of this section consists of furnishing all labor, materials, and equipment required for removal of cast iron, concrete, reinforced concrete, corrugated metal, asbestos cement, or vitrified clay drains ranging in diameter from 4 inches to 36 inches, where required in the work, and relaying them after construction to conform with lines and grades existing prior to construction.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
1. Section 02140 Site Drainage and Dewatering
  2. Section 02160 Support of Excavation
  3. Section 02222 Earthwork for Water Distribution Systems
  4. Section 02227 Rock Removal

#### PART 2 PRODUCTS (Not Applicable)

#### PART 3 EXECUTION

##### 3.01 DRAIN PIPE REMOVAL

- A. A trench of sufficient width and depth shall be excavated so that the drain pipes may be removed without damage.
1. The Contractor shall stockpile all removed sections of pipe at or near the job site.
  2. They shall be properly stacked or dispersed and protected to prevent damage.
  3. The Contractor shall replace any pipe sections that are to be relaid which may become lost, damaged or destroyed as a result of his operations, or because of his failure to properly store and protect them in a manner that would eliminate such damage or loss.
  4. Sections already damaged through no fault of the Contractor shall be replaced at the Owner's expense.

##### 3.02 RELAYING DRAIN PIPES

- A. The trenches shall be prepared to the proper widths and depths to facilitate the installation of the pipe.
1. The subgrade shall be compacted to support the pipe or other structures until it is firm and unyielding for the entire width of the trench
  2. Gravel or crushed stone shall be used to bed the pipe.
  3. Pipes shall be relaid to proper line and grade by utilizing batter boards or a transit or level.

4. Pipe sections are to be thoroughly cleaned of all silt or debris prior to installation.
5. Sections which have been damaged to such an extent that they may present future maintenance problems or may fail under loading shall not be reused.
6. The Contractor shall be required to replace any sections damaged by negligence at his own expense.
7. If drain pipes are damaged and require replacement, replacement of damaged drain pipe shall be with RCP or HDPE only. No replacement with VCP or ACP will be allowed.

END OF SECTION

SECTION 02513

ASPHALTIC PAVEMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. Provide asphaltic pavement and appurtenant items as required by the Contract Documents.
  - 1. In general the Contractor shall provide all labor, equipment, and materials, and perform all operations in connection with the installation of asphaltic pavement, berms, pavement markings, calcium chloride, final grade adjustments of valve boxes, manhole and catch basin castings, and preparation of the trench.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 02222 Earthwork for Water Distribution Systems

1.03 STANDARDS

- A. All road repairs and patch work will be done in accordance with Town of Milford Highway Department specs.

1.04 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
  - 3. Performance Bond: Contractor shall provide a three (3) year Performance Bond in the amount of \$15,000 prior to obtaining Town of Milford permits.

PART 2 PRODUCTS

2.01 GRAVEL SUBBASE

- A. Shall be as specified in Section 02222, Earthwork for Water Distribution Systems.

2.02 CONTROLLED DENSITY FILL (CDF)

- A. Shall be as specified in Section 02222, Earthwork for Water Distribution Systems

## 2.03 ASPHALTIC PAVEMENT

- A. Bottom and Top Course:
  - 1. Shall be Class I asphaltic pavement conforming to Sections 420, 460 and M3 of the Standard Specifications.

## 2.04 ASPHALT TACK COAT

- A. Shall consist of either emulsified asphalt, grade RS-1 conforming to Section M3.03.1, or cutback asphalt, grade RC-70 or RC-250 conforming to Section M3.02.0 of the Standard Specifications.

## 2.05 PAVEMENT MARKING PAINT

- A. Shall be High Heat Rapid Drying Traffic Marking Material conforming to Section M7.01.09, (Yellow High Heat Rapid Drying Traffic Marking Material) of the Standard Specifications.

## PART 3 EXECUTION

### 3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 FINAL PREPARATION OF SUBGRADES

- A. Gravel Subbase:
  - 1. Minimum compacted depth shall be shown on details, of 12 inches as measured from the bottom of the pavement.
  - 2. Spread and compacted in layers not exceeding 6 inches in depth, compacted measurement.
  - 3. All layers shall be compacted to not less than 95 percent of the maximum dry density of the material as determined by the standard AASHTO Test Designation T99 Compaction Test Method C at optimum moisture content.

### 3.03 GENERAL

- A. All asphaltic pavement thickness referred to in this Section shall be compacted thickness.
- B. No asphaltic pavement shall be placed when the air temperature is below forty (40) degrees Fahrenheit, or when the material on which the mix is to be placed contains frost.
- C. Maintain asphaltic pavement under this Contract during the guarantee period of one (1) year.
  - 1. Promptly refill and re-pave all areas which have settled or are otherwise unsatisfactory for traffic.

### 3.04 PLACEMENT OF ASPHALTIC CONCRETE PAVEMENT

#### A. Temporary Pavement (Bituminous Concrete Binder)

1. Place after underground facilities have been installed.
2. Pavement shall be the type as specified in this Section except that "cold-mix" will be acceptable for repairs during seasonal closure of the asphalt concrete supplier.
3. Compacted thickness shall be four (4) inches placed in two (2) lifts unless otherwise detailed on the Drawings.

#### B. Bituminous Concrete Excavation By Cold Planer

1. This work shall consist of preparing a foundation for the placement of bituminous concrete surfacing courses. All construction methods, equipment and materials for bituminous concrete excavation by cold planer shall conform to Massachusetts Highway Department standards specifications, Section 120.66.
2. Limit of Bituminous Concrete Excavation by Cold Planer
  - a. The existing surface course shall be excavated by cold planer at a width of five (5) feet centered over the centerline of the trench or flush with the existing curbing extending 12-inches past the further edge of the trench, to a depth of 1-1/2 inches, including 4-foot driveway aprons where applicable. Where pavement excavation abuts existing pavement to remain, the existing pavement shall be trimmed square and straight.
  - b. At the limit of proposed trench pavement overlay (based on contract award and/or service connection installation method) indicated on the drawings, at all intersecting side streets, and 4-foot driveway aprons, the proposed overlay shall be keyed into existing pavement. The existing surface course shall be excavated by cold planer to a depth of 1-1/2 inches for a length of 10 feet (minimum), and trimmed square and straight so that new surfacing shall be placed on undisturbed bituminous base course, unless indicated otherwise.
3. Excess material resulting from the operation shall be removed and properly disposed of off-site by the Contractor.
4. Equipment: Equipment for removing the bituminous surface shall be a power operated planing machine or grinder capable of removing in as many passes as required, a layer of bituminous material 1-1/2 inches in depth. The equipment shall be capable of accurately establishing profile grades by referencing from either the existing pavement or from an independent grade control and shall have a positive means for controlling cross slope elevations. The equipment shall also have an effective means for removing excess material from the surface and for preventing any dust resulting from the operations from escaping into the air and meet standards set by the Air Quality Act for noise and air pollution. The Contractor will be permitted to augment the large milling or grinding equipment with other more maneuverable machines for those areas inaccessible such as curb or casting cuts.
5. All drainage structures, sewer structures and other utilities shall be located and protected during the cold planing process. Any structures damaged during construction shall be replaced at the contractor's expense.

#### C. Trench Top Course 1½" Overlay:

1. Bottom course pavement shall remain in place following excavation by cold planer.

2. The bottom course shall be swept clean of all foreign matter and loose material.
3. Depressions in the bottom course resurfacing shall have a leveling course applied before the top course paving begins.
4. The surface receiving the top course shall be completely dry prior to the application of the tack coat.
5. Tack coat shall be applied at the rate of 0.25 gallons per square yard. The contact surface of the curbing, castings and other structures shall be painted with the tack coat.
6. All castings (frames and covers, valve boxes), shall be raised to finish grade before the top course is applied.
7. The equipment used for spreading and finishing shall be a mechanical self powered paver capable of spreading and finishing the mixture true to line, grade, width and crown by means of fully automated controls for both longitudinal and transverse slope.
8. Top course pavement compacted thickness shall be one and one half (1 ½) inches placed in a single lift unless otherwise detailed on the Drawings within the limits of the previously cold planed areas.
9. Compaction shall be accomplished with a self-propelled roller with a weight of approximately 285 pounds per inch of roller width.

D. Pavement for Sidewalks/Driveways

1. The gravel base course shall be as hereinbefore specified.
2. Permanent pavement for sidewalks/driveways shall consist of a gravel base course, Type I-1 bituminous concrete binder course and surface course.
3. The thickness of the bituminous concrete courses shall be as specified in the Road Opening Permit Regulations.
4. Sidewalks, curb cuts, accessible ramps, and driveway crossings damaged during construction and requiring reconstruction shall be constructed in compliance with Architectural Access Board regulations, 521 CMR 21-22.

### 3.05 CASTING ADJUSTMENTS

- A. Where asphaltic pavement is to be applied, manhole and catch basin frames and valve boxes are to be adjusted to the grade of the new pavement.
1. A neat line shall be cut in the pavement around the existing frames and valve boxes.
  2. The material; gravel, pavement and concrete collar (if applicable) shall be removed down to six (6) inches below the frame.
  3. The frame shall be freed from its existing grout bed and shimmed with steel shims of the appropriate thickness, at a minimum of four (4) alternate locations, so as to insure that the frame will not rock. The frame shall then be set into a full bed of bituminous concrete, compacted pneumatically by a 60-pound jackhammer with foot. The bituminous concrete shall be placed in 3-inch lifts with at least 8-inches in depth around the frame and cover.
  4. The frame shall be protected from damage from traffic until the concrete has taken a firm set.

### 3.06 BERMS

- A. Asphaltic Pavement Berms:

1. Berms shall be class I asphaltic Type I-1.
2. The mixture shall be placed and compacted with a machine acceptable and approved by the Engineer, for the type of berm required.
3. Placing and forming of berms by hand shall not be allowed.

