

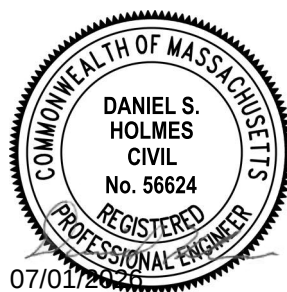
Walnut Street Retaining Wall Repairs

NA-2026-004

City of North Adams

North Adams, MA

July 2026



**Tighe &
Bond**

53 Southampton Road
Westfield, MA 01085

Walnut Street Retaining Wall Repairs City of North Adams, MA

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DIVISION 0 - BIDDING AND CONTRACT REQUIREMENTS

SECTION 00100

ADVERTISEMENT FOR BIDS

CITY OF NORTH ADAMS
DEPARTMENT OF PUBLIC SERVICES
NORTH ADAMS, MASSACHUSETTS
ADVERTISEMENT FOR BIDS

Sealed Bids for the construction of the “Walnut Street Retaining Wall Repairs” will be received by the Office of Procurement, City Hall, 10 Main Street, North Adams, MA 01247 until 2:00 p.m. local time on July 23rd, 2026 at which time the Bids received will be publicly opened and read. Sealed Bids must have outer envelope marked as “Walnut Street Retaining Wall Repairs Bid No. NA-2026-004.”

The work consists of demolition of the existing structure, construction of a new cast-in-place concrete retaining wall, drainage repairs, and surface work. Bids shall be on a unit price basis, with additive alternate bid items as indicated in the Bid Form.

All Bids for this project are subject to the provisions of Massachusetts General Laws Chapter 30, Section 39M as amended.

Bidding Documents may be obtained electronically from the Tighe & Bond website at: http://www.tighebond.com/Projects_Out_to_Bid.php

Prospective bidders must complete a one-time registration process on the web site in order to receive log-in credentials. Bidders must log in to the web site to download bidding documents for the project. Bidders will be added to the “planholders” or prospective bidders list upon downloading the bidding documents for the project. Bidding documents may also be examined at the office of Tighe & Bond, Inc., 53 Southamptton Road, Westfield, Massachusetts between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, legal holidays excluded.

A bid deposit shall be furnished in accordance with the Instructions to Bidders.

This Contract contains price adjustments for hot mix asphalt mixes, diesel fuel, gasoline, Portland cement contained in concrete, and steel. See the Special Provisions for payment procedures and base prices for this Project.

Minimum Wage Rates as determined by the Commissioner of Department of Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Section 26 to 27D, as amended, apply to this project. It is the responsibility of the Contractor, before Bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed Work under this Contract.

MassDOT prequalification of contractors with the class of work as, Highway - Construction, for the project with an estimated value of \$1,998,756.60 will be required.

An optional pre-Bid conference will be held at the Department of Public Services, 59 Hodges Cross Road, North Adams, MA 01247 on July 9th at 10 AM.

The City of North Adams reserves the right to reject any or all bids and to waive any informalities in the best interest of the City.

Thomas D. Peterson, Procurement Officer

CITY OF NORTH ADAMS, MASSACHUSETTS

Consulting Engineer:

Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085
413-562-1600

END OF SECTION

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SECTION 00200

INSTRUCTIONS TO BIDDERS

SECTION 00200

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 DEFINED TERMS

- 1.1 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions.

ARTICLE 2 COPIES OF BIDDING DOCUMENTS

- 2.1 Refer to Advertisement for Bids for information on examination and procurement of documents.
- 2.2 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3 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

- 3.1 Bidders shall be experienced in the kind of Work to be performed, shall have the necessary equipment, and shall possess sufficient capital to properly execute the Work within the time allowed. Bids received from Bidders who have previously failed to complete Work within the time required, or who have previously performed similar Work in an unsatisfactory manner, may be rejected. A Bid may be rejected if Bidder cannot show that he has the necessary ability, plant and equipment to commence the Work at the time prescribed and thereafter to prosecute and complete the Work at the rate or within the time specified. A Bid may be rejected if Bidder is already obligated for the performance of other Work which would delay the commencement, prosecution or completion of the Work.
- 3.2 Bidders shall have a minimum of 5 years of experience and shall have successfully completed 3 roadway, drainage, and cast in place concrete projects of similar scope within the past 5 years. Submit with the bid a summary of experience and representative projects to show compliance with these qualifications.
- 3.3 Bidders must be pre-qualified by the Massachusetts Dept. of Transportation (MassDOT) Highway Division in the Highway - Construction category to bid on the above project. An award will not be made to a Contractor who is not pre-qualified by MassDOT Highway Division prior to the opening of proposals.
- 3.4 Bidders may be investigated by Owner to determine if they are qualified to perform the Work. All Bidders shall be prepared to submit within five days of Owner's or Engineer's request, written evidence of such information and data necessary to make this determination. The investigation of a Bidder will seek to determine whether the organization is adequate in size, is authorized to do business in the jurisdiction where the project is located, has had previous experience and whether available equipment and financial resources are adequate to assure Owner that the Work will be completed in accordance with the terms of the Agreement. Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of such Bidder fails to satisfy Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.
- A. Bidders may be required to provide a letter stating that the Bidder is in good financial standing. The letter must:
1. Be provided by a financial institution or certified public accountant having a relationship with the Bidder;

2. Be on the bank or accountant's letterhead;
3. Include name and contact information for the bank or accountant including address, email and telephone number;
4. Identify the account holder(s), whose names must match the name of the Bidder, the type and length of business relationship, and the historical status of the accounts (i.e. good standing, timely payments, no overdrafts, etc.); and
5. NOT include account numbers, account amounts, or lines of credit.

ARTICLE 4 SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.1 The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment are to be obtained and paid for by Contractor.

4.2 Existing Site Conditions

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions in or relating to existing surface and subsurface structures at the Site (except Underground Facilities).
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Copies of reports and drawings referenced above will be made available for review at Engineer's office. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 5.06 of the General Conditions.

4.3 Site Visit and Testing by Bidders

- A. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- B. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- C. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- D. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.4 Owner's Safety Program

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

ARTICLE 5 BIDDER'S REPRESENTATIONS

5.1 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, including any Addenda, data, and referenced items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, or performance of the Work;
- D. carefully study all reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or adjacent to the Site which have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports

and drawings, and carefully study all reports and drawings relating to a Hazardous Environmental Condition, if any, at or adjacent to the Site which have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;

- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on 1) the cost, progress, and performance of the Work; 2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, , and 3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the Work to be performed by Owner and others at the site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and finishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 PRE-BID CONFERENCE

- 6.1 A pre-Bid conference will be held at the time and location stated in the invitation or advertisement to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 INTERPRETATIONS AND ADDENDA

- 7.1 All questions about the meaning or intent of the Bidding Documents shall be submitted in writing to the Engineer via the Tighe & Bond website for bidding document distribution at:
http://www.tighebond.com/Projects_Out_to_Bid.php
- 7.2 Prospective bidders must be registered users of the web site to submit questions regarding the project. In order to receive consideration, questions must be received by Engineer at least five days prior to the date fixed for the opening of Bids. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda to all parties

recorded by Engineer as having received the Bidding Documents not later than three days prior to the date fixed for the opening of Bids. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

- 7.3 Addenda may be issued to clarify, correct, supplement or change the Bidding Documents. Such Addenda, if any, will be issued in the manner and within the time period stated in paragraph 7.2.
- 7.4 The Bidder must acknowledge receipt of each Addendum, if any, in the space provided on the Bid Form.

ARTICLE 8 BID DEPOSIT

- 8.1 In the Bidding Documents, the terms “Bid security” and “Bid deposit” shall have the same meaning.
- 8.2 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5% of Bidder’s maximum Bid price (including any additive alternates) and in the form of a certified check, bank money order, cash, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.3 All Bid deposits of General Bidders, except those under consideration by Owner, will be returned within 5 days, excluding Saturdays, Sundays and legal holidays, after the opening of General Bids. Other Bid deposits will be returned upon the execution and delivery of the Agreement. The Bid deposit of the Successful Bidder will be retained until such bidder has furnished the required contract security and executed the Agreement, whereupon the bid deposit shall be returned. If the Successful Bidder fails to furnish the required contract security within 15 days after the Notice of Award and execute the Agreement within 5 days after receipt from Owner, Owner may annul the Notice of Award and the Bid deposit of that Bidder will be forfeited to Owner as liquidated damages for such failure.

ARTICLE 9 CONTRACT TIMES

- 9.1 The number of days within which, or the dates by which, the Work is to be:
 - A. substantially completed, and/or
 - B. completed and ready for final paymentare set forth in the Agreement.

ARTICLE 10 LIQUIDATED DAMAGES

- 10.1 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 SUBSTITUTE AND “OR EQUAL” ITEMS

- 11.1 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the effective date of the Contract.

ARTICLE 12 SUBCONTRACTORS, SUPPLIERS, AND OTHERS (NOT USED)**ARTICLE 13 PREPARATION OF BID**

- 13.1 A Bid must be made on the Bid form included with the Project Manual. The Bid form shall not be altered in any way.
- 13.2 The Bid form must be completed in ink. Blank spaces in the Bid form must be filled in correctly where indicated, and the Bidder must state, both in words and numerals, the prices for which he proposes to complete each and every item of Work. Ditto marks shall not be used.
- 13.3 A Bidder shall execute his Bid as stated below.
- A. A Bid by an individual shall show the Bidder's name and official address.
 - B. A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature) accompanied by evidence of authority to sign. The official address of the partnership shall be shown.
 - C. A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature) and must be accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the corporate secretary. The state of incorporation and the official corporate address shall be shown.
 - D. A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
 - E. A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
 - F. All names must be printed in ink below the signature.
- 13.4 The Bid shall contain an acknowledgment of the receipt of all Addenda in the space provided on the Bid form.
- 13.5 Postal and email addresses and telephone number to which communications regarding the Bid are to be directed shall be shown.
- 13.6 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.
- 13.7 In order to be considered for selection, the Bidder must submit a complete bid package in accordance with these Bidding Documents. Partial Bids will not be accepted. Refer to the Bid Form for a list of documents that shall be submitted in addition to the Bid Form.
- 13.8 Any deviations in completion of the Bid Form and accompanying documents from the instructions provided in this Article may be cause for rejection of the Bid.

ARTICLE 14 BASIS OF BID**14.1 Unit Price**

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity” (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with paragraph 13.03 of the General Conditions.
- C. 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.
- D. Unit prices for identical item numbers that are in more than one bid schedule shall be equal. Discrepancies will be resolved in favor of the lowest unit price.
- E. The price for alternates included in the Bid form will be the amount added to the base Bid if Owner selects the alternate. In the evaluation of Bids, alternates will be applied in the same order as listed in the Bid form. The award will be based on the lowest eligible Bid including all selected alternates.

14.2 Allowances

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor’s overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents in accordance with paragraph 13.02 of the General Conditions.

ARTICLE 15 SUBMITTAL OF BID

- 15.1 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement for Bids and shall be enclosed in an opaque sealed envelope plainly marked with the Project title, the name and address of Bidder, and shall be accompanied by the Bid deposit and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation “BID ENCLOSED”. When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bids. A mailed Bid shall be addressed to Owner at the address in the Advertisement for Bids.
- 15.2 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 MODIFICATION OR WITHDRAWAL OF BID

16.1 Withdrawal Prior to Bid Opening

- A. A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

16.2 Modification Prior to Bid Opening

- A. If a Bidder wishes to modify its Bid prior to the Bid opening, Bidder must withdraw its initial Bid in the manner specified in paragraph 16.1.A and submit a new Bid prior to the date and time for the opening of Bids.

ARTICLE 17 OPENING OF BIDS

- 17.1 Bids will be opened as indicated in the Advertisement for Bids and publicly read aloud.
- 17.2 In order to be considered for selection, Bids must arrive at the designated location on or before the date and time specified in the Advertisement for Bids. Bidders mailing their Bids should allow for normal mail delivery time to ensure timely receipt of their Bids by Owner.
- 17.3 Bids received by mail or otherwise after the time specified for the opening of Bids will not be accepted and will be returned to the Bidder unopened.
- 17.4 No responsibility will attach to Owner, its employees or the Engineer for premature opening of a Bid not properly addressed and identified in accordance with the Bidding Documents.

ARTICLE 18 DISQUALIFICATION OF BIDDERS

- 18.1 More than one Bid for the same Work from an individual, or a firm, partnership, corporation or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder is interested.

ARTICLE 19 BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 19.1 All Bids will remain subject to acceptance for the period of time stated in the Bid form, but Owner may, in its sole discretion, release any Bid and return the Bid deposit prior to the end of this period.

ARTICLE 20 EVALUATION OF BIDS AND AWARD OF CONTRACT

- 20.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities, and the right to disregard all nonconforming, nonresponsive or conditional Bids.
- 20.2 Owner reserves the right to reject any Bid not accompanied by specified documentation and Bid deposit.
- 20.3 Owner reserves the right to reject any Bid if it shows any omissions, alterations of form, additions not called for, conditions or qualifications, or irregularities of any kind.
- 20.4 Owner reserves the right to reject any Bid that, in his sole discretion, is considered to be unbalanced or unreasonable as to the amount bid for any lump sum or unit price item.
- 20.5 In evaluating Bids, Owner will consider 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 or prior to the Notice of Award.
- 20.6 In evaluating whether a Bidder is responsible, Owner will consider the qualifications the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 20.7 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

- 20.8 If the Owner awards the Contract for the Work, such award shall be to the responsible Bidder (who has neither been disqualified nor rejected pursuant to Article 18 or this Article 20) submitting the lowest responsive Bid.
- 20.9 Contents of the Bid of the Successful Bidder will become part of any contract awarded.

ARTICLE 21 CONTRACT SECURITIES

- 21.1 Performance and payment bonds shall be furnished by the successful Bidder. The amounts of and other requirements for performance and payment bonds are stated in Article 6 of the General Conditions. Performance and payment bonds submitted shall be posted by a recognized surety company having a place of business in the Commonwealth of Massachusetts. All performance and payment bonds signed by an agent must be accompanied by a certified copy of the authority to act. Performance Bonds and Payment Bonds shall be submitted on the forms included in Sections 00610 and 00615, respectively, of the Contract Documents. Additional requirements may be stated in the General or Supplementary Conditions.
- 21.2 Within 15 days from the date of the Notice of Award, the Successful Bidder shall deliver to Owner and Engineer, for review and approval, the performance bond and the payment bond he proposes to furnish at the time of the execution of the Agreement.
- 21.3 The required contract securities will become part of the Contract Documents.

ARTICLE 22 CONTRACT INSURANCE

- 22.1 The requirements for insurance to be provided by the Successful Bidder are stated in Article 6 of the General Conditions and in the Supplementary Conditions.
- 22.2 Within 15 days from the date of the Notice of Award, the Successful Bidder shall deliver evidence of required insurance to Owner and Engineer.
- 22.3 The required insurance certificates will become part of the Contract Documents.

ARTICLE 23 SIGNING OF AGREEMENT

- 23.1 The Owner will transmit the required number of unsigned Agreements to the Successful Bidder with the Notice of Award. Within 15 days of the date of the Notice of Award, the Successful Bidder shall sign the Agreements and return them to the Owner. The Owner will return one executed Contract to the Successful Bidder.

ARTICLE 24 SALES TAXES

- 24.1 Owner is exempt from Massachusetts State sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. The tax exemption number will be provided to the Successful Bidder.

ARTICLE 25 MASSACHUSETTS PREVAILING WAGE RATES

- 25.1 Minimum Wage Rates as determined by the Commissioner of Department of Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as amended, apply to this project. The Wage Rate Determination is included in Part II of the Supplementary Conditions.
- 25.2 It is the responsibility of the Bidder before bid opening to request any additional information on Minimum Wage Rates for those tradespeople who may be employed for the proposed Work under this Contract.