### 3.07 DUST CONTROL TREATMENT

- A. Calcium chloride shall be applied only upon direction of the Engineer.
1. The roadway shall be swept clean and calcium chloride spread at a uniform rate over the prepared gravel trench surface.

### 3.08 PAVEMENT MARKINGS

- A. Pavement markings shall be applied as shown on the contract drawings, at locations directed by the Engineer, or as required by the Town of Milford.
1. Pavements shall have been in place 48 hours prior to the application.
  2. The surface shall be prepared to accept the application in compliance with the paint manufacturer's requirements.
  3. The temperature of the pavement shall be between forty (40) degrees and one hundred twenty (120) degrees Fahrenheit.
  4. No thinners are to be used for the pavement markings.
  5. The equipment used for the application of pavement markings, shall be of standard commercial manufacturer. All other equipment and devices necessary for the application of pavement markings and protection thereof and for the protection of the traveling public, shall be as usually required for work of this type, and shall be furnished by the Contractor.
  6. Pavement markings shall be either a single continuous line or a broken line, four (4) inches wide.
  7. If for any reason material is spilled or tracked on the pavement or any markings applied by the Contractor the Contractor shall remove such material.
    - a. The material shall be removed by a method that is not injurious to the roadway surface and is acceptable to the Engineer.
    - b. Clean the roadway surface and prepare the surface for a re-application of the pavement markings.
  8. All painted road markings shall be replaced. All thermoplastic road markings shall be replaced.

END OF SECTION

## SECTION 02516

### REMOVE AND RESET EXISTING CURB

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: The work of this Section shall consist of removing the existing curb(s), edging, curb corners and curb inlets of every type and cross section and resetting them in accordance with these specifications and in conformity with the lines and grades shown on the Drawings.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 02222 Earthwork for Water Distribution Systems
  - 2. Section 02513 Asphaltic Pavement
  - 3. Section 03301 Cast-In-Place Concrete for Water Mains

#### PART 2 PRODUCTS

##### 2.01 CURBING

- A. Curb, edging, curb inlets and curb corners shall consist of the same as is designated to be reset.

##### 2.02 GRAVEL

- A. Gravel shall conform to the requirements of Subsection M1.03.0 Type C of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges.

#### PART 3 EXECUTION

##### 3.01 REMOVAL OF EXISTING CURB

- A. A trench of sufficient width or depth shall be excavated so that the existing curb, edging, curb corners and curb inlets can be removed without damage.
- B. The Contractor shall protect all curb or edging and keep it in satisfactory condition until the acceptance of the entire contract. The Contractor shall replace any existing curb, edging, curb corners and curb inlets that is to be reset, which is lost or damaged as a result of his operations, or because of his failure to store and protect it in a manner that would eliminate its loss or damage.
- B. The length of any section of curb or edging, shall be altered by cutting in order to fit closures as necessary. The ends of all stones shall be square with the planes of the top and face so that when the stones are placed end-to-end as closely as possible no space shall

show in the joint at the top and face of more that  $\frac{3}{4}$  inch for the full width of the top and for 8 inches down on the face.

- C. The Contractor shall accept and hold entire responsibility for the removal, handling, stacking at a convenient location for the Owner and the Contractor, and protection of all curbing and corners until final removal from the site or the resetting of the curb. Any curbing damaged through lack of protection or carelessness by the Contractor shall be replaced at the Contractors expense.
- D. Any curb or curb corners not damaged through lack of protection or carelessness by the Contractor but deemed by the Engineer as unsatisfactory for relaying or stacking will be discarded. The Contractor is responsible for proper disposal of the granite without additional compensation. The OWNER reserves the right to claim the portions of the damage granite deemed useful.

### 3.02 EXCAVATING TRENCH AND PREPARING FOUNDATION

- A. The trench for the curb shall be excavated to a width of 18 inches. The subgrade of the trench shall be a depth below the proposed finished grade of the curb equal to 6 inches plus the depth of the curbstone. The trench for the curb corner shall extend 6 inches beyond the front and back of curb corner to the full depth of foundation.
- B. The foundation for the curb shall consist of gravel spread upon the subgrade and after being thoroughly compacted by tamping shall be 6 inches in depth.

### 3.03 SETTING CURB AND EDGING

- A. All spaces under the curb, curb corners or edging shall be filled with gravel thoroughly compacted so that the curb, curb corners or edging will be completely supported throughout their length.

### 3.04 FILLING ABOUT TRENCH

- A. After the curb, curb corners, curb inlets and edging is set, the space between it and the wall of the trench shall be filled with poured concrete, at a minimum of 3-inches below finished grade of bituminous, care being taken not to affect the line or grade of the curb, curb corners, curb inlets and edging.

### 3.05 POINTING

- A. The joints between curbstones or edging shall be carefully filled with cement mortar and neatly pointed on the top and front exposed portions. After pointing, the curbstones or edging shall be satisfactorily cleaned of all excess mortar that may have been forced out of the joints.

### 3.06 TRANSITION CURB FOR WHEELCHAIR RAMPS

- A. Transitions from normal curb settings to wheelchair ramps or driveways shall be accomplished with transition curb. Transitions shall be of the same type of curb and similar to that abutting and, if on a curve, of the same radius.

END OF SECTION

## SECTION 02611

### DUCTILE IRON PIPE AND FITTINGS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work Included: Provide buried ductile iron water mains, fittings, and other appurtenances as required by the Contract Documents.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 02140 Site Drainage and Dewatering
  - 2. Section 02160 Support of Excavation
  - 3. Section 02222 Earthwork for Water Distribution Systems
  - 4. Section 02640 Buried Valves and Appurtenances
  - 5. Section 02645 Hydrants
  - 6. Section 02650 Thrust Blocks and Joint Restraints
  - 7. Section 02675 Disinfection of Water Mains
  - 8. Section 02676 Testing Piping Systems

##### 1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. All ductile iron pipe and fittings shall be of domestic manufacture.
- C. Coordinate the work of this Section with the work of other related Sections.
- D. All pipe materials and lubricants in contact with water shall be NSF approved for use with potable water.

##### 1.04 INSPECTION, TESTS AND ACCEPTANCE

- A. All pipe delivered to the job site shall be accompanied by test reports certifying that the pipe conforms to "AWWA Standard AWWA C151 for Ductile Iron Pipe, for Water and Other Liquids".
- B. All tests shall be made in accordance with the methods prescribed by the above mentioned AWWA Standard, and the acceptance or rejection shall be based on the test results.
- C. Pipe which does not conform to the requirements of this contract shall be immediately removed from the site and replaced by the Contractor with pipe which does conform.

## 1.05 STANDARDS

- A. The following American Water Works Association (AWWA) standards form a part of this specification as referenced:
  - 1. AWWA C104 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
  - 2. AWWA C110 Ductile-Iron and Gray-Iron Fittings, 3 In. through 48 In. for Water and Other Liquids.
  - 3. AWWA C111 Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
  - 4. AWWA C150 Thickness Design of Ductile-Iron Pipe.
  - 5. AWWA C151 Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water and Other Liquids.
  - 6. AWWA C153 Ductile-Iron Compact Fittings, 3 In. through 12 In., for Water and Other Liquids.
  - 7. AWWA C600 Installation of Ductile Iron Watermain and Their Appurtenances.

## 1.06 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.

## PART 2 PRODUCTS

### 2.01 PIPE

- A. Ductile Iron Pipe (Buried Service):
  - 1. All pipe shall meet the requirements of ANSI/AWWA C111/A21.11.
  - 2. Class: 52
  - 3. Joints
    - a. Push-on meeting the requirements of ANSI/AWWA C111/A21.11.
  - 4. Gaskets: Conform to ANSI/AWWA C111/A21.11.
  - 5. Lining: Conforming to ANSI/AWWA C104/A21.4
  - 6. Thickness of cement-mortar lining:
    - a. 1/8 inch for pipes 12 inches and smaller.
    - b. 3/16 inch for pipe 14 inches and larger.
  - 7. Cement-mortar lining to be seal coated per AWWA C104.
  - 8. Accessories: Pipe shall be provided with all necessary accessories to make-up the joint (glands, tee head bolts, hex nuts, etc.). A minimum of three brass wedges shall be supplied for every joint.

## 2.02 FITTINGS

- A. Fittings:
  - 1. Comply with ANSI/AWWA C153/A21.53.
  - 2. Pressure rating: 350 psi.
  - 3. Lining and coating: Same as pipe.
  - 4. Joint: Mechanical joint in compliance with ANSI/AWWA C111/A21.11.
  - 5. Markings on fittings: Comply with ANSI/AWWA C110/A21.10.
  - 6. Ductile iron fittings shall be clean, sound and without defects. The castings shall be smooth and free from pinholes, excess iron, etc. The coatings shall be continuous, smooth and neither brittle nor sticky.

## 2.03 SPECIAL FITTINGS

- A. Locking Hydrant Tees: Shall be mechanical joint, each having a bell and plain end, with a split mechanical joint on the plain end. Gate valve shall be secured directly to the tee by using the standard mechanical joint gasket and standard bolts.
- B. Retainer Glands: See Section 02650 – Thrust Blocks and Joint Restraints.
- C. Couplings: Shall be cast or ductile iron, consisting of a middle ring, two (2) rubber gaskets, and the followers with stainless steel bolts and nuts. Coupling and gasket shall be sized for the particular application intended. Couplings shall be as manufactured by Rockwell.
- D. Plugs: Shall be ductile iron with mechanical or push-on joint and retainer feature.
- E. Sleeves: Shall be ductile iron with mechanical joint, long body style meeting or exceeding the requirements of ANSI/AWWA C110/A21.10 or latest revision thereto.
- F. Transition Couplings: As required for joining pipes of different diameters shall be furnished as required and designed for compatibility with the pipe and operating pressures encountered.
  - 1. Transition couplings shall be Dresser Style 162 as manufactured by Dresser Industries Inc., or an approved equal.