END OF SECTION

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SECTION 00300

GEOTECHNICAL DATA

SECTION 00300

GEOTECHNICAL DATA

PART 1 GENERAL

1.1 SUMMARY

- A. For the preparation of Bidding Documents, Engineer has relied upon the following reports and tests of subsurface and latent physical conditions of the site. The location of all bore holes is shown on the Drawings.
 - 1. Soil boring data (attached)
 - a. The subsurface data are not guaranteed as to accuracy or completeness, nor are they a part of the Contract Documents.
 - b. Bidders are cautioned that the subsurface data have been utilized for general design purposes only. No explicit or implicit representation is made as to the nature of the materials which may be encountered below the surface of the ground.
 - c. The making available of this subsurface data to Bidders is not intended to relieve them from their responsibility to familiarize themselves with the subsurface and other site conditions.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Boring No. **TB-01**
Page **1** of **1**
File No. **N0363-059**
Checked by: **O. Cavallini**

Drilling Co.: Seaboard Drilling

Foreman: Jeff Nitsch
T&B Rep.: M. Mottolese
Date Start: 11/28/22 End: 11/29/22
Location: See Exploration Location Plan
GS. Elev. 822 Datum: NAVD 88

Type: I.D./O.D.
Casing: HSA
Sampler: Split Spoon
Hammer Wt.: N/A
Hammer Fall: N/A
Rig Make/Model: Diedrich D-50 (Auto Hammer)

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/10"	0' - 2'	8 - 9	Medium dense, brown, fine to coarse SAND and fine GRAVEL, little Silt, moist	ASPHALT	1	No Well Installed
				8 - 4		0.5'		
		S-2/6"	2' - 4'	8 - 5	Loose, brown/gray, fine to coarse SAND and fine GRAVEL, little Silt, moist	SAND AND GRAVEL FILL		
				3 - 3				
		S-3/2"	4' - 6'	2 - 5	Medium dense. Brown, fine to coarse SAND and fine GRAVEL, little Silt, moist			
10				5 - 3			2 3	
		S-4/12"	6' - 8'	3 - 18	Top 4": Brown, fine to coarse SAND and fine GRAVEL, little Silt, moist	7.0'		
				9 - 17	Bot 8": Gray/brown, fine to coarse SAND, some fine Gravel, some Silt, moist			
		S-5/5"	8' - 9.7'	15 - 25	Very dense, gray/brown, fine to coarse SAND and WEATHERED ROCK, little Silt, moist	GLACIAL TILL		
				50 - 50/2"		9.7'		
15					End of Boring at 9.7' (Refusal)			
20								
25								
30								

Notes:
1. Auger grinding and slow auger advancement throughout soil profile due to inferred cobbles and boulders.
2. No groundwater was encountered prior to boring termination.
3. Upon completion, boring was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.

Proportions Used
TRACE (TR.) 0 - <10%
LITTLE (LI.) 10 - <20%
SOME (SO.) 20 - <35%
AND 35 - <50%

Density/Consistency
VERY LOOSE 0-4 VERY SOFT <2
LOOSE 4-10 SOFT 2-4
MEDIUM DENSE 10-30 MEDIUM 4-8
DENSE 30-50 STIFF 8-15
VERY DENSE >50 VERY STIFF 15-30
HARD >30

Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Boring No. **TB-02**
Page **1** of **1**
File No. **N0363-059**
Checked by: **O. Cavallini**

Drilling Co.: Seaboard Drilling

Foreman: Jeff Nitsch
T&B Rep.: M. Mottolese
Date Start: 11/28/22 End: 11/29/22
Location: See Exploration Location Plan
GS. Elev. 825 Datum: NAVD 88

Casing	Sampler
HSA	Split Spoon
4.25"	1-3/8"/2"
N/A	140#
N/A	30"
Diedrich D-50 (Auto Hammer)	

Type
I.D./O.D.
Hammer Wt.
Hammer Fall
Rig Make/Model

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/12"	0' - 1.6'	13-16	Very dense, brown/gray, fine to coarse SAND and fine to coarse GRAVEL, little Silt, moist	ASPHALT 0.4'	1	
				59-50/1"				
		S-2/7"	2' - 4'	11-12				
				27-32				
		S-3/9"	4' - 6'	23-14				
10				4-4	Medium dense, gray, fine to coarse GRAVEL and fine to coarse SAND, little Silt, moist	SAND AND GRAVEL FILL		No Well Installed
		S-4/0"	6' - 8'	9-10				
				8-9				
		S-5/12"	8' - 10'	6-3				
				7-4				
15		S-6/3"	10' - 12'	15-21	Medium dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt, moist	12.5'	2	
				5-11				
20					NO RECOVERY	INFERRED BEDROCK		
25					Medium dense, brown, fine to coarse GRAVEL and fine to coarse SAND, some Silt, moist	18'	3 4	
30					End of Boring at 18' (Refusal)			

Notes:
1. Auger grinding and slow auger advancement throughout soil profile due to inferred cobbles and boulders.
2. Initial auger refusal occurred at 12.5ft bgs. Attempted to take rock core at 12.5', but material was too soft. Attempted to continue auger advancement and was able to advance augers to approximately 18ft bgs prior to refusal.
3. No groundwater was encountered prior to boring termination.
4. Upon completion, boring was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.

Proportions Used

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30

Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Boring No. TB-02A
Page 1 of 1
File No. N0363-059
Checked by: O. Cavallini

Drilling Co.: Seaboard Drilling
Foreman: Jeff Nitsch
T&B Rep.: N. Day
Date Start: 12/01/22 End: 12/01/22
Location: See Exploration Location Plan
GS. Elev. 825 Datum: NAVD 88

Type I.D./O.D.
Hammer Wt. 140#
Hammer Fall 30"
Rig Make/Model Diedrich D-50 (Auto Hammer)

Casing Sampler
FJC Split Spoon
4" 1-3/8"/2"
140# 140#
30" 30"

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5					No samples taken from 0 to 10 feet due to information previously gathered from TB-02.		1	No Well Installed
10					Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, some Silt, moist	10'		
		S-1/14"	10'-12'	6-4		SAND AND GRAVEL FILL		
				6-8				
15					White/gray, WEATHERED ROCK and fine to coarse SAND, little Silt, moist	13'		
		S-2/2"	13.5'-14.1'	30-50/1"		GLACIAL TILL	2	
	2:30	C-1/49"	14.1'-19.1'					
	2:57				Soft to moderately hard, slightly weathered to fresh, slightly fractured, medium grained, gray/white, DOLOMITE. Close, thin, subhorizontal, moderately rough, clean Joints, no Silt.			
	4:24					BEDROCK		
	3:34							
	1:49				Recovery %= 81.7% RQD %= 34.7%		3	
20					End of Boring at 19.1'	19.1'	4	
25								
30								

Notes:
1. Drill rig chatter during rollerbit advancement throughout soil profile due to inferred cobbles and boulders.
2. Split spoon and rollerbit refusal encountered at approximately 14.1ft BGS. Rock core taken from 14.1ft to 19.1ft BGS.
3. No groundwater was encountered prior to boring termination.
4. Upon completion, boring was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.

Proportions Used	
TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency		
VERY LOOSE	0-4	VERY SOFT <2
LOOSE	4-10	SOFT 2-4
MEDIUM DENSE	10-30	MEDIUM 4-8
DENSE	30-50	STIFF 8-15
VERY DENSE	>50	VERY STIFF 15-30
		HARD >30

Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Boring No. **TB-03**
Page **1** of **1**
File No. **N0363-059**
Checked by: **O. Cavallini**

Drilling Co.: Seaboard Drilling

Foreman: Jeff Nitsch
T&B Rep.: M. Mottolese
Date Start: 11/28/22 End: 11/29/22
Location: See Exploration Location Plan
GS. Elev. 828 Datum: NAVD 88

Type: I.D./O.D.
Hammer Wt. 140#
Hammer Fall 30"
Rig Make/Model: Diedrich D-50 (Auto Hammer)

Casing: FJC
Split Spoon: 1-3/8"/2"
4"
140#
30"
30"

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	N o t e s	Well Construction	
5		S-1/13"	0' - 2'	17-11	Medium dense, brown, fine to coarse SAND and fine GRAVEL, little Silt, moist Loose, brown/red, fine to coarse SAND and fine GRAVEL, little Silt, moist NO RECOVERY NO RECOVERY Soft to moderately hard, slightly weathered, slightly fractured to sound, medium grained, white/gray, DOLOMITE. Close to very close, thin, horizontal to subhorizontal, moderately rough, clean Joints, no Silt. Recovery %= 100% RQD %= 60.7%	ASPHALT	1	No Well Installed	
				7-4		0.4'			
		S-2/3"	2' - 4'	5-4		SAND AND GRAVEL FILL			
				2-2					
		S-3/0"	4' - 6'	7-7					
				3-2					
		S-4/0"	6'-6.2'	50/2"		6.2'			
	10	4:30	C-1/60"	6.2'-11.2'					BEDROCK
		4:00							
		2:45							
3:15									
	3:00				11.2'	3 4			
15					End of Boring at 11.2'				
20									
25									
30									

Notes:
1. Switched from HSA to FJC at approximately 4ft BGS due to difficulties advancing HSA from encountered cobbles and boulders.
2. Split spoon and rollerbit refusal encountered at approximately 6.2ft BGS. Rock core taken from 6.2ft to 11.2ft BGS.
3. No groundwater was encountered prior to boring termination.
4. Upon completion, boring was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.

Proportions Used

TRACE (TR.) 0 - <10%
LITTLE (LI.) 10 - <20%
SOME (SO.) 20 - <35%
AND 35 - <50%

Density/Consistency

VERY LOOSE 0-4
LOOSE 4-10
MEDIUM DENSE 10-30
DENSE 30-50
VERY DENSE >50
VERY SOFT <2
SOFT 2-4
MEDIUM 4-8
STIFF 8-15
VERY STIFF 15-30
HARD >30

Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Boring No. **TB-04**
Page **1** of **1**
File No. **N0363-059**
Checked by: **O. Cavallini**

Drilling Co.: Seaboard Drilling

Foreman: Jeff Nitsch
T&B Rep.: M. Mottolese
Date Start: 11/28/22 End: 11/29/22
Location: See Exploration Location Plan
GS. Elev. 828 Datum: NAVD 88

Casing	Sampler
HSA	Split Spoon
4.25"	1-3/8"/2"
N/A	140#
N/A	30"
Diedrich D-50 (Auto Hammer)	

Type
I.D./O.D.
Hammer Wt.
Hammer Fall
Rig Make/Model

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/13"	0' - 2'	5-5	Loose, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt, moist	ASPHALT 0.3' SAND AND GRAVEL FILL 8'	1	No Well Installed
				3-2				
		S-2/5"	2' - 4'	4-3				
				4-4				
		S-3/11"	4' - 6'	5-5				
				4-1				
		S-4/13"	6' - 8'	1-4				
				2-2				
10					End of Boring at 8' (Refusal)		2 3	
15								
20								
25								
30								

Notes: 1. Auger grinding and slow auger advancement throughout soil profile due to inferred cobbles and boulders. 2. No groundwater was encountered prior to boring termination. 3. Upon completion, boring was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.	Proportions Used		Density/Consistency	
	TRACE (TR.)	0 - <10%	VERY LOOSE	0-4
	LITTLE (LI.)	10 - <20%	LOOSE	4-10
	SOME (SO.)	20 - <35%	MEDIUM DENSE	10-30
	AND	35 - <50%	DENSE	30-50
			VERY DENSE	>50
			VERY SOFT	<2
			SOFT	2-4
			MEDIUM	4-8
			STIFF	8-15
			VERY STIFF	15-30
			HARD	>30

Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Boring No. **TB-05**
Page **1** of **1**
File No. **N0363-059**
Checked by: **O. Cavallini**

Drilling Co.: Seaboard Drilling
Foreman: Jeff Nitsch
T&B Rep.: M. Mottolese
Date Start: 11/28/22 End: 11/29/22
Location: See Exploration Location Plan
GS. Elev. 814 Datum: NAVD 88

Casing	Sampler
HSA	Split Spoon
4.25"	1-3/8"/2"
N/A	140#
N/A	30"
Diedrich D-50 (Auto Hammer)	

Type
I.D./O.D.
Hammer Wt.
Hammer Fall
Rig Make/Model

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5		S-1/16"	0' - 2'	2-1	Top 5": TOPSOIL	TOPSOIL	1	No Well Installed
				2-5	Bot 11": Brown, fine to coarse SAND, some Silt, moist	0.4' SUBSOIL 2.0'		
		S-2/0"	2' - 4'	8-4	NO RECOVERY			
				3-4				
		S-3/7"	4' - 6'	3-2	Very loose, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt, moist	SAND AND GRAVEL FILL		
				1-2				
		S-4/0"	6' - 6.1'	50/1"	NO RECOVERY	6'		
10					End of Boring at 6.1' (Refusal)		2 3	
15								
20								
25								
30								

Notes:	Proportions Used	Density/Consistency
1. Auger grinding and slow auger advancement throughout soil profile due to inferred cobbles and boulders.	TRACE (TR.) 0 - <10%	VERY LOOSE 0-4 VERY SOFT <2
2. No groundwater was encountered prior to boring termination.	LITTLE (LI.) 10 - <20%	LOOSE 4-10 SOFT 2-4
3. Upon completion, boring was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.	SOME (SO.) 20 - <35%	MEDIUM DENSE 10-30 MEDIUM 4-8
	AND 35 - <50%	DENSE 30-50 STIFF 8-15
		VERY DENSE >50 VERY STIFF 15-30
		HARD >30

Density consistency	
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	>50
VERY SOFT	<2
SOFT	2-4
MEDIUM	4-8
STIFF	8-15
VERY STIFF	15-30
HARD	>30

Project: Walnut St Retaining Wall
Location: North Adams, MA
Client: City of North Adams

Drilling Co.:	Seaboard Drilling		
Foreman:	Jeff Nitsch		
T&B Rep.:	M. Mottolese		
Date Start:	11/28/22	End:	11/29/22
Location	See Exploration Location Plan		
GS. Elev.	825	Datum:	NAVD 88

	Casing	Sampler
Type	HSA	N/A
I.D./O.D.	4.25"	N/A
Hammer Wt.	N/A	N/A
Hammer Fall	N/A	N/A
Rig Make/Model	Diedrich D-50	

Groundwater Readings

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
Not Encountered				

Depth (ft.)	Casing Blows Per Ft.	Sample No. / Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	N o t e s	Well Construction
5					No samples taken during the advancement of the rock probe		1	No Well Installed
							2	
							3	
10					End of Boring at 8' (Refusal)		4	
15								
20								
25								
30								

Notes:

- Notes:
1. Rock probe performed to determine approximate elevation of bedrock in this location. No soil samples were taken during the advancement of the rock probe.
2. Auger grinding and slow auger advancement throughout soil profile due to inferred cobbles and boulders
3. No groundwater was encountered prior to rock probe termination.
4. Upon completion, rock probe was backfilled to the ground surface using drill cuttings and finished with an asphalt patch.

Proportions Used

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistency

Density/Consistency			
VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30

Project: Walnut St Retaining Wall
Location: Oak Avenue - North Adams, MA
Client: City of North Adams

Boring No. TB-06
Page 1 of 1
File No.
Checked by:

Drilling Co. Seaboard Drilling
Foreman: Jeff Nitsch
T&B Rep.: Aaron Champagne
Date Start: 10/02/23 End: 10/02/23
Location See Exploration Location Plan
GS. Elev. Datum:

	Casing	Sampler
Type	HSA	Split Spoon
I.D./O.D.	4.25"	1-3/8"/2"
Hammer Wt.	N/A	140#
Hammer Fall	N/A	30"
Rig Make/Model	Mobile B-53 (Auto Hammer)	

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time

Depth (ft.)	Casing Blows Per Ft.	Sample No. Rec.(in)	Sample Depth (ft.)	Blows Per 6"	PID Reading (ppm)	Sample Description	General Stratigraphy	N o t e s	Well Construction
5		S-1/8"	0'-2'	9-4		Medium dense, brown, fine GRAVEL and fine to medium SAND, trace Silt, dry No recovery Medium dense, brown, fine GRAVEL and medium SAND, little Clay, wet Medium dense, brown, fine GRAVEL, little fine Sand, some Clay, wet Loose, brown, fine GRAVEL and fine to medium SAND, little Silt, wet	ASPHALT		
				7-4			0.5'		
		S-2/0"	2'-4'	6-6			SAND AND GRAVEL FILL		
				5-2					
		S-3/10"	4'-6'	1-10					
			3-2						
	S-4/11"	6'-8'	10-5						
			5-5						
	S-5/16"	8'-10'	2-2						
			4-2						
10		S-6/19"	10'-12'	2-2		Top 8": Brown, fine GRAVEL and fine to medium SAND, little Silt, wet Bottom 11": Brown, coarse SAND, little Silt, wet	12'		
				3-3					
15						End of Boring at 12'			
20									
25									
30									

Notes: 1. Asphalt thickness 6" 2. Water at 4'	Proportions Used	Density/Consistency
	TRACE (TR.) 0 - <10% LITTLE (LI.) 10 - <20% SOME (SO.) 20 - <35% AND 35 - <50%	VERY LOOSE 0-4 LOOSE 4-10 MEDIUM DENSE 10-30 DENSE 30-50 VERY DENSE >50 VERY SOFT <2 SOFT 2-4 MEDIUM 4-8 STIFF 8-15 VERY STIFF 15-30 HARD >30



Boring No. **TB-07**
Page 1 of 1
File No. _____
Checked by: _____

Foreman:	Jeff Nitsch
T&B Rep.:	Aaron Champagne
Date Start:	10/02/23
End:	10/02/23
Location	See Exploration Location Plan
GS. Elev.	Datum:

	Casing	Sampler
Type	HSA	Split Spoon
I.D./O.D.	4.25"	1-3/8"/2"
Hammer Wt.	N/A	140#
Hammer Fall	N/A	30"
Rig Make/Model	Mobile B-53 (Auto Hammer)	

Date	Time	Depth	Casing	Sta. Time

Notes:

- ### Proportions Used

Density/Consistency

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
		HARD	>30

Project: Walnut St Retaining Wall
Location: Walnut Street - North Adams, MA
Client: City of North Adams

Boring No. TB-8
Page 1 of 1
File No.
Checked by:

Drilling Co.: Seaboard Drilling
Foreman:
T&B Rep.: Aaron Champagne
Date Start: 03/31/26 End: 03/31/26
Location: See Exploration Location Plan
GS. Elev. Datum:

Casing Sampler
Type HSA Split Spoon
I.D./O.D. 4.25" 1-3/8"/2"
Hammer Wt. N/A 140#
Hammer Fall N/A 30"
Rig Make/Model Mobile B-53 (Auto Hammer)

Table with 5 columns: Date, Time, Depth, Casing, Sta. Time. It is a header row for groundwater readings.