## 2.04 POLYETHYLENE ENCASEMENT

- A. Polyethylene Encasement:
  - 1. Comply with ANSI/AWWA C105/A21.5, “American National Standard for Polyethylene Encasement of Ductile Iron Pipe Systems.”
  - 2. Polyethylene encasement shall be installed as directed by the Owner.

## 2.05 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

## PART 3 EXECUTION

### 3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 FIELD MEASUREMENTS

- A. Make necessary measurements in the field to assure precise fit of the items.

### 3.03 GENERAL

- A. Earthwork:
  - 1. Trench, backfill and compact for the work of this Section in strict accordance with the pertinent provisions of Section 02222, Earthwork for Water Distribution Systems.
  - 2. Shoring for the work of this Section shall be in strict accordance with Section 02160, Support of Excavation.
  - 3. Control of ground and surface water shall be in strict accordance with Section 02140, Site Drainage and Dewatering.

### 3.04 PIPE HANDLING

- A. Handling:
  - 1. The Contractor shall take care not to damage pipe by impact, bending, compression, or abrasion during handling, and installation. Joint ends of pipe especially shall be kept clean.
  - 2. Pipe shall be stored a minimum 4 inches above ground at a height no greater than 5 feet, and with even support for the pipe barrel.
  - 3. Only nylon-protected slings shall be used for handling the pipe. No hooks or bare cables shall be permitted.
  - 4. Gaskets shall be shipped in cartons and stored in a clean area, away from grease, oil, heat, direct sunlight and ozone producing electric motors.
  - 5. Pipe shall not be dropped from trucks onto the ground or into the trench.

### 3.05 INSTALLATION

- A. Pipe:
  - 1. Installation and jointing of ductile iron pipe shall be in accordance with AWWA C600 Sections 9b and 9c, latest revision, as applicable.
  - 2. In general, jointing of ductile iron push-on pipe and fittings shall be done as follows.
  - 3. The last 8 inches of the outside of the spigot end of the pipe and the inside of the bell end of pipe shall be thoroughly cleaned.
  - 4. The joint surfaces and the gasket shall be painted with a lubricant, provided by the pipe manufacturer, just prior to making up the joint. The spigot end shall then be gently pushed home into the bell.
  - 5. The position of the gasket shall be checked to insure that the joint has been properly made and is watertight.

6. Care shall be taken not to exceed the manufacturer's recommended maximum deflection allowed for each joint.
7. When laying is not in progress, including lunch time, the open ends of the pipe shall be closed by a watertight plug.
8. When cutting of pipe is required, the cutting shall be done by machine, leaving a smooth cut at right angles to the axis of the pipe.
  - a. Cut ends of pipe to be used with a push-on type bell shall be beveled to conform to the manufactured spigot end.
  - b. Cement lining shall be inspected for damage and shall be remortared as required to ensure a continuous lining.
9. Each pipe section shall be placed into position in the trench in such manner and by such means required to cause no damage to the pipe, person or to property.
10. The Contractor shall have on the job site, with each laying crew, all the proper tools to handle and cut the pipe.
11. Each pipe length shall be inspected for cracks, defects in coating or lining, and any other evidences of unsuitability. Contractor shall excavate a minimum amount of trench and shall back-fill trench to within 2 lengths of pipe laying. All trenches shall be back-filled at night.
12. Pipe shall be laid in the dry and at no time shall water in the trench be permitted to flow into the pipe.
13. The pipe shall then be laid on the trench bedding, and the pipe pushed home. Jointing shall be in accordance with the manufacturer's instructions and appropriate ASTM Standards, and the Contractor shall have on hand for each pipe laying crew, the necessary tools, gauges, pipe cutters, etc. necessary to install the pipe in a workmanlike manner. Pipe laying shall proceed upgrade with spigot ends pointing in the directions of flow.
14. Blocking under the pipe will not be permitted except where a concrete cradle is proposed, in which case pre-cast concrete blocks shall be used.
15. If inspection of the pipe indicated that the pipe has been properly installed as determined by the Inspector, the Contractor may then refill or back-fill the remainder of the trench in accordance with the specifications.
16. Acceptable alignment shall be preserved inlaying. The deflection at joints shall not exceed 3 degrees, or 12 inches for an 18 foot length of pipe. Fittings, in addition to those shown on the Drawings, shall be provided, if required, in crossing utilities, which may be encountered upon opening the trench. Solid sleeves shall be used only where approved by the Inspector.

B. Caps and Plugs:

1. Shall be provided with a threaded corporation or bleeder valve so that air and water pressure can be relieved prior to future connection.

C. Thrust Blocking for Fittings:

1. As specified in Section 02650, Thrust Blocks and Joint Restraints.

D. Couplings:

1. Contractor shall provide all adapters and fittings such as transition couplings, as determined in the field, necessary to complete all tie-ins, whether or not specifically stated in the Specifications or on the Contract Drawings.

E. Joints:

1. Push-on joints shall be made in strict accordance with the manufacturer's instructions. Pipe shall be laid with bell ends on the upstream side. A rubber

gasket shall be inserted in the groove of the bell end of the pipe and joint surfaces cleaned and lubricated. The plain end of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which it is to be jointed and pushed home with a jack or by other means. After jointing the pipe, a metal feeler shall be used to make certain that the rubber gasket is located correctly.

2. All mechanical joints at valves, fittings and hydrants shall have ductile iron retainer glands as specified. To assemble the joints in the field, the Contractor shall thoroughly clean the joint surfaces and rubber gasket with soapy water before tightening the bolts. Bolts shall be tight to the specified torques. Under no conditions shall extension wrenches or pipe over handle or ordinary ratchet wrench be used to secure greater leverage.

### 3.06 SPECIAL CONDITIONS

- A. Under no conditions shall ductile iron pipe be installed within 5 feet of gas lines without written permission from the Engineer at the discretion of the Owner.

### 3.07 TESTING

- A. Comply with the pertinent sections of Section 02676, Testing Piping Systems.

### 3.08 DISINFECTING

- A. Comply with the pertinent sections of Section 02675, Disinfection of Water Mains.

END OF SECTION

## SECTION 02640

### BURIED VALVES AND APPURTENANCES

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Provide buried valves, valve boxes, and valve accessories, as required by the Contract Documents.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications
  1. Section 02140 Site Drainage and Dewatering
  2. Section 02160 Support of Excavation
  3. Section 02222 Earthwork for Water Distribution Systems
  4. Section 02611 Ductile Iron Pipe and Fittings

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  1. Materials list of items proposed to be provided under this Section.
  2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
  3. An exploded view diagram with a materials list.

##### 1.04 STANDARDS

- A. The following American Water Works Association (AWWA) standards form a part of this specification as referenced:
  1. AWWA C515 Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service.
  2. AWWA C504 Rubber-Seated Butterfly Valves.

#### PART 2 PRODUCTS

##### 2.01 VALVES

- A. Resilient Seated Gate Valves: Shall be used on all water mains less than sixteen (16) inches in diameter and all hydrant branches.
  1. Valves shall be as manufactured by Mueller Co., or approved equal.
  2. Meet or exceed the requirements of ANSI/AWWA C515.
  3. Joints: Mechanical joint conforming to ANSI/AWWA C111/A21.11.

4. Ductile iron body.
5. Bronze stem.
6. Resilient sealed wedge type:
  - a. Wedge: Fully encapsulated; no exposed iron.
7. Triple O-ring seal stuffing box.
8. Non rising stem.
9. Two (2) inch square operating nut.
10. Rated for 250 psi and tested to 500 psi.
11. Open: Clockwise (right).
12. All internal and external surfaces except rubber coatings shall be coated with fusion bonded epoxy to a minimum thickness of 8 mils:
  - a. Coating shall be non-toxic, impart no taste to water and shall conform to AWWA C-550.
13. Valves shall have an unobstructed waterway when fully opened equal in diameter to at least ¼" greater than the nominal valve size. Valves shall have mechanical joint ends with retainer glands.
14. All valves shall be tested at the rate working pressure in accordance with section 6 of AWWA C509. Valve shall be rated at 200 psi working pressure and 400 psi test pressure.

## 2.02 VALVE BOXES

- A. Valve boxes shall be provided for each buried valve. They shall be:
  1. Domestic manufacture.
  2. Cast iron with a cast iron cover.
  3. Cover shall have the word "WATER" cast into the cover in raised letters.
  4. Valve box barrel shall not be less than (5-¼) inches in diameter.
  5. Valve box top section shall have a minimum diameter of 6 1/8 inches.
  6. Shall be two (2) piece sliding type, providing a minimum overlap of six (6) inches.
  7. The lower section shall enclose the operating nut and stuffing box/gear box of the valve and shall have a minimum diameter of 8 inches.
  8. The box shall not transmit shock or stress to the valve.
  9. The bottom section shall be 36 inches in length. The top section shall be at least 26 inches in length and have a plain bottom.
  10. Valve boxes shall be completely and thoroughly coated with bitumastic paint.

## 2.03 LINE STOPS

- A. The equipment, materials, and installation of line stops shall be performed by a qualified firm experienced in the installation of line stops. The minimum acceptable qualifications shall be five (5) years of continuous installation of line stops and have at least fifteen (15) years of similar installations.
- B. All equipment, materials, and installation methods of line stops shall be submitted to the Engineer for approval prior to purchase and installation.

PART 3 EXECUTION

3.01 HANDLING AND INSPECTION

- A. Care shall be taken to prevent damage to valves, and appurtenances during handling and installation. All materials shall be carefully inspected for defects in workmanship and materials.
- B. All operating mechanisms operated to check their proper functioning, and all nuts and bolts checked for tightness. Valves which do not operate easily or are otherwise defective shall be replaced at the Contractor's expense.