Main data table with 10 columns: Depth (ft.), Casing Blows Per Ft., Sample No. Rec.(in), Sample Depth (ft.), Blows 6", Per 6", PID Reading (ppm), Sample Description, General Stratigraphy, Notes, Well Construction. It contains detailed log data for a boring, including sample depths, blow counts, and soil descriptions.

Summary and Notes section. Includes 'Notes' (Asphalt thickness, Water at 3.5', Refusal at 9'-6"), 'Proportions Used' (TRACE, LITTLE, SOME, AND), and 'Density/Consistency' (VERY LOOSE, LOOSE, MEDIUM DENSE, DENSE, VERY DENSE).

SECTION 00410

BID FORM

SECTION 00410

BID FORM

PROJECT IDENTIFICATION:

Walnut Street Retaining Wall Repairs

TABLE OF ARTICLES

1. Bid Recipient
2. Bidder's Acknowledgements
3. Bidder's Representations
4. Bidder's Certifications
5. Basis of Bid
6. Time of Completion
7. Attachments to This Bid
8. Bid Submittal

ARTICLE 1 - BID RECIPIENT

- 1.1 This Bid is submitted to:

City of North Adams, Massachusetts

Office of Procurement, City Hall

10 Main Street

North Adams, MA 01247

- 1.2 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGEMENTS

- 2.1 Bidder accepts all of the terms and conditions of the Advertisement for Bids and Instructions to Bidders, including without limitation, those dealing with the disposition of Bid deposit. The Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 2.2 The Work under this Contract shall be subject to the provisions of Chapter 30, Section 39M of the Massachusetts General Laws.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

- 3.1 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents and hereby acknowledges the receipt of all Addenda.
- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- K. Bidder is aware that the estimated quantities on the Bid Form are subject to Article 13.03 of the General Conditions (Section 00700).

ARTICLE 4 - BIDDER'S CERTIFICATION

- 4.1 Bidder hereby certifies 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, that all employees to be employed at the Site 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 MGL Chapter 30, Section 39M.
- 4.2 Bidder certifies that, under penalty of perjury, Bidder is not presently debarred from doing public construction work in the Commonwealth under the provisions of MGL Chapter 29, Section 29F or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.
- 4.3 Pursuant to M.G.L.c.62C, s49A, bidder hereby certifies under the penalties of perjury, to the best of Bidder's knowledge and belief, that Bidder has complied with all laws of the commonwealth related to taxes, reporting of employees and contractors, and withholding and remitting of child support.
- 4.4 Bidder hereby certifies under the penalties of perjury, to the best of Bidder's knowledge and belief, that Bidder has filed all State tax returns and paid all State taxes required by law.
- 4.5 Bidder certifies under 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 herein the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.
- 4.6 Bidder certifies that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- 4.7 Bidder certifies that Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- 4.8 Bidder certifies that Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- 4.9 Bidder certifies that Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph:
 - A. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - B. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of the Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - C. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

- D. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 - BASIS OF BID

- 5.1 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
101.1	Clearing and Grubbing, per acre, the price of: _____ ()	x 0.1 ac =	\$ _____
102.1	Tree Trimming, per linear foot, the price of: _____ (\$)	x 650 l.f. =	\$ _____
104.	Tree Removed – Diameter 24 Inches and Over, each, the price of: _____ (\$)	x 3 each =	\$ _____
120.	Earth Excavation, per cubic yard, the price of: _____ (\$)	x 1,500 c.y. =	\$ _____
127.1	Reinforced Concrete Excavation, per cubic yard, the price of: _____ (\$)	x 90 c.y. =	\$ _____
141.1	Test Pit for Exploration, per cubic yard, the price of: _____ (\$)	x 100 c.y. =	\$ _____
144.	Class B Rock Excavation, per cubic yard, the price of: _____ (\$)	x 125 c.y. =	\$ _____

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
146.	Drainage Structure Removed, each, the price of: _____ (\$ _____)	x 5 each =	\$ _____
151.	Gravel Borrow, per cubic yard, the price of: _____ (\$ _____)	x 1,100 c.y. =	\$ _____
151.2	Gravel Borrow for Backfilling Structures and Pipes, per cubic yard, the price of: _____ (\$ _____)	x 100 c.y. =	\$ _____
156.	Crushed Stone, per ton, the price of: _____ (\$ _____)	x 650 tons =	\$ _____
170.	Fine Grading and Compacting – Subgrade Area, per square yard, the price of: _____ (\$ _____)	x 1,300 s.y. =	\$ _____
201.	Catch Basin, each, the price of: _____ (\$ _____)	x 8 each =	\$ _____
202.	Manhole, each, the price of: _____ (\$ _____)	x 2 each =	\$ _____

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
203.	Special Manhole, each, the price of: _____	x 1 each =	\$ _____
	(\$ _____)		
210.	Sanitary Sewer Manhole, each, the price of: _____	x 1 each =	\$ _____
	(\$ _____)		
212.	Temporary Sanitary Sewer Main, lump sum, the price of: _____	lump sum =	\$ _____
	(\$ _____)		
220.	Drainage Structure Adjusted, each, the price of: _____	x 8 each =	\$ _____
	(\$5 _____)		
220.2	Drainage Structure Rebuilt, per linear foot, the price of: _____	x 10 l.f. =	\$ _____
	(\$ _____)		
220.7	Sanitary Structure Adjusted, each, the price of: _____	x 3 each =	\$ _____
	(\$ _____)		

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
221.	Frame and Cover, each, the price of: _____		
	(\$ _____)	x 3 each =	\$ _____
222.1	Frame and Grate MassDOT Cascade Type, each, the price of: _____		
	(\$ _____)	x 7 each =	\$ _____
222.3	Frame and Grate Municipal Standard, each, the price of: _____		
	(\$ _____)	x 1 each =	\$ _____
223.1	Frame and Grate (or Cover) Removed and Stacked, each, the price of: _____		
	(\$ _____)	x 5 each =	\$ _____
227.4	Masonry Plug, per square foot, the price of: _____		
	(\$ _____)	x 10 s.f. =	\$ _____
250.08	8 Inch Polyvinyl Chloride Sanitary Sewer Pipe, per linear foot, the price of: _____		
	(\$150 _____)	x 290 l.f. =	\$ _____
252.12	12 Inch Corrugated Plastic Pipe, per linear foot, the price of: _____		
	(\$ _____)	x 20 l.f. =	\$ _____

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
252.15	15 Inch Corrugated Plastic Pipe, per linear foot, the price of: _____	x 660 l.f. =	\$ _____
	(\$ _____)		
252.24	24 Inch Corrugated Plastic Pipe, per linear foot, the price of: _____	x 70 l.f. =	\$ _____
	(\$ _____)		
269.06	6 Inch Slot Perforated Corrugated Plastic Pipe (Subdrain), per linear foot, the price of: _____	x 150 l.f. =	\$ _____
	(\$ _____)		
302.06	6 Inch Ductile Iron Water Pipe (Rubber Gasket), per linear foot, the price of: _____	x 20 l.f. =	\$ _____
	(_____)		
302.08	8 Inch Ductile Iron Water Pipe (Rubber Gasket), per linear foot, the price of: _____	x 260 l.f. =	\$ _____
	(_____)		
309.	Ductile Iron Fittings for Water Pipe, per pound, the price of: _____	x 500 lb. =	\$ _____
	(\$ _____)		

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
345.4	4 Inch Temporary Water Main, lump sum, the price of: _____	lump sum =	\$ _____
	(\$ _____)		
347.1	1 Inch Copper Tubing Type K, per linear foot, the price of: _____	x 30 l.f. =	\$ _____
	(\$ _____)		
350.06	6 Inch Gate and Box, each, the price of: _____	x 1 each. =	\$ _____
	(_____)		
350.08	8 Inch Gate and Box, each, the price of: _____	x 3 each =	\$ _____
	(_____)		
358.	Gate Box Adjusted, each, the price of: _____	x 1 each. =	\$ _____
	(\$ _____)		
363.1	1 Inch Corporation Cock, each, the price of: _____	x 2 each =	\$ _____
	(\$ _____)		
376.2	Hydrant – Removed and Reset, each, the price of: _____	x 1 each =	\$ _____
	(\$ _____)		

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
381.	Service Box, per each, the price of: _____	x 2 each =	\$ _____
	(\$ _____)		
384.	Curb Stop, per each, the price of: _____	x 2 each =	\$ _____
	(\$ _____)		
402.	Dense Graded Crushed Stone for Subbase, per cubic yard, the price of: _____	x 10 c.y. =	\$ _____
	(\$ _____)		
403.	Reclaimed Pavement for Sub Base, per square yard, the price of: _____	x 180 s.y. =	\$ _____
	(\$ _____)		
450.23	Superpave Surface Course – 12.5 (SSC – 12.5), per ton, the price of: _____	x 150 tons =	\$ _____
	(\$ _____)		
450.32	Superpave Intermediate Course – 19.0 (SIC – 19.0), per ton, the price of: _____	x 225 tons =	\$ _____
	(\$ _____)		
451.	HMA per patching, per ton, the price of: _____	x 70 tons =	\$ _____
	(\$ _____)		

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
452.	Asphalt Emulsion for Tack Coat, per gallon, the price of: _____	x 60 gal. =	\$ _____
	(\$ _____)		
570.2	Hot Mix Asphalt Curb Type 2, per linear foot, the price of: _____	x 500 l.f. =	\$ _____
	(\$ _____)		
620.12	Guardrail, TL-2 Single Faced, per linear foot, the price of: _____	x 180 l.f. =	\$ _____
	(\$ _____)		
622.	Thrie Beam Guardrail, per linear foot, the price of: _____	x 150 l.f. =	\$ _____
	(\$ _____)		
627.1	Trailing Anchorage, each, the price of: _____	x 2 each =	\$ _____
	(\$ _____)		
628.25	Transition to Thrie Beam, each, the price of: _____	x 2 each =	\$ _____
	(\$ _____)		

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
643.	Curved Top Chain Link Fence Vinyl Coated, per linear foot, the price of: _____	x 150 l.f. =	\$ _____
	(\$ _____)		
645.172	72 Inch Chain Link Fence (Pipe Top Rail) Vinyl Coated, per linear foot, the price of: _____	x 230 l.f. =	\$ _____
	(\$ _____)		
697.1	Silt Sack, each, the price of: _____	x 13 each =	\$ _____
	(\$ _____)		
698.3	Geotextile Fabric for Separation, per square yard, the price of: _____	x 500 s.y. =	\$ _____
	(\$ _____)		
702.	Hot Mix Asphalt Sidewalk or Driveway, per ton, the price of: _____	x 100 tons =	\$ _____
	(\$ _____)		
734.	Sign Removed and Reset, each, the price of: _____	x 2 each =	\$ _____
	(\$ _____)		

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
748.	Mobilization, lump sum, the price of: _____ (\$ _____) * Not to exceed 5 percent of the total Bid price	*lump sum =	\$ _____
751.	Loam for Roadsides, per cubic yard, the price of: _____ (\$ _____)	x 50 c.y. =	\$ _____
765.	Seeding, per square yard, the price of: _____ (\$5 _____)	x 400 s.y. =	\$ _____
767.121	Sediment Control Barrier, per linear foot, the price of: _____ (\$ _____)	x 850 l.f. =	\$ _____
852.	Safety Signing for Traffic Management, per square foot, the price of: _____ (\$ _____)	x 60 s.f. =	\$ _____
853.1	Portable Breakaway Barricade Type III, each, the price of: _____ (\$ _____)	x 5 each =	\$ _____
880.	Police Details, the price of: <u>Twenty-Five Thousand Dollars and Zero Cents</u> (\$25,000 _____)	Allowance =	<u>\$25,000</u>

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
904.4	4,000 psi, ¾ Inch, 585 HP Cement Concrete, per cubic yard, the price of: _____	x 300 c.y. =	\$ _____
	(\$ _____)		
910.1	Steel Reinforcement for Structures – Epoxy Coated, per pound, the price of: _____	x 66,000 lbs =	\$ _____
	(\$ _____)		
953.1	Temporary Support of Excavation, per lump sum, the price of: _____	lump sum =	\$ _____
	(\$ _____)		
983.	Dumped Riprap, per ton, the price of: _____	x 120 tons =	\$ _____
	(\$ _____)		
998.1	Monthly Price Adjustment for Hot Mix Asphalt Mixtures, the price of: Two Thousand Dollars and Zero Cents (\$2,000 _____)	Allowance =	\$2,000 _____
998.2	Monthly Price Adjustment for Diesel Fuel, the price of: Two Thousand Dollars and Zero Cents (\$2,000 _____)	Allowance =	\$2,000 _____

BASE BID			
Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
998.3	Monthly Price Adjustment for Gasoline, the price of: <u>Twenty Thousand Dollars and Zero Cents</u> (\$20,000)	Allowance =	<u>\$20,000</u>
998.4	Monthly Price Adjustment for Cement Concrete, the price of: <u>Three Thousand Dollars and Zero Cents</u> (\$3,000)	Allowance =	<u>\$3,000</u>
998.5	Monthly Price Adjustment for Steel, the price of: <u>Three Thousand Dollars and Zero Cents</u> (\$3,000)	Allowance =	<u>\$3,000</u>
998.6	Utility Allowance, the price of: <u>One Hundred Seventy Thousand Dollars and Zero Cents</u> (\$170,000)	Allowance =	<u>\$170,000</u>
TOTAL AMOUNT OF BID – Items 101.1 through 999.1			
			_____ dollars
			(words)
			(\$ _____)
			(figures)

ALTERNATE 1: RECONSTRUCTION OF OAK AVENUE

Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
120.	Earth Excavation, per cubic yard, the price of: _____	x 160 c.y. =	\$ _____
	(\$ _____)		
151.	Gravel Borrow, per cubic yard, the price of: _____	x 50 c.y. =	\$ _____
	(\$ _____)		
170.	Fine Grading and Compacting – Subgrade Area, per square yard, the price of: _____	x 1,100 s.y. =	\$ _____
	(\$ _____)		
403.	Reclaimed Pavement for Sub Base, per square yard, the price of: _____	x 1,090 s.y. =	\$ _____
	(\$ _____)		
450.23	Superpave Surface Course – 12.5 (SSC – 12.5) per ton, the price of: _____	x 150 tons =	\$ _____
	(\$ _____)		
450.32	Superpave Surface Course – 19.0 (SIC – 19.0) per ton, the price of: _____	x 225 tons =	\$ _____
	(\$ _____)		

ALTERNATE 1: RECONSTRUCTION OF OAK AVENUE

Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
570.2	Hot Mix Asphalt Curb Type 2, per linear foot, the price of:		
	_____	x 1,100 l.f. =	\$ _____
	(\$ _____)		

TOTAL AMOUNT OF ALTERNATE 1: RECONSTRUCTION OF OAK AVENUE – Items 120. through 570.2

_____ dollars
(words)

(\$ _____)
(figures)

TOTAL AMOUNT OF BASE BID AND ALTERNATE 1

_____ dollars
(words)

(\$ _____)
(figures)

5.2 This Bid includes Addenda numbered _____.

ARTICLE 6 - TIME OF COMPLETION

6.1 Bidder agrees that the Work will be substantially completed and ready for final payment in accordance with paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.2 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times as stated in the Agreement.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.1 The following documents are attached to and made a condition of this Bid:

- A. Bid deposit in the amount of _____ dollars (\$ _____), consisting of a bid bond in the amount of five percent of the total amount of Bid
- B. Evidence of authority to sign
- C. List of Project References
- D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids

- E. A list of adversarial proceedings in which the bidder is or was a party within the past 5 years that relate to the procurement or performance of any public or private construction contract together with a brief statement as to outcome if concluded or status if pending.
- F. A list of any projects on which the firm was terminated or failed to complete the work within the past 5 years, including a brief explanation for each instance listed.
- G. Evidence of Bidder's qualifications in accordance with Article 3 of Section 00200
- H. Completed Certificate of Vote if applicable

ARTICLE 8 - BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By: _____

[Signature] _____*[Printed name]* _____*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: _____

[Signature] _____*[Printed name]* _____

Title: _____

Submittal Date: _____

Address for giving notices: _____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____

(where applicable)

END OF SECTION

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CERTIFICATE OF VOTE

(to be filed if Contractor is a Corporation)

I, _____, hereby certify that I am the duly qualified
(Secretary of the Corporation)

and acting Secretary of _____ and I further certify that a meeting of the

(Name of Corporation)

Directors of said Company, duly called and held on _____, at which
(Date of Meeting)

all Directors were present and voting, the following vote was unanimously passed:

VOTED: To authorize and empower

Anyone acting singly, to execute Forms of General Bid, Contracts or Bonds on behalf of the Corporation.

I further certify that the above vote is still in effect and has not been changed or modified in any respect.

By: _____
(Secretary of Corporation)

A True Copy:

Attest: _____
(Notary Public)

My Commission Expires: _____
(Date)

SECTION 00520

AGREEMENT

SECTION 00520

AGREEMENT

THIS AGREEMENT, made this _____ day of _____,
20____, by and between the party of the first part, the City of North Adams, hereinafter called
"OWNER," acting herein through its Mayor, and the party of the second part,
_____ doing business as *(an individual) (a
partnership) (a joint venture) (a corporation) located in the *(City) (Town) of
_____, County of
_____, and State of _____, hereinafter called
"CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements
hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby
agrees with the OWNER to commence and complete the project described as follows: "Walnut
Street Retaining Wall Repair" hereinafter called the project, for the sum of

Dollars (\$_____) and all extra work in connection therewith, under the terms as
stated in the Contract Documents; and at his (its or their) own proper cost and expense to furnish
all the materials, supplies, machinery equipment, tools, superintendence, labor, insurance, and
other accessories and services necessary to complete the said project in accordance with the
conditions and prices stated in SECTION 00410 BID FORM, Section 00700 GENERAL
CONDITIONS, Section 00800 SUPPLEMENTARY GENERAL CONDITIONS, the plans,
which include all maps, plates, blue prints, and the specifications and Contract Documents as
prepared by the Owner.

*Strike out inapplicable term.

The CONTRACTOR hereby agrees to commence work under this Contract on or before a date to be specified in written "Notice to Proceed" of the OWNER.

The CONTRACTOR further agrees to fully complete the project on or before August 1, 2027 and completed and ready for final payment on or before September 1, 2027.

The CONTRACTOR further agrees to pay as liquidated damages the sum of \$1,000. for each consecutive calendar day thereafter as provided in the Liquidated Damages Paragraph of Section 00700 GENERAL CONDITIONS.

The CONTRACTOR agrees not to discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age or national origin; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.

The CONTRACTOR agrees not to participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1954, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in Section 00700 GENERAL CONDITIONS as amended by the supplementary general conditions, and to make payments on account thereof as provided in Section 00700 GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

City of North Adams, Massachusetts
(Owner)

By _____

(Name)

(Title)

(Contractor)

By _____

(Name)

(Title)

(Address)

(City and State)

Approved as to Form:

By _____
(Owner's Counsel)

(Name)

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this contract is available therefor and that the _____ has been authorized to execute the contract and approve all requisitions and change orders.

By _____
(Owner's Accountant)

SECTION 00610

PERFORMANCE BOND

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall 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 shall not be reduced or set off on account of any such unrelated obligations. No right of action shall 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 may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall 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 shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

SECTION 00615

PAYMENT BOND

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 satisfy 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 shall 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 shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
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;
4. A brief description of the labor, materials, or equipment furnished;
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;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
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 shall be 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

SECTION 00700

GENERAL CONDITIONS

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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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 form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *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, or both; 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, or both; 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; or (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. 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), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree 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 the 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. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *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. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *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.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *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.
28. *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.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *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.
31. *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.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *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.
34. *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.
35. *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.
36. *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.

37. *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 furnished by Owner which are designated for the use of Contractor.
38. *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.
39. *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.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *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.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then 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 are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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.

48. *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 the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the 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:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

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

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of 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 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 Supplementary Conditions or otherwise), 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 executed 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 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.

2.04 *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 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.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.
 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.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- 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.
- 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.

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, shall mean 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, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the 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 officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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 Documents 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 Documents 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 shall 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 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 thereunder.
- 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 give written notice to Owner and Contractor 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 editions, 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 shall preclude 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 thirtieth 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 sixtieth day after the day of Bid opening or the thirtieth 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 shall 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 shall 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 shall 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 the Contract Times and Contract Price. 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.
- 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. 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 shall 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 (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. 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.
- E. Paragraph 8.03 governs 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.
- F. 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.

- G. 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.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- 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; 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 7.12, 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 at law; 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 shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site 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 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 relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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 upon 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 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.

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 either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 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 the necessity of Owner's obtaining 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 above; 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. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
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; or
 - 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 as 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, or both, then any such adjustment shall 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, or both, 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.

5.05 *Underground Facilities*

- 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.
- 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 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.

- C. *Engineer's Review:* Engineer will 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; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; 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 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. *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:
 - a. 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;
 - 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;
 - c. 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
 - d. 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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- 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.
- 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 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.
- 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, or both, 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.
- 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 or 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.H shall obligate 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 shall obligate 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 all 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 specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are 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 Financial Management Service, Surety Bond Branch, 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.
- C. 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.
- D. 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 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.
- E. 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.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

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. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as 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.
- E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- 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.

6.03 *Contractor's Insurance*

- 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. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (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.

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 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 *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.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 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 6.05 shall 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, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- 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.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, 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.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

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

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the 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 material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- 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 shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall 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 material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.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 material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall 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 that specified, and
 - 3) be suited to the same use as that 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 that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
- d. shall 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 shall 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 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity 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 five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, 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, Supplier, or other individual or entity, whether initially or as a replacement, shall 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 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.
- J. 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.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. 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.

7.07 *Patent Fees and Royalties*

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

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of 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

7.09 *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.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work 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 shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *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.

7.12 *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. 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.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when 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.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. 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.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor 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).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall 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.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

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 threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified 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
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

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.D.

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. *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.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction 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 shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 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.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 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, shall 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, Sample, or other submittal shall 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.D.4.

E. *Resubmittal Procedures:*

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

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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 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.

- D. 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 shall 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 and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their 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 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 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*

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

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

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 at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner 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, or both. 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 shall 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. When applicable, any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 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. 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 to 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.
- C. 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 to Contractor.

- D. 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 shall 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 Documents (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 10.08. 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 *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 Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *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.

10.07 *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.

10.08 *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, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 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 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *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 (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents 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.
 - b. 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.
 - 2. *Work Change Directives:* 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 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

11.03 *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.

11.04 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall 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); or
 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 11.04.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 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.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 five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall 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 will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal 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 shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* 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. 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. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall 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.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. 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.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *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 shall be submitted 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; and
 - 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.
- 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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall be incorporated in a Change Order 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, 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 property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes

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

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as 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 shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

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, subject to the provisions of the following paragraph.
- 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:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. 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.

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 will 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 therewith 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 shall 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 shall 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 shall 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 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 shall 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 special 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, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, 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 shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

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 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 seven 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 on account of 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. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 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 on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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 that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated 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;
 - l. there are other items entitling 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 shall 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 shall be treated as an amount due as determined by Paragraph 15.01.C.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 seven 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 shall 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 seven 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 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 6.05 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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall 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 disputes that Contractor believes are unsettled; 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 Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. 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. *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.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- 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.
- 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 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 terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then 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 other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not 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, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall 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) ten 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) 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 seven 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 shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; 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 on account of loss of anticipated overhead, profits, or revenue, 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 seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 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, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph 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; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising 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; or
 - 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 Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

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 shall not constitute a waiver of that provision, nor shall 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 or completion of the Contract or termination 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 *Headings*

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

SECTION 00800

SUPPLEMENTARY CONDITIONS

SECTION 00800

SUPPLEMENTARY CONDITIONS

PART 1 AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2013 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

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

The address system used in the Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix “SC” added thereto.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 Delete paragraph 1.01A.38 in its entirety and insert the following in its place:

1.01A.38. Specifications – Sections included under Division 1 and the Special Provisions of the Project Manual.

SC-1.01 Add the following language at the end of the first sentence of paragraph 1.01A.40:

or has been completed except for work having a contract price of less than one percent of the then adjusted total Contract Price.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.02 Delete paragraph 2.02A in its entirety and insert the following in its place:

2.02A Owner shall furnish to Contractor one hard copy of the Drawings and Project Manual, and one copy in electronic portable document format (PDF). Additional copies will be furnished upon request at the cost of reproduction.

ARTICLE 3 –DOCUMENTS: INTENT, REQUIREMENTS, REUSE

SC-3.01 Replace paragraph 3.01E with the following paragraph:

3.01E In the event of conflicts, inconsistencies or discrepancies among the Contract Documents, to the extent applicable, the better quality or greater quantity of work shall be provided without change to the Contract Price. In the event of such conflicts, inconsistencies or discrepancies which do not relate to the quality or quantity of work, the Contractor shall request clarifications or interpretations from the Engineer as provided herein.

SC-3.01 Add the following new paragraph immediately after paragraph 3.01E:

- 3.01F Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

- SC-4.01 Delete paragraph 4.01A in its entirety and insert the following in its place:

- 4.01A The Contract Times will commence to run on the date specified in the Notice to Proceed.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

- SC-5.03 Add the following new paragraphs immediately after paragraph 5.03B.3:

- 5.03C In the preparation of Drawings and Specifications, Engineer has relied upon the data obtained from tests of subsurface and latent physical conditions of the site. Such data is in the form of boring logs which are included in the Project Manual. The locations of the test borings are shown on the Drawings. Such logs and samples are not part of the Contract Documents.

- 5.03C.1 The subsurface data are not guaranteed as to accuracy or completeness.

- 5.03C.2 Bidders are cautioned that the subsurface data have been utilized for general design purposes only. No explicit or implicit representation is made as to the nature of the materials which may be encountered below the surface of the ground.

- 5.03C.3 The making available of this subsurface data to Bidders is not intended to relieve them from their responsibility to familiarize themselves with subsurface and other site conditions.

- SC-5.04 Add the following new paragraph immediately after paragraph 5.04D.4:

- 5.04D.5 Adjustment resulting from subsurface or latent physical conditions will be in accordance with Massachusetts General Law Chapter 30, Section 39N referenced in Part II of the Supplementary Conditions.

- SC-5.06 Delete Paragraphs 5.06A and 5.06B in their entirety and insert the following:

- 5.06A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to the Owner.

- 5.06B. Not used.

ARTICLE 6 - BONDS AND INSURANCE

SC-6.03 Add the following new paragraph immediately after paragraph 6.03B.3:

6.03B.4 Insurance certificate(s) shall also contain the following:

1. Confirmation that the General Liability policy covers only the Work under this Contract, with project specific limits.
2. Confirmation that automobile insurance covers all Scheduled, Hired and Non-Owned vehicles.
3. Names of all additional insureds as specified herein.

SC-6.03 Add the words “and Paragraph 6.04” after the words “Paragraph 6.03” in Paragraph 6.03I.

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

6.03.K The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers’ Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	Statutory
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Employer’s Liability:

Bodily injury, each accident	<u>Statutory</u>
Bodily injury by disease, each employee	<u>Statutory</u>
Bodily injury/disease aggregate	<u>Statutory</u>

2. Contractor’s Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	<u>\$3,000,000</u>
Products - Completed Operations Aggregate	<u>\$1,000,000</u>
Personal and Advertising Injury	<u>\$3,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	<u>\$1,000,000</u>

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person	<u>\$1,000,000</u>
Each accident	<u>\$1,000,000</u>

Property Damage:

Each accident	<u>\$1,000,000</u>
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4. Excess or Umbrella Liability:

Per Occurrence	<u>\$2,000,000</u>
General Aggregate	<u>\$2,000,000</u>

5. Contractor's Pollution Liability:

Each Occurrence	<u>\$1,000,000</u>
General Aggregate	<u>\$2,000,000</u>

☐ If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

SC -6.05 Delete Section 6.05 in its entirety and insert the following in its place:

6.05 Not used.

SC-6.05 Add the following new subparagraph after subparagraph 6.05.A.1:

6.05.A.1.a In addition to Owner, Contractor, and all Subcontractors, include as insureds the following:

1) Tighe & Bond (53 Southampton Rd, Westfield, MA 01085)

ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

SC-7.02 Add the following new paragraph immediately after paragraph 7.02B.

7.02C Whenever Owner shall notify Contractor in writing that any person on the Work appears to be incompetent, disorderly, or otherwise unsatisfactory, such person shall be removed from the Project and shall not again be employed on it except with the consent of Owner.

7.03D Whenever it is written that an equipment manufacturer must have a specified period of experience with his product, equipment which does not meet the specified experience period can 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.

SC-7.06 Add the following language at the end of paragraph 7.06O.2:

Contractor shall make payments to Subcontractors in accordance with Massachusetts General Law Chapter 30, Section 39F which is referenced in PART II of these Supplementary Conditions.

SC-7.07 Delete paragraph 7.07B in its entirety and replace it with the following:

7.07B Not used.

SC-7.08 Delete the word “Owner” in the last sentence of Paragraph 7.08A and replace with the word “Contractor.”

SC-7.09 Add the following sentence at the end of paragraph 7.09.A.

All materials provided under this Contract are exempt from the Sales and Use Taxes of the Commonwealth of Massachusetts. The tax exemption number will be provided to the Contractor.

SC-7.10 Add the following new paragraph immediately after paragraph 7.10C.

7.10D Contractor shall comply with all applicable provisions of Chapter 30, Section 39R of the Massachusetts General Laws regarding Contractor’s records.

SC-7.18 Add the following new paragraph immediately after paragraph 7.18.C.

7.18D If, through 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 such damage alleged to have been sustained, Owner shall notify Contractor, who shall indemnify, defend, and save harmless Owner against any such claim.

ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

B. The Resident Project Representative (RPR) will be Engineer’s representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR’s actions.

1. RPR’s dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR’s dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor.

C. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).
2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

SC-11.06 Insert the following sentence at the end of Paragraph 11.06.A.2:

If Engineer does not take action on the Change Proposal and neither Owner nor Contractor submit a letter to the other party indicating that the Change Proposal is deemed denied, then the Change Proposal shall be deemed denied after 60 days of Engineer's receipt of the Contractor's supporting data, thereby commencing the time for appeal of the denial under Article 12.

ARTICLE 13 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-13.01 Delete the word "superintendents," in the second sentence after the word "limitation," in paragraph 13.01B.1.

SC-13.01 Delete paragraph 13.01B.5.c in its entirety and replace with the following:

13.01B.5.c The fair rental and operating cost of all machinery and equipment used on the extra work for the period of such use. The fair rental and operating cost for all machinery and equipment shall be based upon the most recent edition of "Rental Rate Bluebook for Construction Equipment" (the "Bluebook"), published by Equipment Watch (equipmentwatch.com), or a similar publication approved by Engineer and adjusted for regional and age adjustments as specified in the "Bluebook." Rental periods corresponding to the overall period of use shall be used, except if a piece of equipment used on extra work is already on the job, or has previously been rented for a long period of time (months), then the long-term rental rate (monthly) shall be used in determining costs. The hourly rental rate for long-term rental equipment will be determined by the monthly rental rate divided by 176.