3.02 INSTALLATION

- A. General:
  - 1. Construction methods for the work under this Section shall conform to the applicable portions of Section 02611, Buried Ductile Iron Pipe and Fittings, details as shown on the Contract Drawings, manufacturer's recommended installation procedures, and procedures specified herein.
- B. Valves and Appurtenances:
  - 1. Generally, valves shall be set and aligned plumb, supported by a flat stone or solid concrete block, with the trench bottom being firmly compacted.
  - 2. Valve boxes shall be set centered and plumb over the operating nuts of all, direct burial valves. The top of each valve box shall be set to finished grade with at least 10 inches of overlap remaining between the upper sections for future vertical adjustment. Minimum overlap for lower, extension pieces shall be 6 inches.
  - 3. Valves, bolts and all other appurtenances shall be thoroughly cleaned and given a shop coat of asphaltum varnish.
  - 4. Ferrous surfaces obviously not to be painted shall be given a shop coat of grease or other suitable rust-resistant coating.
  - 5. Valves shall be anchored to all tees or fittings with retainer glands.

END OF SECTION

## SECTION 02641

### TAPPING SLEEVES AND VALVES

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Provide tapping sleeves and valves, valve boxes, and accessories, as required by the Contract Documents.

##### 1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, the following Specifications:
  - 1. Section 02140 Site Drainage and Dewatering
  - 2. Section 02160 Support of Excavation
  - 3. Section 02222 Earthwork for Water Distribution Systems
  - 4. Section 02611 Ductile Iron Pipe and Fittings

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.

##### 1.04 STANDARDS

- A. The following American Water Works Association (AWWA) standards form a part of this specification as referenced:
  - 1. AWWA C111 Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings
  - 2. AWWA C515 Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service.

##### 1.05 QUALITY ASSURANCE

- A. Use adequate number of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. All of the types of tapping sleeves, valves, and appurtenances shall be products of established firms who are experienced in the manufacture of the particular item to be furnished.
  - 1. All tapping sleeves, valves, and their appurtenances shall be of domestic manufacture.

## PART 2 PRODUCTS

### 2.01 TAPPING SLEEVE

- A. Shall be manufactured by Mueller Co., Decatur, IL, or an approved equal.
  - 1. Size as noted on the Drawings.
  - 2. Mechanical joint ends in compliance with ANSI/AWWA C111.
  - 3. Outlet flange dimensions and drilling shall comply with ANSI B16.1, Class 125 and with MSS-SP60.
  - 4. Ductile iron body.
  - 5. Rated for 200 psi and tested to 400 psi.
  - 6. 1-inch NPT test plug.

### 2.02 TAPPING VALVE

- A. Shall be as manufactured by Mueller Co., Decatur, IL, or an approved equal.
  - 1. Size as noted on the drawings.
  - 2. Joints: Mechanical joints by flanged end.
  - 3. Meet or exceed the requirements of ANSI/AWWA C515.
  - 4. Ductile iron body.
  - 5. Bronze stem.
  - 6. Resilient-seated.
  - 7. Non rising stem.
  - 8. O-ring stem sealed stuffing box.
  - 9. Two (2) inch square operating nut.
  - 10. Rated for 200 psi and tested to 400 psi.
  - 11. Open: Clockwise (right).
  - 12. All internal and external surfaces except rubber coatings shall be coated with fusion bonded, NSF 61 certified, epoxy to a minimum thickness of 8 mils:
    - a. Coating shall be non-toxic, impart no taste to water and shall conform to AWWA C-550.

### 2.03 VALVE BOXES

- A. Valve boxes shall be provided for each buried valve. They shall be:
  - 1. Domestic manufacture.
  - 2. Cast iron with a cast iron cover.
  - 3. Cover shall have the word "WATER" and an arrow indicating the direction of opening cast into the cover in raised letters.
  - 4. Valve box barrel shall not be less than (5-1/4) inches in diameter.
  - 5. Shall be two (2) piece sliding type, providing a minimum overlap of six (6) inches.
  - 6. The lower section shall enclose the operating nut and stuffing box/gear box of the valve and shall have a minimum diameter of 8 inches.
  - 7. The box shall not transmit shock or stress to the valve.

## PART 3 EXECUTION

### 3.01 HANDLING AND INSPECTION

- A. Care shall be taken to prevent damage to the tapping sleeves and valves, and appurtenances during handling and installation.
  - 1. All materials shall be carefully inspected for defects in workmanship and materials.
  - 2. All operating mechanisms operated to check their proper functioning, and all nuts and bolts checked for tightness.
  - 3. Valves which do not operate easily or are otherwise defective shall be replaced at the Contractor's expense.

### 3.02 INSTALLATION

- A. General:
  - 1. Construction methods for the work under this Section shall conform to the applicable portions of Section 02611 Ductile Iron Pipe and Fittings, details as shown on the Contract Drawings, manufacturer's recommended installation procedures, and procedures specified herein.
- B. Quality Assurance:
  - 1. The tapping sleeve and valve shall be installed by skilled workers who are thoroughly trained and experienced and have the special equipment necessary for the proper performance of the work of this Section.
- C. Tapping Sleeves and Valvves:
  - 1. A test pit shall be excavated prior to obtaining the tapping sleeve and valve to verify the existing water main size, material, and orientation.
  - 2. Existing water main shall be thoroughly cleaned in the area of the proposed connection.
  - 3. Tapping sleeve and valve shall not be installed closer than four (4) feet to a pipe joint or repair collar.
  - 4. Tapping sleeve and valve shall be pressure tested before tap is started.
  - 5. Pipe tap shall be made under pressure.
  - 6. Valve boxes shall be set centered and plumb over the operating nuts of the valve.
    - a. The top of each valve box shall be set to finished grade with at least 10 inches of overlap remaining between the upper sections for future vertical adjustment.
    - b. Minimum overlap for lower extension pieces shall be 6 inches.

END OF SECTION

## SECTION 02645

### HYDRANTS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Provide hydrants as required by the Contract Documents.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  1. Section 02222 Earthwork for Water Distribution Systems
  2. Section 02611 Ductile Iron Pipe and Fittings
  3. Section 02640 Buried Valves and Appurtenances
  4. Section 02650 Thrust Blocks and Joint Restraints

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
  1. Materials list of items proposed to be provided under this Section.
  2. Manufacturer's specifications and other data needed, to insure compliance with the specified requirements.

##### 1.04 STANDARDS

- A. The following American Water Works Association (AWWA) Standards form a part of this specification as referenced:
  1. AWWA C502 Dry-Barrel Fire Hydrants.

#### PART 2 PRODUCTS

##### 2.01 HYDRANTS

- A. Hydrants shall be Mueller Centurion:
  1. Barrel sections shall be 5-1/4 inch diameter.
  2. Five (5) foot six (6) inch bury.
  3. Two (2) 2-1/2 inch hose nozzles.
  4. One (1) 4-1/2 inch pumper outlet.
  5. Replaceable brass nozzles.
  6. Breakaway flange.
  7. Mechanical joint shoe, 6 inch.
  8. Open clockwise (right).
  9. Be in full compliance with AWWA C502.
- B. Hydrants shall conform to National Standard Specification sizes in threads and nuts. Caps shall have retainer chains and rubber gaskets.

## 2.02 HYDRANT EXTENSION

- A. Extension Kit: If required to meet grade on site:
  - 1. Shall be provided by the hydrant manufacturer.
  - 2. Length shall be as needed to meet finish grade.

## PART 3 EXECUTION

### 3.01 SURFACE CONDITIONS

- A. Examine the areas and condition under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 FIELD MEASUREMENTS

- A. Make necessary measurements in the field to assure fit of items.

### 3.03 PROPOSED HYDRANT LOCATIONS

- A. All new hydrant locations shown on the Contract Drawings shall be subject to field location approval by the Owner or the Engineer.

### 3.04 INSTALLATION

- A. Hydrants:
  - 1. Trench, backfill and compact for the work of this Section in strict accordance with pertinent provisions of Section 02222, Earthwork for Water Distribution Systems.
  - 2. The hydrant drainage pit shall be approximately three (3) feet in diameter and two (2) feet deep below and to the rear of the hydrant filled with compacted crushed stone. While backfilling, place additional crushed stone to at least six (6) inches above the hydrant drain ports.
  - 3. After being thoroughly cleaned, all iron work set below ground shall be painted with two coats of asphalt varnish as specified in AWWA C504.
  - 4. Thrust blocking shall be placed behind the shoe of the hydrants, taking care not to block the drain outlets.
  - 5. The hydrant shall be set plumb and to the proper grade and shall remain properly supported until it is backfilled.
  - 6. All iron work left above ground shall be shop painted with two coats of paint of quality and color to correspond to the present standard of the Owner.
  - 7. After the hydrant has been set, it shall be entirely draped with burlap and remain covered until the water distribution system has been accepted and put into service.
  - 8. Where directed by the Inspector, the Contractor shall install plugs in the hydrant drain ports.
  - 9. All hydrants should be secured using retainer glands.

END OF SECTION

## SECTION 02650

### THRUST BLOCKS AND JOINT RESTRAINTS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Work included: Provide thrust blocks and joint restraints for the water mains as required by the Contract Documents.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 02140 Site Drainage and Dewatering
  - 2. Section 02160 Support of Excavation
  - 3. Section 02222 Earthwork for Water Distribution Systems

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed, to insure compliance with the specified requirements.

#### PART 2 PRODUCTS

##### 2.01 CONCRETE

- A. Concrete shall be as specified in Section 03301, Cast-In-Place Concrete for Water Mains.
  - 1. Minimum concrete strength shall be 3,000 psi after 28 days.

##### 2.02 JOINT RESTRAINTS

- A. Mechanical joint restraint shall be Megalug 1100 Series as manufactured by EBAA Iron Sales Inc., Eastland, Texas, or an approved equal.
  - 1. Glands shall be manufactured of ductile iron conforming to ASTM A536.
  - 2. The wedges shall be ductile iron, heat treated to a minimum hardness of 370 BHN.
  - 3. Shall have a minimum working pressure of 350 psi for pipe diameters up to 16 inches with a minimum safety factor of 2:1.
  - 4. Twist-off nuts.
  - 5. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSA/AWWA A21.11 and ANSI/AWWA C153/A21.53 of the latest revision.
  - 6. Flexibility of the joint shall be maintained after burial.

## 2.03 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

## PART 3 EXECUTION

### 3.01 THRUST BLOCKS

- A. Concrete thrust blocks shall be provided at all hydrants and fittings.
  1. The backs of thrust blocks shall be placed against undisturbed earth and the sides shall be formed.
  2. Felt roofing paper shall be placed to protect pipe joints.
  3. Concrete shall not be placed over bolts or nuts.
  4. Area of the thrust block in contact with the fitting shall bear on the body of the fitting, not on the fitting joints.
  5. Wooden side forms shall be provided for thrust blocks.

### 3.02 JOINT RESTRAINTS

- A. Mechanical joint restraint devices shall be installed at all fittings in accordance with the manufacturer's written instructions.

END OF SECTION

## SECTION 02660

### SERVICE CONNECTIONS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Work included: Provide potable water service connections as required by the Contract Documents.

##### 1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 02222 Earthwork for Water Distribution Systems
  - 2. Section 02611 Ductile Iron Pipe and Fittings

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed, to insure compliance with the specified requirements.

##### 1.04 STANDARDS

- A. The following Standards form a part of these Specifications as referenced:
  - 1. AWWA C800 Underground Service Line Valves and Fittings.
  - 2. ASTM B-88 Type K Copper Tubing

##### 1.05 QUALITY ASSURANCE

- A. Codes and Standards
  - 1. Plumbing Code Compliance: Comply with applicable portions of National Standard Plumbing Code pertaining to selection and installation of potable water system materials and products.
  - 2. Water Purveyor Compliance: Comply with requirements of Purveyor supplying water to project, obtain required permits and inspections.
- B. Compliance
  - 1. The Owner may require an affidavit from the manufacturer or vendor that the products furnished comply with all applicable provisions of AWWA C800 and ASTM B-88.

#### PART 2 PRODUCTS

##### 2.01 GENERAL

- A. All materials shall be of domestic manufacture.

- B. The Owner has standardized on the following products listed in this Section for service connections.

## 2.02 SERVICE TUBING

- A. Copper Water Tubing
  1. Conform to the provisions of ASTM B-88.
  2. Size: As indicated on the Drawings.
  3. Type K annealed (soft).
  5. Seamless.

## 2.02 CORPORATION STOPS

- A. Corporation Stop: Shall be as manufactured by Ford or an approved equal.
  1. Test Pressure: 175 psi.
  2. Full keyway and rigid liners.
  3. Compression ends.
  4. Size: As required by the service tubing.
  5. Comply with AWWA C800, Underground Service Line Valves and Fittings.
  6. Shall be “no lead” brass compression type with AWWA Taper Thread.

## 2.03 CURB STOPS

- A. Shall be as manufactured by Ford or an approved equal.
  1. Stops shall open LEFT.
  2. Full key with rigid liners.
  3. Compression ends.
  4. “No lead” brass.

## 2.04 CURB BOXES

- A. Curb boxes shall be of domestic manufacture by Ford, Hayes, or Mueller.
  1. Erie type, tar coated, cast iron, arch pattern base with inlaid covers.
  2. Covers shall be arch base style with brass pentagon nut, flush mounted, plug cover, with a 24-inch rod and the word “water” shall be cast into the cover.
  3. Curb box shaft shall have a minimum inside diameter of 1-inch.

## 2.05 SERVICE SADDLE

- A. Service saddle shall be of domestic manufacture as manufactured by Mueller or equal.
  1. Rated for 200 psi working pressure.
  2. Double strap design.
  3. Brass body.
  4. O-ring sealed outlet.
  3. Epoxy coated ductile iron body.
  4. AWWA threads with Buna-N rubber gasket.
  5. Meet all applicable parts of ANSI/AWWA C800.

## PART 3 EXECUTION

### 3.01 INSPECTION

- A. Service tubing which does not conform to the requirements of this specification shall be immediately removed from the site by the Contractor

### 3.02 HANDLING PIPE

- A. The Contractor shall take care not to damage pipe by impact, bending, compression, or abrasion during handling, and installation. Joint ends of pipe especially, shall be kept clean.

### 3.03 SERVICE LOCATIONS AND SHUT-DOWNS

- A. All new service locations shown on the Contract Drawings shall be subject to field location approval by the Engineer and/or Owner.
- B. The Contractor's shall notify the Milford Water Department 48 hours prior to installation of new service connections.
- C. Where a water service must be shut-down, it shall be the Contractor's responsibility to contact the party owning the service to arrange a shut-down schedule prior to doing any work. This work shall be coordinated with the Milford Water Department.
  - 1. All such schedules must be approved prior to shut-down.
  - 2. Shut-down time shall be kept to a minimum so as to keep service off for the shortest possible time.

### 3.04 INSTALLATION OF TUBING

- A. Service Tubing.
  - 1. Where directed by the Engineer, the Contractor shall install new services including 1-inch and 2-inch tubing.
  - 2. For services outside the paved areas, trench excavation shall be utilized, with tubing being carefully laid in the bottom of the trench, backfill placed and compaction completed.
    - a. Care shall be taken to insure against kinks or crushed areas.
  - 3. Backfill around and to one (1) foot over the tubing shall not contain stones greater than one (1) inch in diameter.
  - 4. For services to be installed beneath paved surfaces, a pneumatic drive device such as "Hole Hog" or equal, trenchless method, shall be utilized to drive the new service beneath the pavement, where possible. Trench excavation shall not be used without prior written approval from the Engineer.
  - 5. Where trench excavation is required, Controlled Density Fill (CDF) shall be used.
  - 6. Service tubing between the corporation stop and the curb stop shall be one (1) piece.
  - 7. Coupling shall not be allowed except for two (2) inch services greater than 200 feet in length.
  - 8. Tubing shall be connected to the curb stop and compression joints tightened.
  - 9. Duct tape shall be installed over the outlet end of curb stops, to be left for future connections.

3.05 APPURTENANCES

A. Corporation Stops.

1. Provide the necessary tap, sized for the fitting.

B. Curb Stops and Boxes.

1. Install curb stops where shown on the Drawings.
2. Place valve box over stop, taking care that it is installed plumb.
3. Curb stops shall be key checked after adjustment of curb box to final grade.
  - a. If curb stop is not centered in the box the box shall be removed and reset over the curb stop.

END OF SECTION

SECTION 02675

DISINFECTION OF WATER MAINS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Disinfecting water mains and their appurtenances, as required by the Contract Documents.
- B. The procedure for disinfecting water mains, as described in this section, generally consists of the following steps:
  - 1. Flushing the new water mains.
  - 2. Filling the new water mains with chlorinated water.
  - 3. Disinfecting the new water mains with chlorine solution.
  - 4. Flushing the chlorinated water from the new water mains.
  - 5. Taking samples for bacteriological analysis.
  - 6. Testing the samples at a state certified laboratory.
  - 7. Placing the new water mains into service.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 02611 Ductile Iron Pipe and Fittings

1.03 SUBMITTALS

- A. The Contractor shall prepare a plan for disinfecting water mains and their appurtenances that describes the proposed schedule, the location of all sampling and flushing points, and the overall procedure for disinfecting. The plan shall also present the proposed chemicals to be employed, the strength of the chemicals and the equipment employed to apply them. The plan shall be presented to the Engineer for review not less than two weeks prior to the proposed time for disinfecting the water mains.
- B. Copies of all test results, as specified herein, shall be submitted directly to the Engineer from the laboratory that conducted the tests.

1.04 STANDARDS

- A. The following standards are referenced, in part, in this specification:
  - 1. Specific sections, or portions thereof, of AWWA C651 Disinfecting Water Mains, as further described herein.

## 1.05 COST OF DISINFECTING WATER MAINS

- A. All costs associated with disinfecting water mains, including water, chemicals and bacteriological analysis of samples, as further described in this Section, shall be paid for by the Contractor.

## PART 2 PRODUCTS

### 2.01 WATER

- A. Water for flushing of water mains, preparation of chlorine solutions and filling of water mains for disinfection shall be potable drinking water.

### 2.02 CHEMICALS

- A. Chlorine for preparation of chlorine solutions for disinfection shall be sodium hypochlorite or calcium hypochlorite and shall conform to the requirements of ANSI/AWWA B300.
- B. Chlorine solutions shall be neutralized prior to disposal using sodium bisulfite, sodium sulfite or sodium thiosulfate.

### 2.03 WATER SAMPLE BOTTLES

- A. Sterile water sample bottles shall be obtained from a state certified laboratory.
  - 1. Sterile bottles for bacteriological analyses shall be treated with sodium thiosulfate to neutralize any residual chlorine.
  - 2. Two samples are required at each specified sampling point. One sample shall be analyzed for the presence of coliform bacteria and one sample shall be analyzed for the presence of heterotrophic plate count (HPC) bacteria.