For the situation where equipment is on the job and available for use but cannot be used due to a delay or suspension of a portion or all of the Contract activities, a rental standby rate may be paid if the Contractor can conclusively demonstrate to the satisfaction of the Engineer that: (1) the

equipment cannot be used elsewhere on the Project or demobilized and remobilized at a cost lower than the cost of standby time, (2) that the equipment cannot be put in use due to factors beyond the Contractor's control, and (3) the equipment on standby would have been used as part of the Work that is suspended or put on hold. The standby rate will be calculated as no more than 50% of the rental rate as listed in the "Bluebook" and adjusted for regional and age adjustments. Lesser standby rates may apply if the Owner or Engineer can demonstrate that the Contractor's standby cost is less than this rate. The standby rate will not include operating costs. A standby rate will not be paid for equipment which is being employed for portions of the Work which are still underway. A standby rate will also not be paid for equipment which is readily demobilized including construction equipment categorized as "shop tools" or "miscellaneous" in the "Bluebook." Standby rates for durations of less than four hours will not be considered.

SC-13.01 Insert in the first sentence after the word "architects," the word "superintendents," in paragraph 13.01C.1

SC-13.01 Add the following new paragraph immediately after paragraph 13.01C.5:

13.01C.6 Costs of or rental of small tools; costs of or rental of buildings.

SC-13.03 Delete Paragraph 13.03B in its entirety and replace it with the following:

13.03B Since subject to change upon determination of actual quantities, estimated quantities of items of Unit Price Work are not guaranteed and serve to facilitate comparison of Bids and to determine an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

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

SC-14.02 Insert after the word "notice" the words "(minimum 24 hours)" in paragraph 14.02A.

SC-14.03 Delete paragraph 14.03B in its entirety and replace with the following:

14.03B *Engineer's Authority:* At any time during the progress of the Work, Engineer shall have the authority to determine whether Work is defective, and reject defective Work, even though such work has been previously inspected and paid for.

SC-14.06 Add the following new paragraph immediately after paragraph 14.06A.

14.06B If Owner stops work under Paragraph 14.06, Contractor shall not be entitled to an extension of Contract Time nor to an increase in Contract Price.

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

- SC-15.01 Delete the first sentence of paragraph 15.01B.1 and replace with the following:
- 15.01B.1 Engineer will, once in each month, make an estimate in writing of the total value of the work completed as of the date of the Application. Engineer shall review the Application with Contractor, and Contractor shall sign the Application.
- SC-15.01 Insert the following sentence at the end of paragraph 15.01B.1:
- The Certificate of Insurance for stored materials must list Tighe & Bond and the City of North Adams as additional insureds.
- SC-15.01 Delete paragraph 15.01C.1 in its entirety and insert the following in its place:
- 15.01C.1 Progress Payments will be made in accordance with Massachusetts General Law Chapter 30, Section 39G, which is referenced in Part II of these Supplementary Conditions.
- SC-15.01 Delete paragraph 15.01D.1 in its entirety and insert the following in its place:
- 15.01D.1 Progress Payments will be made in accordance with Massachusetts General Law Chapter 30, Section 39G, which is referenced in Part II of these Supplementary Conditions.
- SC-15.03 Delete the second sentence in Paragraph 15.03A in its entirety.
- SC-15.03 Add the following new paragraph immediately after paragraph 15.03A:
- 15.03A.1 Substantial Completion shall be as defined in Chapter 30, Section 39G of the Massachusetts General Laws.
- SC-15.03 Delete paragraph 15.03C in its entirety and insert the following in its place:
- 15.03C If, after consultation with Owner, Engineer considers and the Owner agrees that the Work is substantially complete, Engineer will prepare and deliver to Contractor, in a form approved by Owner, a Certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be included with the certificate a list of items to be completed or corrected before final payment.
- SC-15.03 Delete the word “preliminary” from paragraph 15.03D.
- SC-15.03 Add the following new paragraph immediately after paragraph 15.03F:
- 15.03G. The procedure for Substantial Completion shall be in accordance with Chapter 30, Section 39G of the Massachusetts General Laws.
- SC-15.04 Add the following new paragraph immediately after paragraph 15.04A.3:
- 15.04A.4 Owner may at any time request Contractor in writing to permit Owner to take over operation of any part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer, and within a

reasonable time thereafter Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Owner and Engineer that such part of the Work is not ready for separate operation by Owner, Engineer will finalize the list of items to be completed or corrected and will deliver such lists to Owner and Contractor together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties, and guarantees for that part of the Work which will become binding upon Owner and Contractor at the time when Owner takes over such operation (unless they shall have otherwise agreed in writing and so informed Engineer). During such operation and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

Paragraph 15.04.A.4 shall be renumbered to 15.04.A.5

SC-15.06 Delete paragraph 15.06.D in its entirety and insert the following in its place:

- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, or other time period in accordance with applicable laws and regulations, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION

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

- 16.01.A Owner may order, at any time and without cause, suspension of the Work in accordance with Massachusetts General Law Chapter 30, Section 39O, which is referenced in Part II of the Supplementary Conditions.

SC- 16.02 Add the following new paragraph immediately after paragraph 16.02.A.4:

- 16.02.A.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.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

SC-17.02 Add the following paragraph after paragraph 17.01:

- 17.02 Venue

A. Any suit by either party arising under this Contract shall be brought only in the Superior Court in the county where the Project is located. The parties hereto waive any argument that this venue is improper or that the forum is inconvenient.

ARTICLE 18 - MISCELLANEOUS

SC-18.08 Add the following new paragraphs immediately after paragraph 18.08.

18.09 Wage Rates

- A. The requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to the employment of labor, and to the schedule of minimum wage rates established in compliance with laws shall be a part of these Contract Documents. Copies of the wage schedules are included in Part II of these Supplementary Conditions. If 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.
- B. The schedules of wages referred to above are minimum rates only, and Owner will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of the applicable rate contained in these Contract Documents. All disputes in regard to the payment of wages in excess of those specified in the schedules shall be resolved by Contractor.
- C. Per MGL Chapter 149, Section 27, Contractor shall comply with annual updates to the prevailing wage schedule which shall be effective on the anniversary date of the execution of the Contract.
- D. The said schedules of wages shall continue to be the minimum rates to be paid during the life of this Agreement and a legible copy of said schedules shall be kept posted in a conspicuous place at the site of the work.

PART II – FEDERAL AND STATE GOVERNMENT PROVISIONS

Federal and State Government Provisions referenced or included herein, have been selected from those to which specific references have been made elsewhere in the Contract Documents. Each and every other provision of law or clause required by law to be inserted in this Contract shall be deemed to be also inserted herein in accordance with paragraph 3.01.F of the Supplementary Conditions.

1.0 FEDERAL GOVERNMENT PROVISIONS – NOT USED

2.0 COMMONWEALTH OF MASSACHUSETTS PROVISIONS

- 2.1 The Owner and Contractor agree that the following Commonwealth of Massachusetts Provisions apply to the work to be performed under this Contract and that these provisions supersede any conflicting provisions of this Contract.

- 2.2 Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Contract and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State Laws and Regulations exist, the more stringent requirements shall apply.
- 2.3 Massachusetts General Laws
 - 2.3.1 Chapter 30, Section 39F
 - 2.3.2 Chapter 30, Section 39I
 - 2.3.3 Chapter 30, Section 39J
 - 2.3.4 Chapter 30, Section 39L
 - 2.3.5 Chapter 30, Section 39M
 - 2.3.6 Chapter 30, Section 39N
 - 2.3.7 Chapter 30, Section 39O
 - 2.3.8 Chapter 30, Section 39P
 - 2.3.9 Chapter 30, Section 39R
 - 2.3.10 Chapter 82, Section 40
 - 2.3.11 Chapter 149, Section 34
 - 2.3.12 Chapter 149, Section 44J
- 2.4 520 CMR 14.00 Excavation Trench Safety
- 2.5 State Wage Rates

END OF SECTION

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ATTACHMENTS TO SUPPLEMENTARY CONDITIONS

**ATTACHMENT A
MASSACHUSETTS STATE WAGE RATES**



**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
Prevailing Wage Rates**

MAURA HEALEY
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: North Adams **City/Town:** NORTH ADAMS

Contract Number:

Description of Work: The City of North Adams is working to hire a contractor to repair a retaining wall that gave out in several years ago resulting in part of the road washing away.

Job Location: Walnut Street, North Adams, MA 01247

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	6/1/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$0.00	\$79.90
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$0.00	\$81.64
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT	6/1/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$0.00	\$79.97
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$0.00	\$81.71
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT	6/1/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$0.00	\$80.09
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$0.00	\$81.83
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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 3)							
For apprentice rates see "Apprentice- PILE DRIVER"							
AIR TRACK OPERATOR	6/1/2026	\$36.97	\$10.90	\$9.75	\$6.60	\$0.00	\$64.22
LABORERS	12/1/2026	\$39.39	\$10.90	\$9.75	\$6.60	\$0.00	\$66.64
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.79	\$10.90	\$9.75	\$6.60	\$0.00	\$68.04
	12/1/2027	\$42.19	\$10.90	\$9.75	\$6.60	\$0.00	\$69.44
	6/1/2028	\$43.69	\$10.90	\$9.75	\$6.60	\$0.00	\$70.94
	12/1/2028	\$45.19	\$10.90	\$9.75	\$6.60	\$0.00	\$72.44
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$37.75	\$10.90	\$9.75	\$6.60	\$0.00	\$65.00
LABORERS	12/1/2026	\$39.04	\$10.90	\$9.75	\$6.60	\$0.00	\$66.29
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS)	12/1/2025	\$40.32	\$14.50	\$4.30	\$6.25	\$0.00	\$65.37
HEAT & FROST INSULATORS LOCAL 6							
HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)							
ASPHALT RAKER	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
AUTOMATIC GRADER-EXCAVATOR (RECLAIMER)	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BACKHOE/FRONT-END LOADER OPERATOR	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)							
	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
For apprentice rates see "Apprentice- LABORER"							
BATCH/CEMENT PLANT - ON SITE	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2026	\$36.97	\$10.90	\$9.75	\$6.60	\$0.00	\$64.22
LABORERS	12/1/2026	\$39.39	\$10.90	\$9.75	\$6.60	\$0.00	\$66.64
LABORERS - ZONE 4 (BUILDING & SITE)							
	6/1/2027	\$40.79	\$10.90	\$9.75	\$6.60	\$0.00	\$68.04
	12/1/2027	\$42.19	\$10.90	\$9.75	\$6.60	\$0.00	\$69.44
	6/1/2028	\$43.69	\$10.90	\$9.75	\$6.60	\$0.00	\$70.94
	12/1/2028	\$45.19	\$10.90	\$9.75	\$6.60	\$0.00	\$72.44
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2026	\$37.75	\$10.90	\$9.75	\$6.60	\$0.00	\$65.00
	12/1/2026	\$39.04	\$10.90	\$9.75	\$6.60	\$0.00	\$66.29
LABORERS							
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
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							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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
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

Apprentice to Journeyworker Ratio: 1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	2/1/2026	\$56.36	\$12.84	\$15.57	\$5.89	\$0.00	\$90.66
BRICKLAYERS LOCAL 3	8/1/2026	\$58.56	\$12.84	\$15.57	\$5.89	\$0.00	\$92.86
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	2/1/2027	\$59.96	\$12.84	\$15.57	\$5.89	\$0.00	\$94.26

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)							
Effective Date: 2/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$28.18	\$12.84	\$15.57	\$5.89	\$0.00	\$62.48
2	60.00	\$33.82	\$12.84	\$15.57	\$5.89	\$0.00	\$68.12
3	70.00	\$39.45	\$12.84	\$15.57	\$5.89	\$0.00	\$73.75
4	80.00	\$45.09	\$12.84	\$15.57	\$5.89	\$0.00	\$79.39
5	90.00	\$50.72	\$12.84	\$15.57	\$5.89	\$0.00	\$85.02

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)							
Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.28	\$12.84	\$15.57	\$5.89	\$0.00	\$63.58
2	60.00	\$35.14	\$12.84	\$15.57	\$5.89	\$0.00	\$69.44
3	70.00	\$40.99	\$12.84	\$15.57	\$5.89	\$0.00	\$75.29
4	80.00	\$46.85	\$12.84	\$15.57	\$5.89	\$0.00	\$81.15
5	90.00	\$52.70	\$12.84	\$15.57	\$5.89	\$0.00	\$87.00

Apprentice to Journeyworker Ratio: 1:5

BULLDOZER/POWER SHOVEL/TREE SHREDDER /CLAM SHELL	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING BOTTOM MAN	6/1/2026	\$50.40	\$10.90	\$9.75	\$9.80	\$0.00	\$80.85
LABORERS	12/1/2026	\$51.90	\$10.90	\$9.75	\$9.80	\$0.00	\$82.35
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER	6/1/2026	\$49.25	\$10.90	\$9.75	\$9.80	\$0.00	\$79.70
LABORERS	12/1/2026	\$50.75	\$10.90	\$9.75	\$9.80	\$0.00	\$81.20
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN	6/1/2026	\$49.58	\$10.90	\$9.75	\$9.80	\$0.00	\$80.03
LABORERS	12/1/2026	\$51.08	\$10.90	\$9.75	\$9.80	\$0.00	\$81.53
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
For apprentice rates see "Apprentice- LABORER"							
CARPENTER	3/1/2026	\$43.81	\$9.19	\$11.25	\$6.90	\$0.00	\$71.15
CARPENTERS	9/1/2026	\$44.76	\$9.19	\$11.25	\$6.90	\$0.00	\$72.10
CARPENTERS LOCAL 336 - BERKSHIRE COUNTY	3/1/2027	\$45.66	\$9.19	\$11.25	\$6.90	\$0.00	\$73.00

Apprentice: CARPENTER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.71	\$9.19	\$0.00	\$1.38	\$0.00	\$30.28
2	45.00	\$19.71	\$9.19	\$0.00	\$1.38	\$0.00	\$30.28
3	55.00	\$24.10	\$9.19	\$0.00	\$2.76	\$0.00	\$36.05
4	55.00	\$24.10	\$9.19	\$0.00	\$2.76	\$0.00	\$36.05
5	70.00	\$30.67	\$9.19	\$11.25	\$4.14	\$0.00	\$55.25
6	70.00	\$30.67	\$9.19	\$11.25	\$4.14	\$0.00	\$55.25
7	80.00	\$35.05	\$9.19	\$11.25	\$5.52	\$0.00	\$61.01
8	80.00	\$35.05	\$9.19	\$11.25	\$5.52	\$0.00	\$61.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER							
Effective Date: 9/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$20.14	\$9.19	\$0.00	\$1.38	\$0.00	\$30.71
2	45.00	\$20.14	\$9.19	\$0.00	\$1.38	\$0.00	\$30.71
3	55.00	\$24.62	\$9.19	\$0.00	\$2.76	\$0.00	\$36.57
4	55.00	\$24.62	\$9.19	\$0.00	\$2.76	\$0.00	\$36.57
5	70.00	\$31.33	\$9.19	\$11.25	\$4.14	\$0.00	\$55.91
6	70.00	\$31.33	\$9.19	\$11.25	\$4.14	\$0.00	\$55.91
7	80.00	\$35.81	\$9.19	\$11.25	\$5.52	\$0.00	\$61.77
8	80.00	\$35.81	\$9.19	\$11.25	\$5.52	\$0.00	\$61.77

Apprentice to Journeyworker Ratio: 1:5

CARPENTER WOOD FRAME	10/1/2025	\$27.37	\$7.38	\$4.47	\$1.00	\$0.00	\$40.22
CARPENTERS	10/1/2026	\$28.47	\$7.38	\$4.47	\$1.00	\$0.00	\$41.32
CARPENTERS-ZONE 3 (Wood Frame)							
All Aspects of New Wood Frame Work							