## PART 3 EXECUTION

### 3.01 WATER MAIN DISINFECTING

- A. After completion of all water main related construction, except water service connection installation, all water mains, valves, hydrants, hydrant connections and other appurtenances installed under this Contract shall, be disinfected in accordance with AWWA Standard C651, Section 4.4.3 (Continuous Feed Method), as modified herein.
  - 1. Taps for flushing, chlorination and sampling shall be installed by the Contractor at no additional expense to the Owner.
  - 2. Flush the new water mains with potable water to remove any contaminants and debris that may have entered the water mains during construction.
  - 3. The flushing velocity in the new water mains shall not be less than 2.5 feet per second. In the absence of a flow meter, flow rate shall be determined either by placing a pitot gage at the discharge or by measuring the time to fill a container of a known volume

4. Prepare a chlorine solution that will be continuously fed into the potable water that is used to fill the new water mains.
5. The chlorine solution shall be applied to the new water mains with a chemical feed pump designed to feed chlorine solutions
6. Completely fill the new water mains with the chlorinated, potable water to remove any air pockets. The point of application shall be no more than 10 feet downstream from the beginning of the new water mains.
7. The chlorine solution shall be of sufficient strength to provide a minimum residual chlorine concentration of 25 milligrams per liter (mg/l) in the filled water mains.
8. New valves and hydrants shall be operated to insure their proper disinfection.
9. Isolation valves shall be maintained in a closed position to prevent chlorinated water from entering the existing water distribution system.
10. Chlorinated water shall remain in the main for a minimum of 48 hours.
11. The minimum residual chlorine concentration at the end of the 48 hour holding period shall be 10 mg/l.
12. After the 48-hour retention period, chlorinated water shall be flushed from every hydrant branch on the main until the chlorine concentration leaving the main is no higher than that generally in the system or less than 1.0 mg/l.
13. Chlorinated water shall be discharged in a manner that will not adversely effect flora and fauna or drainage courses and shall conform to applicable State regulations for waste discharge.
14. Chlorinated water that is flushed from the mains shall be neutralized by the addition of a dechlorinating agent so that the residual chlorine concentration is zero.
15. The location of the discharge for the dechlorinated water shall be approved by the Engineer and the Town of Milford.

### 3.02 BACTERIOLOGICAL TESTS

- A. A minimum of 24 hours after flushing and before the new water mains are placed in service, the Contractor shall collect water samples for testing of the bacteriological quality of the water.
  1. No hose or fire hydrant shall be used in the collection of samples.
  2. A sampling tap shall consist of a standard corporation stop installed in the main with a PVC gooseneck assembly.
  3. Samples for bacteriological testing shall be collected in sterile bottles treated with sodium thiosulfate and furnished by the state certified laboratory that will perform the tests.
  4. Unless otherwise directed by the Engineer or the Owner, the minimum number of samples for bacteriological analysis shall be as follows:
    - a. One sample every 1,200 linear feet of newly installed water mains.
    - b. One sample at the end of the newly installed water mains.
    - c. One sample at each branch.
  5. One round of sampling shall be conducted on water distribution systems that continuously maintain a chlorine residual.
  6. Two rounds of sampling shall be conducted on water distribution systems that do not continuously maintain a chlorine residual. The second round of sampling shall be conducted a minimum of 24 hours after the first round of samples is taken.
- B. All bacteriological tests shall be performed by a state certified laboratory.
  1. Two bacteriological tests shall be performed on all samples:
    - a. one coliform bacteria, and

- b. one heterotrophic plate count (HPC) bacteria.
2. Test results on all samples and a copy of the chain of custody shall be mailed directly to the Engineer and Owner from the laboratory.
3. The disinfection procedure shall be considered satisfactory only if the results of all tests confirm the following:
  - a. the absence of coliform bacteria in all samples taken and
  - b. the HPC bacteria are less than 500 colony forming units per milliliter (cfu/ml) in all samples taken (unless the water supplier has established a stricter HPC limit from baseline data for their water distribution system, in which case the results of the HPC bacteria tests shall meet the stricter limit).
4. The new water mains may be placed in service if the results of the disinfection procedure are satisfactory and the Engineer and Owner have granted their permission.
5. If the initial disinfection procedure fails to produce satisfactory results, the new water mains shall be flushed and resampled as described above. If the test results from the resampling also fail to produce satisfactory results, the entire disinfection procedure shall be repeated.

END OF SECTION

SECTION 02676

TESTING PIPING SYSTEMS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Provide pressure/leakage tests as required by the Contract Documents.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
  - 1. Section 02611 Ductile Iron Pipe and Fittings
  - 2. Section 02640 Buried Valves and Appurtenances
  - 3. Section 02675 Disinfection of Water Mains

1.03 STANDARDS

- A. The following American Water Works Association Standard shall form a part of this specification as referenced:
  - 1. AWWA C600 Installation of Ductile Iron Water Mains and Their Appurtenances.

PART 2 PRODUCTS

2.01 WATER

- A. The Owner shall furnish water free, for flushing and testing the water main, if hydrants or other connection points are convenient to the work. Otherwise, the Contractor shall be responsible for securing an acceptable potable water supply at no additional cost to the Owner.

PART 3 EXECUTION

3.01 TESTING

- A. A formal pressure/leakage test shall be required of the water mains, valves and appurtenances in the system constructed.
  - 1. The pressure/leakage test shall be conducted in accordance with these specifications and the applicable requirements of AWWA C600, Section 4.
  - 2. Where any section of a water main is provided with concrete thrust blocks, the test shall not be made until at least 5 days have elapsed since the concrete was placed.
  - 3. If high-early-strength cement is used in the concrete thrust blocks, the test shall not be made until at least 2 days have elapsed since the concrete was placed.

4. Prior to testing, the pipe line or section thereof, the section to be tested shall be thoroughly flushed, and all air expelled. All air shall be expelled by appropriate methods including the use of corporation stops installed by the Contractor, at no additional cost to the Owner, at high points along the water main.
5. After all the air has been expelled, and the corporation stops closed, the test pressure shall be applied by means of a pump connected to the pipe.
6. The pump, pipe connections, and all necessary apparatus including the gages, shall be furnished by the Contractor.
7. Unless otherwise specified, the test pressure shall be 150 psi or 150 percent of the working pressure, which ever is greater, but in no case shall the pressure exceed 250 psi.
8. This pressure shall be maintained for 2 hours.
9. Any excessive indicated leakage, as determined by the pressure test, shall be located and repairs made. The total leakage from the pipeline or sections thereof shall not exceed the amount shown in Table 1 of this Specification Section.
10. Should the pipe line or sections thereof not come within the permissible leakage limits, the Contractor (at his own expense) shall be required to excavate and locate the source of leakage and make repairs.
11. After the Contractor has notified the Engineer that repairs have been made, the test shall be repeated until the pipeline or sections thereof are within the allowable leakage.

Table 1

Ductile and Gray Cast Iron mains  
Allowable Leakage per 1000 Ft.

| Avg. Test Pressure<br>(psi) | <u>Nominal Pipe Diameter (inches)</u> |          |           |           |           |           |           |
|-----------------------------|---------------------------------------|----------|-----------|-----------|-----------|-----------|-----------|
|                             | <u>6</u>                              | <u>8</u> | <u>10</u> | <u>12</u> | <u>16</u> | <u>20</u> | <u>24</u> |
| 350                         | 0.84                                  | 1.12     | 1.40      | 1.69      | 2.25      | 2.81      | 3.37      |
| 300                         | 0.78                                  | 1.04     | 1.30      | 1.56      | 2.08      | 2.60      | 3.12      |
| 250                         | 0.71                                  | 0.95     | 1.19      | 1.42      | 1.90      | 2.37      | 2.85      |
| 200                         | 0.64                                  | 0.85     | 1.06      | 1.28      | 1.70      | 2.12      | 2.55      |
| 150                         | 0.55                                  | 0.74     | 0.92      | 1.10      | 1.47      | 1.84      | 2.21      |
| 100                         | 0.45                                  | 0.60     | 0.75      | 0.90      | 1.20      | 1.50      | 1.80      |

\* Leakage allowable based on gallons per hour per 1000 feet of main.

END OF SECTION

SECTION 02930

LOAM AND SEED

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: Provide loam and seed as required by the Contract Documents.
  - 1. Generally the Work consists of topsoiling, seeding and fertilizing all disturbed areas of the water main easements.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 02015 Test Pits
  - 2. Section 02210 Site Grading
  - 3. Section 02222 Earthwork for Water Distribution Systems

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
  - 1. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- B. If the results of the hydraulic seeding operation (if utilized) are unsatisfactory, the method shall be abandoned and seeding shall be required by the sowing method.

1.04 SUBMITTALS

- A. Comply with pertinent provisions of Section 01300.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
- C. If hydroseeding application is to be used, a written description containing seed analysis, fertilizer and lime addition data is to be submitted for review of the Owner.

1.05 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.
- B. Immediately remove from the site, materials which are not true to name, and do not comply with the specified requirements, and promptly replace with materials meeting the specified requirements.

PART 2 PRODUCTS

2.01 TOPSOIL

- A. Topsoil stripped from the site and stored, shall be approved before reuse.
  - 1. Topsoil from the site shall be treated to conform to the requirements for topsoil furnished from offsite sources.
  - 2. If the required quantity of suitable topsoil is not available from stripping of the site, or if it is not approved, topsoil from outside sources shall be furnished.
  - 3. Stockpiled topsoil used for this work shall be screened before being spread.
  - 4. Surplus topsoil not required to fulfill the requirements of the Contract shall be properly disposed of unless otherwise directed by the Owner.

2.02 TOPSOIL FURNISHED FROM OFFSITE SOURCES

- A. Topsoil shall be fertile, friable, natural topsoil typical of the locality, and obtained from a well-drained site.
  - 1. It shall be without admixture of subsoil or slag.
  - 2. Shall be screened.
  - 3. Topsoil as delivered to the site shall have an acidity range of pH 5.0 to 6.5 and shall contain not less than 5% organic matter as determined by loss on ignition of moisture-free samples dried at 100 degrees Centigrade.
  - 4. If required, limestone shall be added to the topsoil to adjust the pH, so that it complies with the required limits.

- B. Mechanical Analysis: Topsoil shall meet the following mechanical analysis

| Size               | % Passing | % Retained |
|--------------------|-----------|------------|
| 1-1/4" screen      | 100       | 0          |
| 1/2" screen        | 97-100    | 0-3        |
| No. 100 mesh sieve | 40-60     | 40-60      |

2.03 TREATING TOPSOIL WITH LIMESTONE OR ALUMINUM SULFATE

- A. When the hydrogen-ion value is below the specified level, add ground limestone at the rate of 2-1/2 lbs. per cubic yard of topsoil to raise pH one full point.
- B. The following table shows the amount of limestone needed for various soil reactions on the basis of 1,000 sq. ft. and on the basis of one (1) acre:

| pH  | pH Desired | Lbs. per 1000 sq. ft. | Tons per Acre |
|-----|------------|-----------------------|---------------|
| 6.0 | 6.5        | 0-46                  | 0-1           |
| 5.5 | 6.5        | 46-92                 | 1-2           |
| 5.0 | 6.5        | 92-138                | 2-3           |

- 1. Limestone shall be raw, ground agricultural limestone containing not less than 90% calcium carbonate and shall be ground to such fineness that 50% will pass through a 100-mesh sieve and 90% will pass through a 20-mesh sieve.

2. When hydrogen-ion value is above specified level, add aluminum sulfate at the rate of 2-1/2 lbs. per cubic yard of topsoil to lower the pH one full point. Aluminum sulfate shall be unadulterated and delivered in containers with the name of the material, name of the manufacturer, and net weight of contents.

2.04 LIME

- A. Lime shall be ground limestone containing not less than 85 percent calcium and magnesium carbonates.
  1. Ground to such fineness that at least 50 percent will pass through a 100-mesh sieve and at least 90 percent shall pass through a 20-mesh sieve.

2.05 GRASS SEED (UPLANDS)

- A. General: Provide grass seed which is:
  1. Free from noxious weed seeds, and recleaned.
  2. Grade A recent crop seed.
  3. Treated with appropriate fungicide at time of mixing.
  4. Delivered to the site in sealed containers with dealers guaranteed analysis.
- B. Proportions by Weight (Level Areas):
 

|                    |             |
|--------------------|-------------|
| 1. Chewing Fescue  | 60 percent. |
| 2. Red Top         | 10 percent. |
| 3. Annual Ryegrass | 10 percent  |
| 4. Kentucky Blue   | 20 percent. |
- C. Proportions by Weight (Slopes):
 

|                        |             |
|------------------------|-------------|
| 1. Creeping Red Fescue | 50 percent. |
| 2. Perennial Rye Grass | 20 percent  |
| 3. Red Clover          | 10 percent. |
| 4. Winter Rye          | 15 percent  |
| 5. Ladino Clover       | 5 percent   |
- D. Requirements:
  1. Seed shall be furnished and delivered premixed in the proportions specified above.
  2. All seed shall comply with State and Federal seed laws.
  3. A certificate of compliance with the specifications shall be submitted by the manufacturer with the shipment of the seed. The certificate shall include the guaranteed percentage of purity, weed content and germination of the seed, net weight and date of shipment.
  4. No seed shall be sown until the Contractor has submitted the above mentioned certificate to the Engineer.

2.06 GRASS SEED (WETLANDS)

- A. Proportions by Weight
 

|                        |      |
|------------------------|------|
| 1. Lurid Sedge         | >10% |
| 2. Fowl Manna Grass    | >10% |
| 3. Fringed Sedge       | >10% |
| 4. Woolgrass           | >10% |
| 5. Other Wetland Seeds | <60% |
- B. Germination Minimum

- |    |                     |     |
|----|---------------------|-----|
| 1. | Lurid Sedge         | 80% |
| 2. | Fowl Manna Grass    | 80% |
| 3. | Fringed Sedge       | 80% |
| 4. | Wool Grass          | 80% |
| 5. | Other Wetland Seeds | 80% |

C. Requirements:

1. Grass seed mixture for the compensatory storage areas shall be a fresh, clean, new crop seed. Seed may be mixed by an approved method on the site or may be mixed by the dealer. All seed shall comply with State and Federal seed laws. If the seed is mixed on the site, each variety shall be delivered in the original containers bearing the dealer's guaranteed analysis. If the seed is mixed by the dealer, the dealer's guaranteed statement of the composition of the mixture and the percentage of purity, weed content, net weight, and germination of each variety shall be provided. No seed shall be sown until contractor has submitted the guaranteed statement of the composition to the Engineer.
2. Seed shall be the commercial product of an approved reputable manufacturer and shall be certified to be not more than one (1) year old and shall be composed of the following varieties, The seed mix shall be New England wetmix as manufactured by New England Wetland Plants Inc. Amherst, MA. or approved equal.
3. The application rate shall be one pound per 5,000 square feet. The seed shall be mechanical spread or broadcasted by hand works creating an even distribution. The seed mix shall be sown early spring or late fall for increased germination.

2.07 FERTILIZER

- A. Fertilizer shall be furnished in containers plainly marked with the chemical analysis of the product.
  1. Fertilizer shall be stored so that when used it will be dry and free flowing.
  2. Fertilizer shall not contain phosphorous.

2.08 HYDRAULIC SPRAY MACHINE

- A. Shall be designed specifically for seed dissemination.
- B. Shall allow materials to be mixed with water in the machine and kept in an agitated state to keep materials uniformly suspended in the water.
- C. Shall be designed to provide equal quantities of required materials over a particular spraying area.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 APPLICATION

- A. Application of Topsoil
  - 1. Topsoil shall be applied to the prepared subgrade specified in Section 02210, Site Grading.
  - 2. Topsoil shall be spread to a compacted depth of:
    - a. Four (4) inches for cross country areas.
    - b. Areas to have topsoil applied to them shall be scarified or otherwise roughened, just prior to the application.
- B. Seedbed Preparation
  - 1. Grade areas to be seeded to a smooth uniform grade.
  - 2. Roll, scarify, rake and level as necessary to obtain true, even surfaces
  - 3. Meet existing grades.
  - 4. All seeded areas shall slope to drain.
  - 5. All finish grades shall meet approval before grass seed is sown.
- C. Application Rates of Limestone, Aluminum Sulfate, Fertilizer and Seed
  - 1. Limestone or Aluminum Sulfate shall be applied and thoroughly incorporated in the layer of loam or topsoil to adjust the acidity of the material.
  - 2. The rate of application of the limestone will be determined by the pH value.
  - 3. Fertilizer shall be applied at the rate of 20 pounds per 1000 square feet.
  - 4. The seed mixture shall be sown at the rate of 5 pounds per 1000 square feet.
- D. Fertilizing and Liming
  - 1. Fertilizing and liming shall be done when the soil is in a moist condition and at least 24 hours before the sowing of the seed.
  - 2. The fertilizer and lime shall be applied to the soil by means of a mechanical spreader or other approved method capable of maintaining a uniform rate of application.
  - 3. Thoroughly harrowed, raked or otherwise mixed with the soil to a depth of not less than 2 inches.
  - 4. The fertilizer and lime shall not be applied together.
- E. Time of Seeding
  - 1. The recommended seeding periods are from April 1 to June 1, and from August 15 to October 1.
  - 2. The Contractor may choose to seed at other times but regardless of the time of seeding he shall be responsible for a full growth of grass.
  - 3. When directed he shall re-fertilize and reseed areas on the project which do not develop a satisfactory growth of grass.
  - 4. Re-fertilizing and reseeding shall be incidental to the original seeding item requirements.

### 3.03 SEEDING METHODS

- A. Fertilizer, limestone, and mulch material, if required, and seed of the type specified may be placed by one of the following methods, provided an even distribution is obtained.
- B. Dry Method
  - 1. Power Equipment: Mechanical seeders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders, or other approved mechanical seeding equipment or attachments may be used when seed, limestone, and fertilizer are to be applied in dry form.

2. Manual Equipment - On areas which are inaccessible to power equipment, permission may be given to use hand-operated mechanical equipment when the materials applied are in dry form. The use of hand shovels to spread the materials shall not be allowed.
3. When the dry method is used, limestone and fertilizer shall not be mixed together prior to their application, but shall be worked into the soil together to a depth of at least 2 inches.
4. At least 24 hours shall elapse between the time fertilizer is incorporated into the topsoil and seed is spread.
5. Areas covered with park seed shall be raked, and, rolled with a roller weighing not more than 100 pounds per foot of roller width to firm the soil but not to pack it. The rolling shall be done the same day as the seeding unless otherwise permitted.
6. Areas seeded in the spring after April 15 shall be covered with a 1 inch loose layer of clean wheat or oat straw. The straw shall be kept wet until a catch of grass is established. Loose straw shall be removed from the site.
7. Grass on slopes or banks may be established by another method subject to approval. Special care shall be exercised to prevent erosion or washouts.

C. Hydraulic Method

1. The application of grass seed, fertilizer, limestone, and a suitable mulch, if approved, may be accomplished through the use of an approved spraying machine.
2. The materials shall be mixed with water in the machine and kept in an agitated state in order for the materials to be uniformly suspended in the water.
3. The spraying equipment shall be so designed that when the solution is sprayed over an area, the resulting deposits of limestone, fertilizer, and grass seed shall be equal to the required rates.
4. Prior to the start of work, the Engineer shall be furnished with a certified statement for approval as to the number of pounds of materials to be used per 100 gallons of water. This statement shall also specify the number of square feet of seeding that can be covered with the quantity of solution in the hydroseeder.
5. The hydraulic seeding and fertilizing machine shall be completely flushed and cleaned each day before seeding is started.
6. If the results of the spray operations are unsatisfactory, the Contractor shall be required to abandon this method and apply the materials in accordance with the dry method.
7. When the hydraulic method is used, compaction or rolling shall be required.

D. Side Slopes Application

1. Roadway side slopes shall be seeded utilizing a hydraulic (hydro-seed) application process, to place seed and fertilizer simultaneously.
2. A color agent shall also be within the hydraulic mix.
3. Care shall be taken during the application to prevent coverage of poles, trees, signs, and etc.

### 3.04 MAINTENANCE

- A. The Contractor shall be responsible for the proper care of the seeded areas during the period when the grass is becoming established.
1. This period shall extend for two months after a successful uniform stand of grass is produced.
  2. The Contractor shall reseed all areas as necessary to obtain a uniform stand of grass, free from bare spots.