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$16.42	\$7.38	\$0.00	\$0.00	\$0.00	\$23.80
2	60.00	\$16.42	\$7.38	\$0.00	\$0.00	\$0.00	\$23.80
3	65.00	\$17.79	\$7.38	\$0.00	\$1.00	\$0.00	\$26.17
4	70.00	\$19.16	\$7.38	\$0.00	\$1.00	\$0.00	\$27.54
5	75.00	\$20.53	\$7.38	\$3.80	\$1.00	\$0.00	\$32.71
6	80.00	\$21.90	\$7.38	\$3.80	\$1.00	\$0.00	\$34.08
7	85.00	\$23.26	\$7.38	\$3.80	\$1.00	\$0.00	\$35.44
8	90.00	\$24.63	\$7.38	\$3.80	\$1.00	\$0.00	\$36.81

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$17.08	\$7.38	\$0.00	\$0.00	\$0.00	\$24.46
2	60.00	\$17.08	\$7.38	\$0.00	\$0.00	\$0.00	\$24.46
3	65.00	\$18.51	\$7.38	\$0.00	\$1.00	\$0.00	\$26.89
4	70.00	\$19.93	\$7.38	\$0.00	\$1.00	\$0.00	\$28.31
5	75.00	\$21.35	\$7.38	\$3.80	\$1.00	\$0.00	\$33.53
6	80.00	\$22.78	\$7.38	\$3.80	\$1.00	\$0.00	\$34.96
7	85.00	\$24.20	\$7.38	\$3.80	\$1.00	\$0.00	\$36.38
8	90.00	\$25.62	\$7.38	\$3.80	\$1.00	\$0.00	\$37.80

Apprentice to Journeyworker Ratio: 1:5

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CEMENT MASONRY/PLASTERING	1/1/2026	\$48.13	\$13.20	\$16.30	\$2.93	\$1.69	\$82.25
PLASTERERS AND CEMENT MASONS LOCAL 534	7/1/2026	\$49.32	\$13.20	\$16.30	\$2.93	\$1.69	\$83.44
Plasterers and Cement Masons - Zone 2	1/1/2027	\$50.51	\$13.20	\$16.30	\$2.93	\$1.69	\$84.63
	7/1/2027	\$51.70	\$13.20	\$16.30	\$2.93	\$1.69	\$85.82
	1/1/2028	\$52.89	\$13.20	\$16.30	\$2.93	\$1.69	\$87.01

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.07	\$13.20	\$16.30	\$0.00	\$0.00	\$53.57
2	60.00	\$28.88	\$13.20	\$16.30	\$2.93	\$1.69	\$63.00
3	65.00	\$31.28	\$13.20	\$16.30	\$2.93	\$1.69	\$65.40
4	70.00	\$33.69	\$13.20	\$16.30	\$2.93	\$1.69	\$67.81
5	75.00	\$36.10	\$13.20	\$16.30	\$2.93	\$1.69	\$70.22
6	80.00	\$38.50	\$13.20	\$16.30	\$2.93	\$1.69	\$72.62
7	90.00	\$43.32	\$13.20	\$16.30	\$2.93	\$1.69	\$77.44

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 7/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.66	\$13.20	\$16.30	\$0.00	\$0.00	\$54.16
2	60.00	\$29.59	\$13.20	\$16.30	\$2.93	\$1.69	\$63.71
3	65.00	\$32.06	\$13.20	\$16.30	\$2.93	\$1.69	\$66.18
4	70.00	\$34.52	\$13.20	\$16.30	\$2.93	\$1.69	\$68.64
5	75.00	\$36.99	\$13.20	\$16.30	\$2.93	\$1.69	\$71.11
6	80.00	\$39.46	\$13.20	\$16.30	\$2.93	\$1.69	\$73.58
7	90.00	\$44.39	\$13.20	\$16.30	\$2.93	\$0.00	\$76.82

Apprentice to Journeyworker Ratio: 1:5

CHAIN SAW OPERATOR	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19

For apprentice rates see "Apprentice- LABORER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

CRANE OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$43.06	\$13.78	\$12.15	\$3.00	\$0.00	\$71.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

DELEADER (BRIDGE) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 3	1/1/2026	\$59.56	\$10.35	\$12.00	\$12.60	\$0.00	\$94.51
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Apprentice: DELEADER (BRIDGE)**Effective Date: 1/1/2026**

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	6/1/2026	\$49.30	\$10.90	\$9.75	\$9.65	\$0.00	\$79.60
LABORERS - ZONE 4 (BUILDING & SITE)	12/7/2026	\$50.80	\$10.90	\$9.75	\$9.65	\$0.00	\$81.10
	6/7/2027	\$52.40	\$10.90	\$9.75	\$9.65	\$0.00	\$82.70
	12/6/2027	\$54.00	\$10.90	\$9.75	\$9.65	\$0.00	\$84.30
	6/5/2028	\$55.68	\$10.90	\$9.75	\$9.65	\$0.00	\$85.98
	12/4/2028	\$57.35	\$10.90	\$9.75	\$9.65	\$0.00	\$87.65

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS	6/1/2026	\$50.30	\$10.90	\$9.75	\$9.65	\$0.00	\$80.60
LABORERS - ZONE 4 (BUILDING & SITE)	12/7/2026	\$51.80	\$10.90	\$9.75	\$9.65	\$0.00	\$82.10
	6/7/2027	\$53.40	\$10.90	\$9.75	\$9.65	\$0.00	\$83.70
	12/6/2027	\$55.00	\$10.90	\$9.75	\$9.65	\$0.00	\$85.30
	6/5/2028	\$56.68	\$10.90	\$9.75	\$9.65	\$0.00	\$86.98
	12/4/2028	\$58.35	\$10.90	\$9.75	\$9.65	\$0.00	\$88.65

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS	6/1/2026	\$50.05	\$10.90	\$9.75	\$9.65	\$0.00	\$80.35
LABORERS - ZONE 4 (BUILDING & SITE)	12/7/2026	\$51.55	\$10.90	\$9.75	\$9.65	\$0.00	\$81.85
	6/7/2027	\$53.15	\$10.90	\$9.75	\$9.65	\$0.00	\$83.45
	12/6/2027	\$54.75	\$10.90	\$9.75	\$9.65	\$0.00	\$85.05
	6/5/2028	\$56.43	\$10.90	\$9.75	\$9.65	\$0.00	\$86.73
	12/4/2028	\$58.10	\$10.90	\$9.75	\$9.65	\$0.00	\$88.40

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER	6/1/2026	\$50.30	\$10.90	\$9.75	\$9.65	\$0.00	\$80.60
LABORERS	12/7/2026	\$51.80	\$10.90	\$9.75	\$9.65	\$0.00	\$82.10
LABORERS - ZONE 4 (BUILDING & SITE)	6/7/2027	\$53.40	\$10.90	\$9.75	\$9.65	\$0.00	\$83.70
	12/6/2027	\$55.00	\$10.90	\$9.75	\$9.65	\$0.00	\$85.30
	6/5/2028	\$56.68	\$10.90	\$9.75	\$9.65	\$0.00	\$86.98
	12/4/2028	\$58.35	\$10.90	\$9.75	\$9.65	\$0.00	\$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR	6/1/2026	\$50.05	\$10.90	\$9.75	\$9.65	\$0.00	\$80.35
LABORERS	12/7/2026	\$51.55	\$10.90	\$9.75	\$9.65	\$0.00	\$81.85
LABORERS - ZONE 4 (BUILDING & SITE)	6/7/2027	\$53.15	\$10.90	\$9.75	\$9.65	\$0.00	\$83.45
	12/6/2027	\$54.75	\$10.90	\$9.75	\$9.65	\$0.00	\$85.05
	6/5/2028	\$56.43	\$10.90	\$9.75	\$9.65	\$0.00	\$86.73
	12/4/2028	\$58.10	\$10.90	\$9.75	\$9.65	\$0.00	\$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER	6/1/2026	\$49.30	\$10.90	\$9.75	\$9.65	\$0.00	\$79.60
LABORERS	12/7/2026	\$50.80	\$10.90	\$9.75	\$9.65	\$0.00	\$81.10
LABORERS - ZONE 4 (BUILDING & SITE)	6/7/2027	\$52.40	\$10.90	\$9.75	\$9.65	\$0.00	\$82.70
	12/6/2027	\$54.00	\$10.90	\$9.75	\$9.65	\$0.00	\$84.30
	6/5/2028	\$55.68	\$10.90	\$9.75	\$9.65	\$0.00	\$85.98
	12/4/2028	\$57.35	\$10.90	\$9.75	\$9.65	\$0.00	\$87.65
For apprentice rates see "Apprentice- LABORER"							
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 3)							
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	\$49.19	\$10.08	\$11.62	\$12.67	\$0.00	\$83.56
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							
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 3)							
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 3)							
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 (Including Core Drilling)	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
ELECTRICIANS LOCAL 7	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
ELECTRICIANS LOCAL 7							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37

Apprentice: ELECTRICIAN (Including Core Drilling)							
Effective Date: 12/28/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.30	\$7.65	\$0.63	\$0.00	\$0.00	\$29.58
2	45.00	\$23.97	\$7.65	\$0.70	\$0.00	\$0.00	\$32.32
3	50.00	\$26.63	\$13.75	\$7.53	\$0.00	\$0.00	\$47.91
4	55.00	\$29.29	\$13.75	\$7.61	\$0.00	\$0.00	\$50.65
5	65.00	\$34.62	\$13.75	\$9.84	\$0.00	\$0.00	\$58.21
6	70.00	\$37.28	\$13.75	\$11.30	\$0.00	\$0.00	\$62.33

Apprentice: ELECTRICIAN (Including Core Drilling)							
Effective Date: 6/28/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.76	\$7.80	\$0.63	\$0.00	\$0.00	\$30.19
2	45.00	\$24.48	\$7.80	\$0.70	\$0.00	\$0.00	\$32.98
3	50.00	\$27.21	\$14.00	\$7.53	\$0.00	\$0.00	\$48.74
4	55.00	\$29.93	\$14.00	\$7.61	\$0.00	\$0.00	\$51.54
5	65.00	\$35.37	\$14.00	\$9.84	\$0.00	\$0.00	\$59.21
6	70.00	\$38.09	\$14.00	\$11.30	\$0.00	\$0.00	\$63.39

Apprentice to Journeyworker Ratio: 2:3

ELEVATOR CONSTRUCTOR	1/1/2026	\$69.23	\$16.38	\$11.06	\$10.70	\$0.00	\$107.37
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2027	\$72.23	\$16.48	\$11.16	\$11.00	\$0.00	\$110.87
ELEVATOR CONSTRUCTORS LOCAL 41							

Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.62	\$16.38	\$0.00	\$0.00	\$0.00	\$51.00
2	55.00	\$38.08	\$16.38	\$11.06	\$10.70	\$0.00	\$76.22
3	65.00	\$45.00	\$16.38	\$11.06	\$10.70	\$0.00	\$83.14
4	70.00	\$48.46	\$16.38	\$11.06	\$10.70	\$0.00	\$86.60
5	80.00	\$55.38	\$16.38	\$11.06	\$10.70	\$0.00	\$93.52

Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$36.12	\$16.48	\$0.00	\$0.00	\$0.00	\$52.60
2	55.00	\$39.73	\$16.48	\$11.16	\$11.00	\$0.00	\$78.37

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																
Apprentice: ELEVATOR CONSTRUCTOR Effective Date: 1/1/2027 <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>3</td><td>65.00</td><td>\$46.95</td><td>\$16.48</td><td>\$11.16</td><td>\$11.00</td><td>\$0.00</td><td>\$85.59</td></tr><tr><td>4</td><td>70.00</td><td>\$50.56</td><td>\$16.48</td><td>\$11.16</td><td>\$11.00</td><td>\$0.00</td><td>\$89.20</td></tr><tr><td>5</td><td>80.00</td><td>\$57.78</td><td>\$16.48</td><td>\$11.16</td><td>\$11.00</td><td>\$0.00</td><td>\$96.42</td></tr></tbody></table>								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	3	65.00	\$46.95	\$16.48	\$11.16	\$11.00	\$0.00	\$85.59	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
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																
3	65.00	\$46.95	\$16.48	\$11.16	\$11.00	\$0.00	\$85.59																																
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																																
Apprentice to Journeyworker Ratio: 1:1																																							
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 & BEAM RAIL ERECTOR	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72																																
LABORERS	12/1/2026	\$38.64	\$10.90	\$9.75	\$6.60	\$0.00	\$65.89																																
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54																																
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94																																
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44																																
	12/1/2028	\$44.69	\$10.90	\$9.75	\$6.60	\$0.00	\$71.94																																
For apprentice rates see "Apprentice- LABORER"																																							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50																																
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79																																
LABORERS - ZONE 4 (HEAVY & HIGHWAY)																																							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"																																							
FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY	6/1/1999	\$18.84	\$4.80	\$4.10	\$0.00	\$0.00	\$27.74																																
OPERATING ENGINEERS LOCAL 98																																							
OPERATING ENGINEERS LOCAL 98																																							
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY	6/1/1999	\$21.33	\$4.80	\$4.10	\$0.00	\$0.00	\$30.23																																
OPERATING ENGINEERS LOCAL 98																																							
OPERATING ENGINEERS LOCAL 98																																							
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY	6/1/1999	\$22.33	\$4.80	\$4.10	\$0.00	\$0.00	\$31.23																																
OPERATING ENGINEERS LOCAL 98																																							
OPERATING ENGINEERS LOCAL 98																																							
FIRE ALARM INSTALLER	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37																																
ELECTRICIANS LOCAL 7	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87																																
ELECTRICIANS LOCAL 7	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37																																
For apprentice rates see "Apprentice- ELECTRICIAN"																																							
FIRE ALARM REPAIR / MAINTENANCE	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37																																
/ COMMISSIONING	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87																																
ELECTRICIANS LOCAL 7	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37																																
ELECTRICIANS LOCAL 7																																							
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"																																							
FIREMAN	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96																																

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							

Apprentice: FIREMAN							
Effective Date: 12/1/2023							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$23.42	\$13.78	\$12.15	\$3.00	\$0.00	\$52.35
2	70.00	\$27.32	\$13.78	\$12.15	\$3.00	\$0.00	\$56.25
3	80.00	\$31.22	\$13.78	\$12.15	\$3.00	\$0.00	\$60.15
4	90.00	\$35.13	\$13.78	\$12.15	\$3.00	\$0.00	\$64.06

Apprentice to Journeyworker Ratio: 1:6

FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2026	\$29.21	\$10.90	\$9.75	\$6.60	\$0.00	\$56.46
LABORERS	12/1/2026	\$29.21	\$10.90	\$9.75	\$6.60	\$0.00	\$56.46
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FLOORCOVERER	3/1/2026	\$44.34	\$8.56	\$11.25	\$6.90	\$0.00	\$71.05
FLOORCOVERERS LOCAL 2168	9/1/2026	\$45.29	\$8.56	\$11.25	\$6.90	\$0.00	\$72.00
FLOORCOVERERS LOCAL 2168 ZONE III	3/1/2027	\$46.19	\$8.56	\$11.25	\$6.90	\$0.00	\$72.90

Apprentice: FLOORCOVERER							
Effective Date: 3/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.95	\$8.56	\$0.00	\$1.38	\$0.00	\$29.89
2	45.00	\$19.95	\$8.56	\$0.00	\$1.38	\$0.00	\$29.89
3	55.00	\$24.39	\$8.56	\$0.00	\$2.76	\$0.00	\$35.71
4	55.00	\$24.39	\$8.56	\$0.00	\$2.76	\$0.00	\$35.71
5	70.00	\$31.04	\$8.56	\$11.25	\$4.14	\$0.00	\$54.99
6	70.00	\$31.04	\$8.56	\$11.25	\$4.14	\$0.00	\$54.99
7	80.00	\$35.47	\$8.56	\$11.25	\$5.52	\$0.00	\$60.80
8	80.00	\$35.47	\$8.56	\$11.25	\$5.52	\$0.00	\$60.80

Apprentice: FLOORCOVERER							
Effective Date: 9/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$20.38	\$8.56	\$0.00	\$1.38	\$0.00	\$30.32
2	45.00	\$20.38	\$8.56	\$0.00	\$1.38	\$0.00	\$30.32
3	55.00	\$24.91	\$8.56	\$0.00	\$2.76	\$0.00	\$36.23
4	55.00	\$24.91	\$8.56	\$0.00	\$2.76	\$0.00	\$36.23
5	70.00	\$31.70	\$8.56	\$11.25	\$4.14	\$0.00	\$55.65
6	70.00	\$31.70	\$8.56	\$11.25	\$4.14	\$0.00	\$55.65
7	80.00	\$36.23	\$8.56	\$11.25	\$5.52	\$0.00	\$61.56