3. Any seeded areas which fail to show a uniform stand of grass shall be reseeded until all areas are covered
4. Any and all additional seeding shall be at the Contractor's expense.
5. If necessary, barricades of brush or other materials and suitable signs shall be placed to protect the seeded areas.
6. Any washout which occurs shall be regraded and reseeded at the Contractor's expense until a good sod is established.

3.05 GUARANTEE PERIOD

- A. All seeded areas shall be guaranteed by the Contractor for not less than one (1) full year from the date of substantial completion.

END OF SECTION

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DIVISION 3 CONCRETE

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SECTION 03301

CAST-IN-PLACE CONCRETE FOR WATER MAINS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: Provide cast-in-place concrete as required by the Contract Documents.
  - 1. In general the Contractor shall furnish all labor, materials, equipment and incidentals necessary to do all concrete work required for thrust blocking, permanent trench patch and other miscellaneous items.

1.02 RELATED WORK

- A. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 1. Section 02222 Earthwork for Water Distribution Systems
  - 2. Section 02611 Ductile Iron Pipe and Fittings
  - 3. Section 02650 Thrust Blocks and Joint Restraints

PART 2 MATERIALS

2.01 CEMENT

- A. Cement shall be domestic Portland cement conforming to ASTM Designation C150, Type II.

2.02 AGGREGATES

- A. General
  - 1. Provide hard rock aggregate complying with ASTM C33, with additional attributes as specified in this Section.
- B. Fine Aggregates
  - 1. Shall consist of washed inert natural sand conforming to the requirements of ASTM Specification C33, and the following detailed requirements.

| <u>Sieve Size</u> | <u>Percent Retained</u> |
|-------------------|-------------------------|
| No. 4             | 0-5                     |
| No. 16            | 25-40                   |
| No. 50            | 70-87                   |
| No. 100           | 93-97                   |

- C. Coarse Aggregates
  - 1. Provide coarse aggregate consisting of clean, hard, fine grained, sound crushed rock or washed gravel, conforming to the requirements of ASTM Specification C33.

2. Use aggregates of the largest practicable size for each condition of placement, subject to the following maximum size limitations.
  - a. 2-inch for plain concrete.
  - b. 1-inch for reinforced sections ten (10) inches and over in thickness.
  - c. 3/4-inch for reinforced sections less than ten (10) inches in thickness.
3. Grade combined aggregates within the following limits:

Percentage by Weight Passing Sieve

| Sieve Size<br>(Size in Inches) | 1-1/2" Aggregate |             | 1" Aggregate |             | 3/4" Aggregate |             |
|--------------------------------|------------------|-------------|--------------|-------------|----------------|-------------|
|                                | <u>Min.</u>      | <u>Max.</u> | <u>Min.</u>  | <u>Max.</u> | <u>Min.</u>    | <u>Max.</u> |
| 1-1/2"                         | 95               | ----        | ----         | ----        | ----           | ----        |
| 1"                             | 75               | 90          | 90           | 100         | ----           | ----        |
| 3/4"                           | 55               | 77          | 70           | 90          | 90             | 100         |
| 3/8"                           | 40               | 55          | 45           | 65          | 60             | 80          |
| No. 4                          | 30               | 40          | 31           | 47          | 40             | 60          |
| No. 8                          | 22               | 35          | 23           | 40          | 30             | 45          |
| No. 30                         | 10               | 20          | 10           | 23          | 13             | 23          |
| No. 50                         | 2                | 8           | 2            | 10          | 5              | 15          |
| No. 100                        | 0                | 3           | 0            | 3           | 0              | 5           |

2.03 WATER

- A. Use only water which is clean and free from deleterious amounts of acid, alkali, salt and organic matter.

2.04 ADMIXTURES

- A. Use only a standard brand of admixture for concrete, meeting or exceeding ASTM Specification C494.
  1. All concrete which is exposed to the elements shall be air entrained.
  2. The volume of air entrainment shall not exceed five (5) percent.

PART 3 EXECUTION

3.01 CONCRETE MIXING

- A. Class A Concrete
  1. Class A concrete shall have a minimum compressive strength, at 28 days, of 3,000 psi, with a maximum water content of 6.4 gal./100 lbs. and a minimum cement content of 520 lbs./cu. yd.
- B. Class B Concrete
  1. Class B concrete shall have a minimum compressive strength at 28 days of 2,500 psi, with a maximum water content of 7.4 gal./100 lbs. and a minimum cement content of 430 lbs./cu. yd.
  2. Class B concrete may be mixed on site using a 1: 2.5: 5 mix and made with not less than 4.5 bags of cement per cubic yard.

- C. Ready Mix Concrete
  - 1. Ready mix concrete shall comply with ASTM C94.
- D. Concrete Admixtures
  - 1. Air entrainment shall be from 3 to 5 percent.

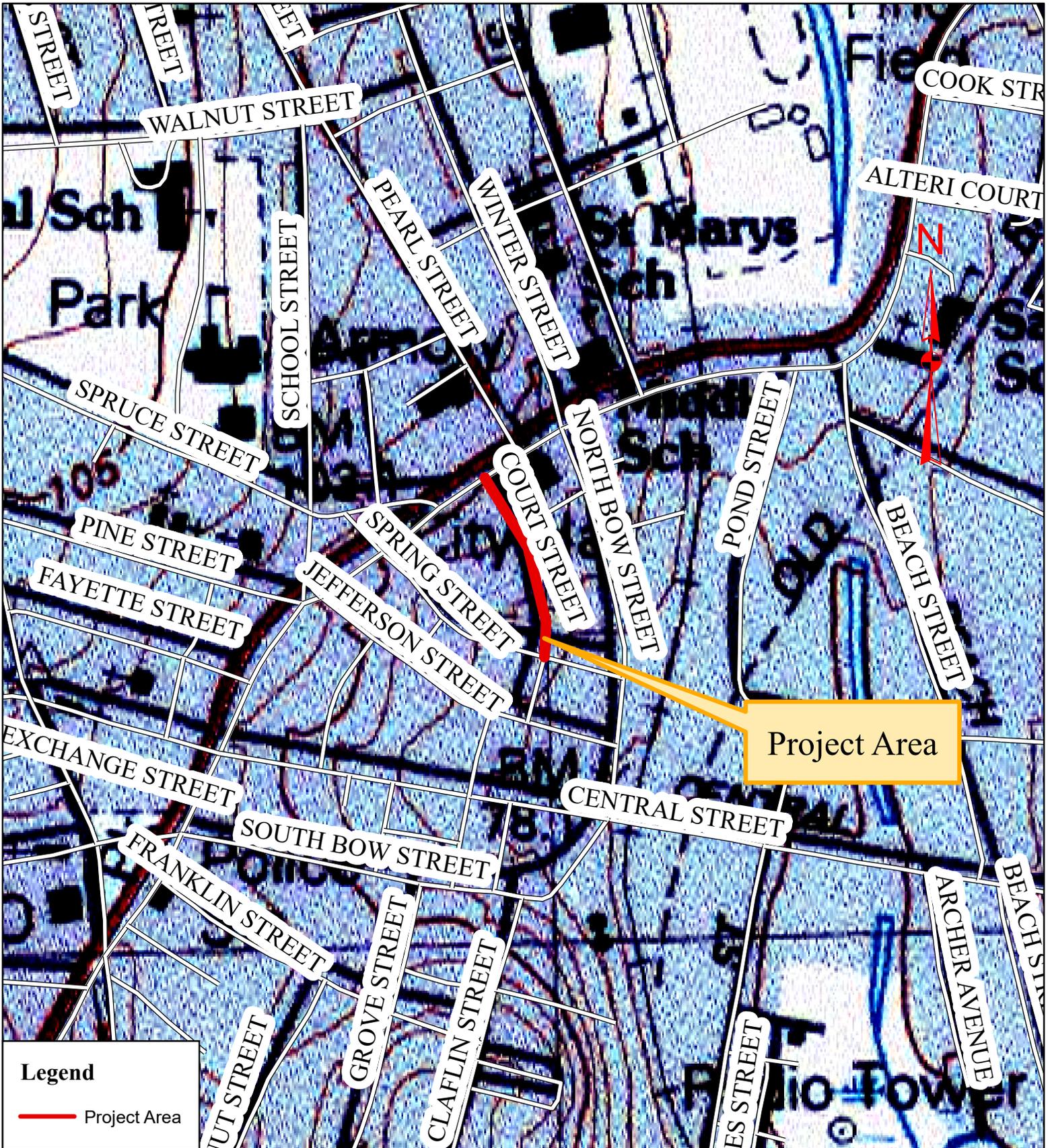
### 3.02 PLACEMENT OF CONCRETE

- A. Concrete shall be carefully placed to ensure dense, compact concrete.
  - 1. Thoroughly spaded or vibrated into position without disturbance of pipe lines or other materials.
  - 2. Placed with as little slump as practicable.
  - 3. Pipe shall be securely braced, both vertically and horizontally, if it is to be encased, to prevent flotation.
  - 4. The sides of thrust blocks shall be formed.
  - 5. Concrete shall not be placed over bolts or nuts so as to prevent the removal of the joint gland.
  - 6. Backfill shall not be placed on the concrete until the concrete has set firm.
  - 7. Concrete shall not be placed in water or submerged within 24 hours after placing, nor shall running water be permitted to flow over the surface of fresh concrete within four days after its placing.

END OF SECTION

APPENDIX A

LOCUS MAP



**Legend**

— Project Area



**TATA & HOWARD**

Date: February 2026  
 Approximate Scale: 1" = 1,000'

Locus Map

Court Street  
 Water Main Improvements

Town of Milford Water Department  
 Milford, Massachusetts

Appendix

A

APPENDIX B  
SOIL BORING LOGS