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: FLOORCOVERER Effective Date: 9/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
8	80.00	\$36.23	\$8.56	\$11.25	\$5.52	\$0.00	\$61.56
Apprentice Notes Steps are 750 hrs.							
Apprentice to Journeyworker Ratio: 1:1							
FORK LIFT OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.25	\$13.78	\$12.15	\$3.00	\$0.00	\$68.18
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATORS/LIGHTING PLANTS OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$35.80	\$13.78	\$12.15	\$3.00	\$0.00	\$64.73
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	6/1/2026	\$44.73	\$11.20	\$8.40	\$6.05	\$0.00	\$70.38
GLAZIERS LOCAL 1333	6/1/2027	\$46.73	\$11.60	\$8.55	\$6.60	\$0.00	\$73.48
GLAZIERS LOCAL 1333	6/1/2028	\$48.73	\$12.00	\$8.70	\$7.20	\$0.00	\$76.63

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)							
Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$22.37	\$11.20	\$8.40	\$6.05	\$0.00	\$48.02
2	56.25	\$25.16	\$11.20	\$8.40	\$6.05	\$0.00	\$50.81
3	62.50	\$27.96	\$11.20	\$8.40	\$6.05	\$0.00	\$53.61
4	68.75	\$30.75	\$11.20	\$8.40	\$6.05	\$0.00	\$56.40
5	75.00	\$33.55	\$11.20	\$8.40	\$6.05	\$0.00	\$59.20
6	81.25	\$36.34	\$11.20	\$8.40	\$6.05	\$0.00	\$61.99
7	87.50	\$39.14	\$11.20	\$8.40	\$6.05	\$0.00	\$64.79
8	93.75	\$41.93	\$11.20	\$8.40	\$6.05	\$0.00	\$67.58

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)							
Effective Date: 6/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.37	\$11.60	\$8.55	\$6.60	\$0.00	\$50.12
2	56.25	\$26.29	\$11.60	\$8.55	\$6.60	\$0.00	\$53.04
3	62.50	\$29.21	\$11.60	\$8.55	\$6.60	\$0.00	\$55.96
4	68.75	\$32.13	\$11.60	\$8.55	\$6.60	\$0.00	\$58.88
5	75.00	\$35.05	\$11.60	\$8.55	\$6.60	\$0.00	\$61.80

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																
Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) Effective Date: 6/1/2027 <table><thead><tr><th>Step</th><th>Percent</th><th>Apprentice Base Wage</th><th>Health</th><th>Pension</th><th>Annuity</th><th>Supplemental Unemployment</th><th>Total Rate</th></tr></thead><tbody><tr><td>6</td><td>81.25</td><td>\$37.97</td><td>\$11.60</td><td>\$8.55</td><td>\$6.60</td><td>\$0.00</td><td>\$64.72</td></tr><tr><td>7</td><td>87.50</td><td>\$40.89</td><td>\$11.60</td><td>\$8.55</td><td>\$6.60</td><td>\$0.00</td><td>\$67.64</td></tr><tr><td>8</td><td>93.75</td><td>\$43.81</td><td>\$11.60</td><td>\$8.55</td><td>\$6.60</td><td>\$0.00</td><td>\$70.56</td></tr></tbody></table> Apprentice to Journeyworker Ratio: 3:1								Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate	6	81.25	\$37.97	\$11.60	\$8.55	\$6.60	\$0.00	\$64.72	7	87.50	\$40.89	\$11.60	\$8.55	\$6.60	\$0.00	\$67.64	8	93.75	\$43.81	\$11.60	\$8.55	\$6.60	\$0.00	\$70.56
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate																																
6	81.25	\$37.97	\$11.60	\$8.55	\$6.60	\$0.00	\$64.72																																
7	87.50	\$40.89	\$11.60	\$8.55	\$6.60	\$0.00	\$67.64																																
8	93.75	\$43.81	\$11.60	\$8.55	\$6.60	\$0.00	\$70.56																																
GRADER/TRENCHING MACHINE/DERRICK OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49																																
For apprentice rates see "Apprentice- OPERATING ENGINEERS"																																							
HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 63 SHEETMETAL WORKERS LOCAL 63	7/1/2025	\$43.48	\$12.94	\$11.01	\$8.72	\$2.13	\$78.28																																
	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 (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37																																
	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87																																
	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37																																
For apprentice rates see "Apprentice- ELECTRICIAN"																																							
HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 63 SHEETMETAL WORKERS LOCAL 63	7/1/2025	\$43.48	\$12.94	\$11.01	\$8.72	\$2.13	\$78.28																																
	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) PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	\$52.76	\$13.50	\$10.85	\$7.10	\$0.00	\$84.21																																
	9/17/2026	\$54.76	\$13.50	\$10.85	\$7.10	\$0.00	\$86.21																																
	3/17/2027	\$58.26	\$12.00	\$10.85	\$7.10	\$0.00	\$88.21																																
	9/17/2027	\$60.26	\$12.00	\$10.85	\$7.10	\$0.00	\$90.21																																
	3/17/2028	\$62.26	\$12.00	\$10.85	\$7.10	\$0.00	\$92.21																																
	9/17/2028	\$64.26	\$12.00	\$10.85	\$7.10	\$0.00	\$94.21																																
	3/17/2029	\$66.26	\$12.00	\$10.85	\$7.10	\$0.00	\$96.21																																
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"																																							
HVAC MECHANIC PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	\$52.76	\$13.50	\$10.85	\$7.10	\$0.00	\$84.21																																
	9/17/2026	\$54.76	\$13.50	\$10.85	\$7.10	\$0.00	\$86.21																																
	3/17/2027	\$58.26	\$12.00	\$10.85	\$7.10	\$0.00	\$88.21																																
	9/17/2027	\$60.26	\$12.00	\$10.85	\$7.10	\$0.00	\$90.21																																
	3/17/2028	\$62.26	\$12.00	\$10.85	\$7.10	\$0.00	\$92.21																																
	9/17/2028	\$64.26	\$12.00	\$10.85	\$7.10	\$0.00	\$94.21																																
	3/17/2029	\$66.26	\$12.00	\$10.85	\$7.10	\$0.00	\$96.21																																

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							

HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS	6/1/2026	\$37.75	\$10.90	\$9.75	\$6.60	\$0.00	\$65.00
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	12/1/2026	\$39.04	\$10.90	\$9.75	\$6.60	\$0.00	\$66.29

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

INSULATOR (PIPES & TANKS)	9/1/2025	\$48.27	\$14.75	\$9.52	\$10.09	\$0.00	\$82.63
HEAT & FROST INSULATORS LOCAL 6	9/1/2026	\$51.01	\$14.75	\$9.52	\$10.09	\$0.00	\$85.37
HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)							

Apprentice: INSULATOR (PIPES & TANKS)							
Effective Date: 9/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.14	\$14.75	\$9.27	\$5.05	\$0.00	\$53.21
2	60.00	\$28.96	\$14.75	\$9.32	\$6.05	\$0.00	\$59.08
3	70.00	\$33.79	\$14.75	\$9.37	\$7.06	\$0.00	\$64.97
4	80.00	\$38.62	\$14.75	\$9.42	\$8.07	\$0.00	\$70.86

Apprentice: INSULATOR (PIPES & TANKS)							
Effective Date: 9/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$25.51	\$14.75	\$9.27	\$5.05	\$0.00	\$54.58
2	60.00	\$30.61	\$14.75	\$9.32	\$6.05	\$0.00	\$60.73
3	70.00	\$35.71	\$14.75	\$9.37	\$7.06	\$0.00	\$66.89
4	80.00	\$40.81	\$14.75	\$9.42	\$8.07	\$0.00	\$73.05

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER	1/1/2025	\$39.50	\$5.50	\$14.28	\$4.55	\$0.00	\$63.83
IRONWORKERS LOCAL 12							
IRONWORKERS LOCAL 12							

Apprentice: IRONWORKER/WELDER							
Effective Date: 1/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	\$23.50	\$5.75	\$0.00	\$3.75	\$0.00	\$33.00
2	0.00	\$25.50	\$5.75	\$10.00	\$3.75	\$0.00	\$45.00
3	0.00	\$27.50	\$5.75	\$11.42	\$3.75	\$0.00	\$48.42
4	0.00	\$29.50	\$5.75	\$12.85	\$3.75	\$0.00	\$51.85

Apprentice to Journeyworker Ratio: 1:4

JACKHAMMER & PAVING BREAKER OPERATOR	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19

For apprentice rates see "Apprentice- LABORER"

LABORER	6/1/2026	\$36.22	\$10.90	\$9.75	\$6.60	\$0.00	\$63.47
LABORERS	12/1/2026	\$38.64	\$10.90	\$9.75	\$6.60	\$0.00	\$65.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.04	\$10.90	\$9.75	\$6.60	\$0.00	\$67.29
	12/1/2027	\$41.44	\$10.90	\$9.75	\$6.60	\$0.00	\$68.69
	6/1/2028	\$42.94	\$10.90	\$9.75	\$6.60	\$0.00	\$70.19
	12/1/2028	\$44.44	\$10.90	\$9.75	\$6.60	\$0.00	\$71.69

Apprentice: LABORER

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$21.73	\$10.90	\$9.75	\$6.60	\$0.00	\$48.98
2	70.00	\$25.35	\$10.90	\$9.75	\$6.60	\$0.00	\$52.60
3	80.00	\$28.98	\$10.90	\$9.75	\$6.60	\$0.00	\$56.23
4	90.00	\$32.60	\$10.90	\$9.75	\$6.60	\$0.00	\$59.85

Apprentice: LABORER

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$23.18	\$10.90	\$9.75	\$6.60	\$0.00	\$50.43
2	70.00	\$27.05	\$10.90	\$9.75	\$6.60	\$0.00	\$54.30
3	80.00	\$30.91	\$10.90	\$9.75	\$6.60	\$0.00	\$58.16
4	90.00	\$34.78	\$10.90	\$9.75	\$6.60	\$0.00	\$62.03

Apprentice to Journeyworker Ratio: 1:5

LABORER (HEAVY & HIGHWAY)	6/1/2026	\$37.00	\$10.90	\$9.75	\$6.60	\$0.00	\$64.25
LABORERS	12/1/2026	\$38.29	\$10.90	\$9.75	\$6.60	\$0.00	\$65.54
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2026

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
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$22.20	\$10.90	\$9.75	\$6.60	\$0.00	\$49.45
2	70.00	\$25.90	\$10.90	\$9.75	\$6.60	\$0.00	\$53.15
3	80.00	\$29.60	\$10.90	\$9.75	\$6.60	\$0.00	\$56.85
4	90.00	\$33.30	\$10.90	\$9.75	\$6.60	\$0.00	\$60.55
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 12/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$22.97	\$10.90	\$9.75	\$6.60	\$0.00	\$50.22
2	70.00	\$26.80	\$10.90	\$9.75	\$6.60	\$0.00	\$54.05
3	80.00	\$30.63	\$10.90	\$9.75	\$6.60	\$0.00	\$57.88
4	90.00	\$34.46	\$10.90	\$9.75	\$6.60	\$0.00	\$61.71
Apprentice to Journeyworker Ratio: 1:5							
LABORER: CARPENTER TENDER	6/1/2026	\$36.22	\$10.90	\$9.75	\$6.60	\$0.00	\$63.47
LABORERS	12/1/2026	\$38.64	\$10.90	\$9.75	\$6.60	\$0.00	\$65.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.04	\$10.90	\$9.75	\$6.60	\$0.00	\$67.29
	12/1/2027	\$41.44	\$10.90	\$9.75	\$6.60	\$0.00	\$68.69
	6/1/2028	\$42.94	\$10.90	\$9.75	\$6.60	\$0.00	\$70.19
	12/1/2028	\$44.44	\$10.90	\$9.75	\$6.60	\$0.00	\$71.69
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER	6/1/2026	\$36.22	\$10.90	\$9.75	\$6.60	\$0.00	\$63.47
LABORERS	12/1/2026	\$38.64	\$10.90	\$9.75	\$6.60	\$0.00	\$65.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.04	\$10.90	\$9.75	\$6.60	\$0.00	\$67.29
	12/1/2027	\$41.44	\$10.90	\$9.75	\$6.60	\$0.00	\$68.69
	6/1/2028	\$42.94	\$10.90	\$9.75	\$6.60	\$0.00	\$70.19
	12/1/2028	\$44.44	\$10.90	\$9.75	\$6.60	\$0.00	\$71.69
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	6/1/2026	\$35.67	\$10.90	\$9.75	\$5.41	\$0.00	\$61.73
LABORERS	12/1/2026	\$36.96	\$10.90	\$9.75	\$5.41	\$0.00	\$63.02
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$38.26	\$10.90	\$9.75	\$5.41	\$0.00	\$64.32
	12/1/2027	\$39.56	\$10.90	\$9.75	\$5.41	\$0.00	\$65.62
	6/5/2028	\$40.91	\$10.90	\$9.75	\$5.41	\$0.00	\$66.97
	12/4/2028	\$42.26	\$10.90	\$9.75	\$5.41	\$0.00	\$68.32
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER	6/1/2026	\$38.22	\$10.90	\$9.75	\$6.60	\$0.00	\$65.47
LABORERS	12/1/2026	\$40.64	\$10.90	\$9.75	\$6.60	\$0.00	\$67.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$42.04	\$10.90	\$9.75	\$6.60	\$0.00	\$69.29
	12/1/2027	\$43.44	\$10.90	\$9.75	\$6.60	\$0.00	\$70.69

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
	12/1/2028	\$46.44	\$10.90	\$9.75	\$6.60	\$0.00	\$73.69
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER	6/1/2026	\$36.22	\$10.90	\$9.75	\$6.60	\$0.00	\$63.47
LABORERS	12/1/2026	\$38.64	\$10.90	\$9.75	\$6.60	\$0.00	\$65.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.04	\$10.90	\$9.75	\$6.60	\$0.00	\$67.29
	12/1/2027	\$41.44	\$10.90	\$9.75	\$6.60	\$0.00	\$68.69
	6/1/2028	\$42.94	\$10.90	\$9.75	\$6.60	\$0.00	\$70.19
	12/1/2028	\$44.44	\$10.90	\$9.75	\$6.60	\$0.00	\$71.69
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER	6/1/2026	\$36.22	\$10.90	\$9.75	\$6.60	\$0.00	\$63.47
LABORERS	12/1/2026	\$38.64	\$10.90	\$9.75	\$6.60	\$0.00	\$65.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.04	\$10.90	\$9.75	\$6.60	\$0.00	\$67.29
	12/1/2027	\$41.44	\$10.90	\$9.75	\$6.60	\$0.00	\$68.69
	6/1/2028	\$42.94	\$10.90	\$9.75	\$6.60	\$0.00	\$70.19
	12/1/2028	\$44.44	\$10.90	\$9.75	\$6.60	\$0.00	\$71.69
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	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS	2/1/2026	\$45.56	\$12.84	\$15.10	\$5.41	\$0.00	\$78.91
BRICKLAYERS LOCAL 3	8/1/2026	\$47.32	\$12.84	\$15.10	\$5.41	\$0.00	\$80.67
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	2/1/2027	\$48.44	\$12.84	\$15.10	\$5.41	\$0.00	\$81.79

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE & TILE FINISHERS Effective Date: 2/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$22.78	\$12.84	\$15.10	\$5.41	\$0.00	\$56.13
2	60.00	\$27.34	\$12.84	\$15.10	\$5.41	\$0.00	\$60.69
3	70.00	\$31.89	\$12.84	\$15.10	\$5.41	\$0.00	\$65.24
4	80.00	\$36.45	\$12.84	\$15.10	\$5.41	\$0.00	\$69.80
5	90.00	\$41.00	\$12.84	\$15.10	\$5.41	\$0.00	\$74.35
Apprentice: MARBLE & TILE FINISHERS Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.66	\$12.84	\$15.10	\$5.41	\$0.00	\$57.01
2	60.00	\$28.39	\$12.84	\$15.10	\$5.41	\$0.00	\$61.74
3	70.00	\$33.12	\$12.84	\$15.10	\$5.41	\$0.00	\$66.47
4	80.00	\$37.86	\$12.84	\$15.10	\$5.41	\$0.00	\$71.21
5	90.00	\$42.59	\$12.84	\$15.10	\$5.41	\$0.00	\$75.94
Apprentice to Journeyworker Ratio: 1:5							
MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANIC/WELDER/BOOM TRUCK	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 3)	1/5/2026	\$45.20	\$10.58	\$11.47	\$9.75	\$0.00	\$77.00
MILLWRIGHTS LOCAL 1121							
MILLWRIGHTS LOCAL 1121 - Zone 3							

Apprentice: MILLWRIGHT (Zone 3) Effective Date: 1/5/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$24.86	\$10.58	\$0.00	\$5.36	\$0.00	\$40.80
2	65.00	\$29.38	\$10.58	\$0.00	\$6.34	\$0.00	\$46.30
3	75.00	\$33.90	\$10.58	\$11.47	\$7.31	\$0.00	\$63.26
4	85.00	\$38.42	\$10.58	\$11.47	\$8.29	\$0.00	\$68.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice Notes Step 1&2 Appr. indentured after 1/6/2020 receive no pension,							
Apprentice to Journeyworker Ratio: 1:4							
MORTAR MIXER	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
For apprentice rates see "Apprentice- LABORER"							
OILER	12/1/2023	\$35.02	\$13.78	\$12.15	\$3.00	\$0.00	\$63.95
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS VI	12/1/2023	\$32.74	\$13.78	\$12.15	\$3.00	\$0.00	\$61.67
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS)	1/1/2026	\$59.56	\$10.35	\$12.00	\$12.60	\$0.00	\$94.51
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER (BRIDGES/TANKS)							
Effective Date: 1/1/2026							
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER (SPRAY OR SANDBLAST, NEW) *	1/1/2026	\$42.03	\$10.35	\$12.00	\$8.35	\$0.00	\$72.73
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.							
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$21.02	\$10.35	\$0.00	\$0.00	\$0.00	\$31.37
2	55.00	\$23.12	\$10.35	\$0.00	\$4.59	\$0.00	\$38.06
3	60.00	\$25.22	\$10.35	\$0.00	\$5.01	\$0.00	\$40.58
4	65.00	\$27.32	\$10.35	\$0.00	\$5.43	\$0.00	\$43.10
5	70.00	\$29.42	\$10.35	\$12.00	\$5.85	\$0.00	\$57.62
6	75.00	\$31.52	\$10.35	\$12.00	\$6.26	\$0.00	\$60.13
7	80.00	\$33.62	\$10.35	\$12.00	\$6.68	\$0.00	\$62.65
8	90.00	\$37.83	\$10.35	\$12.00	\$7.52	\$0.00	\$67.70

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	1/1/2026	\$39.35	\$10.35	\$12.00	\$8.35	\$0.00	\$70.05
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$19.68	\$10.35	\$0.00	\$0.00	\$0.00	\$30.03
2	55.00	\$21.64	\$10.35	\$0.00	\$4.59	\$0.00	\$36.58
3	60.00	\$23.61	\$10.35	\$0.00	\$5.01	\$0.00	\$38.97
4	65.00	\$25.58	\$10.35	\$0.00	\$5.43	\$0.00	\$41.36
5	70.00	\$27.55	\$10.35	\$12.00	\$5.85	\$0.00	\$55.75
6	75.00	\$29.51	\$10.35	\$12.00	\$6.26	\$0.00	\$58.12
7	80.00	\$31.48	\$10.35	\$12.00	\$6.68	\$0.00	\$60.51
8	90.00	\$35.42	\$10.35	\$12.00	\$7.52	\$0.00	\$65.29

Apprentice to Journeyworker Ratio: 1:1

PAINTER / TAPER (BRUSH, NEW) *	1/1/2026	\$40.63	\$10.35	\$12.00	\$8.35	\$0.00	\$71.33
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.							
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2026							
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
Apprentice: PAINTER / TAPER (BRUSH, NEW) * Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$20.32	\$10.35	\$0.00	\$0.00	\$0.00	\$30.67
2	55.00	\$22.35	\$10.35	\$0.00	\$4.59	\$0.00	\$37.29
3	60.00	\$24.38	\$10.35	\$0.00	\$5.01	\$0.00	\$39.74
4	65.00	\$26.41	\$10.35	\$0.00	\$5.43	\$0.00	\$42.19
5	70.00	\$28.44	\$10.35	\$12.00	\$5.85	\$0.00	\$56.64
6	75.00	\$30.47	\$10.35	\$12.00	\$6.26	\$0.00	\$59.08
7	80.00	\$32.50	\$10.35	\$12.00	\$6.68	\$0.00	\$61.53
8	90.00	\$36.57	\$10.35	\$12.00	\$7.52	\$0.00	\$66.44
Apprentice to Journeyworker Ratio: 1:1							
PAINTER / TAPER (BRUSH, REPAINT)	1/1/2026	\$37.95	\$10.35	\$12.00	\$8.35	\$0.00	\$68.65
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							
Apprentice: PAINTER / TAPER (BRUSH, REPAINT) Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$18.98	\$10.35	\$0.00	\$0.00	\$0.00	\$29.33
2	55.00	\$20.87	\$10.35	\$0.00	\$4.59	\$0.00	\$35.81
3	60.00	\$22.77	\$10.35	\$0.00	\$5.01	\$0.00	\$38.13
4	65.00	\$24.67	\$10.35	\$0.00	\$5.43	\$0.00	\$40.45
5	70.00	\$26.57	\$10.35	\$12.00	\$5.85	\$0.00	\$54.77
6	75.00	\$28.46	\$10.35	\$12.00	\$6.26	\$0.00	\$57.07
7	80.00	\$30.36	\$10.35	\$12.00	\$6.68	\$0.00	\$59.39
8	90.00	\$34.16	\$10.35	\$12.00	\$7.52	\$0.00	\$64.03
Apprentice to Journeyworker Ratio: 1:1							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	6/1/2026	\$37.00	\$10.90	\$9.75	\$6.60	\$0.00	\$64.25
LABORERS	12/1/2026	\$38.29	\$10.90	\$9.75	\$6.60	\$0.00	\$65.54
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
PANEL & PICKUP TRUCKS DRIVER	6/1/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$0.00	\$79.73
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$0.00	\$81.47
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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	\$49.19	\$10.08	\$11.62	\$12.67	\$0.00	\$83.56
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER	8/1/2024	\$49.19	\$10.08	\$11.62	\$12.67	\$0.00	\$83.56

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 3)							

Apprentice: PILE DRIVER							
Effective Date: 8/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$22.14	\$10.08	\$0.00	\$2.53	\$0.00	\$34.75
2	55.00	\$27.05	\$10.08	\$0.00	\$5.07	\$0.00	\$42.20
3	70.00	\$34.43	\$10.08	\$11.62	\$7.60	\$0.00	\$63.73
4	80.00	\$39.35	\$10.08	\$11.62	\$10.14	\$0.00	\$71.19

Apprentice to Journeyworker Ratio: 1:5

PIPELAYER	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

PLUMBER & PIPEFITTER	3/17/2026	\$52.76	\$13.50	\$10.85	\$7.10	\$0.00	\$84.21
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2026	\$54.76	\$13.50	\$10.85	\$7.10	\$0.00	\$86.21
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2027	\$58.26	\$12.00	\$10.85	\$7.10	\$0.00	\$88.21
	9/17/2027	\$60.26	\$12.00	\$10.85	\$7.10	\$0.00	\$90.21
	3/17/2028	\$62.26	\$12.00	\$10.85	\$7.10	\$0.00	\$92.21
	9/17/2028	\$64.26	\$12.00	\$10.85	\$7.10	\$0.00	\$94.21
	3/17/2029	\$66.26	\$12.00	\$10.85	\$7.10	\$0.00	\$96.21

Apprentice: PLUMBER & PIPEFITTER							
Effective Date: 3/17/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$23.74	\$13.50	\$10.85	\$0.00	\$0.00	\$48.09

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PLUMBER & PIPEFITTER							
Effective Date: 3/17/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
2	50.00	\$26.38	\$13.50	\$10.85	\$0.00	\$0.00	\$50.73
3	55.00	\$29.02	\$13.50	\$10.85	\$0.00	\$0.00	\$53.37
4	60.00	\$31.66	\$13.50	\$10.85	\$0.00	\$0.00	\$56.01
5	65.00	\$34.29	\$13.50	\$10.85	\$0.00	\$0.00	\$58.64
6	70.00	\$36.93	\$13.50	\$10.85	\$0.00	\$0.00	\$61.28
7	75.00	\$39.57	\$13.50	\$10.85	\$0.00	\$0.00	\$63.92
8	80.00	\$42.21	\$13.50	\$10.85	\$0.00	\$0.00	\$66.56
9	85.00	\$44.85	\$13.50	\$10.85	\$7.10	\$0.00	\$76.30
10	85.00	\$44.85	\$13.50	\$10.85	\$7.10	\$0.00	\$76.30

Apprentice: PLUMBER & PIPEFITTER							
Effective Date: 9/17/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$24.64	\$13.50	\$0.00	\$0.00	\$0.00	\$38.14
2	50.00	\$27.38	\$13.50	\$0.00	\$0.00	\$0.00	\$40.88
3	55.00	\$30.12	\$13.50	\$0.00	\$0.00	\$0.00	\$43.62
4	60.00	\$32.86	\$13.50	\$0.00	\$0.00	\$0.00	\$46.36
5	65.00	\$35.59	\$13.50	\$0.00	\$0.00	\$0.00	\$49.09
6	70.00	\$38.33	\$13.50	\$0.00	\$0.00	\$0.00	\$51.83
7	75.00	\$41.07	\$13.50	\$0.00	\$0.00	\$0.00	\$54.57
8	80.00	\$43.81	\$13.50	\$0.00	\$0.00	\$0.00	\$57.31
9	85.00	\$46.55	\$13.50	\$0.00	\$7.10	\$0.00	\$67.15
10	85.00	\$46.55	\$13.50	\$0.00	\$7.10	\$0.00	\$67.15

Apprentice Notes							
**1:1,2:5,3:9,4:12							

Apprentice to Journeyworker Ratio: 1:1

PNEUMATIC CONTROLS (TEMP.)	3/17/2026	\$52.76	\$13.50	\$10.85	\$7.10	\$0.00	\$84.21
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2026	\$54.76	\$13.50	\$10.85	\$7.10	\$0.00	\$86.21
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2027	\$58.26	\$12.00	\$10.85	\$7.10	\$0.00	\$88.21
	9/17/2027	\$60.26	\$12.00	\$10.85	\$7.10	\$0.00	\$90.21
	3/17/2028	\$62.26	\$12.00	\$10.85	\$7.10	\$0.00	\$92.21
	9/17/2028	\$64.26	\$12.00	\$10.85	\$7.10	\$0.00	\$94.21
	3/17/2029	\$66.26	\$12.00	\$10.85	\$7.10	\$0.00	\$96.21

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER	6/1/2026	\$37.22	\$10.90	\$9.75	\$6.60	\$0.00	\$64.47
LABORERS	12/1/2026	\$39.64	\$10.90	\$9.75	\$6.60	\$0.00	\$66.89
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$41.04	\$10.90	\$9.75	\$6.60	\$0.00	\$68.29
	12/1/2027	\$42.44	\$10.90	\$9.75	\$6.60	\$0.00	\$69.69
	6/1/2028	\$43.94	\$10.90	\$9.75	\$6.60	\$0.00	\$71.19
	12/1/2028	\$45.44	\$10.90	\$9.75	\$6.60	\$0.00	\$72.69
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2026	\$38.00	\$10.90	\$9.75	\$6.60	\$0.00	\$65.25
LABORERS	12/1/2026	\$39.29	\$10.90	\$9.75	\$6.60	\$0.00	\$66.54
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
PUMP OPERATOR (CONCRETE)	12/1/2023	\$39.56	\$13.78	\$12.15	\$3.00	\$0.00	\$68.49
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	5/1/2024	\$26.14	\$11.82	\$7.25	\$0.00	\$0.00	\$45.21
TEAMSTERS 404 - Construction Service (Northampton)							
TEAMSTERS 404 - Construction Service (Northampton)							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2026	\$36.47	\$10.90	\$9.75	\$6.60	\$0.00	\$63.72
LABORERS	12/1/2026	\$38.89	\$10.90	\$9.75	\$6.60	\$0.00	\$66.14
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2027	\$40.29	\$10.90	\$9.75	\$6.60	\$0.00	\$67.54
	12/1/2027	\$41.69	\$10.90	\$9.75	\$6.60	\$0.00	\$68.94
	6/1/2028	\$43.19	\$10.90	\$9.75	\$6.60	\$0.00	\$70.44
	12/1/2028	\$47.26	\$9.90	\$9.25	\$5.53	\$0.00	\$71.94
	6/1/2205	\$34.29	\$9.90	\$0.00	\$0.00	\$0.00	\$44.19
	12/1/2205	\$36.79	\$9.90	\$9.25	\$5.53	\$0.00	\$61.47
	6/1/2206	\$39.29	\$9.90	\$9.25	\$5.53	\$0.00	\$63.97
	12/1/2206	\$41.46	\$9.90	\$9.25	\$5.53	\$0.00	\$66.14
	6/1/2207	\$43.11	\$9.90	\$9.25	\$5.53	\$0.00	\$67.79
	12/1/2207	\$44.51	\$9.90	\$9.25	\$5.53	\$0.00	\$69.19
	6/1/2208	\$46.01	\$9.90	\$9.25	\$5.53	\$0.00	\$70.69
	12/1/2208	\$44.94	\$10.90	\$9.75	\$6.60	\$0.00	\$72.19
For apprentice rates see "Apprentice- LABORER"							
ROLLER OPERATOR	12/1/2023	\$38.42	\$13.78	\$12.15	\$3.00	\$0.00	\$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Coal tar pitch)	10/2/2025	\$44.73	\$10.60	\$8.70	\$10.00	\$0.00	\$74.03
ROOFERS LOCAL 248	7/16/2026	\$46.73	\$10.60	\$8.70	\$10.00	\$0.00	\$76.03
ROOFERS LOCAL 248							
For apprentice rates see "Apprentice- ROOFER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg)	10/2/2025	\$44.23	\$10.60	\$8.70	\$10.00	\$0.00	\$73.53
ROOFERS LOCAL 248	7/16/2026	\$46.23	\$10.60	\$8.70	\$10.00	\$0.00	\$75.53
ROOFERS LOCAL 248							
ROOFER SLATE / TILE / PRECAST CONCRETE	10/2/2025	\$44.73	\$10.60	\$8.70	\$10.00	\$0.00	\$74.03
ROOFERS LOCAL 248	7/16/2026	\$46.73	\$10.60	\$8.70	\$10.00	\$0.00	\$76.03
ROOFERS LOCAL 248							
For apprentice rates see "Apprentice- ROOFER"							
SCRAPER	12/1/2023	\$39.03	\$13.78	\$12.15	\$3.00	\$0.00	\$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS)	12/1/2023	\$38.42	\$13.78	\$12.15	\$3.00	\$0.00	\$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SELF-PROPELLED POWER BROOM	12/1/2023	\$35.80	\$13.78	\$12.15	\$3.00	\$0.00	\$64.73
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SHEETMETAL WORKER	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
SHEETMETAL WORKERS LOCAL 63	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

Apprentice: SHEETMETAL WORKER**Effective Date: 7/1/2025**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.57	\$5.82	\$4.95	\$0.00	\$0.85	\$31.19
2	50.00	\$21.74	\$6.47	\$5.51	\$0.00	\$0.94	\$34.66
3	55.00	\$23.91	\$7.12	\$9.91	\$0.00	\$1.15	\$42.09
4	60.00	\$26.09	\$7.76	\$9.91	\$0.00	\$1.23	\$44.99
5	65.00	\$28.26	\$8.41	\$9.91	\$0.00	\$1.31	\$47.89
6	70.00	\$30.44	\$9.06	\$9.91	\$0.00	\$1.39	\$50.80
7	75.00	\$32.61	\$9.71	\$9.91	\$0.00	\$1.47	\$53.70
8	80.00	\$34.78	\$10.35	\$9.91	\$8.72	\$1.78	\$65.54
9	85.00	\$36.96	\$11.00	\$9.91	\$8.72	\$1.86	\$68.45
10	90.00	\$39.13	\$11.65	\$9.91	\$8.72	\$1.94	\$71.35

Apprentice: SHEETMETAL WORKER**Effective Date: 7/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SHEETMETAL WORKER							
Effective Date: 7/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.57	\$5.96	\$4.95	\$0.00	\$0.85	\$31.33
2	50.00	\$21.74	\$6.62	\$5.51	\$0.00	\$0.94	\$34.81
3	55.00	\$23.91	\$7.28	\$9.91	\$0.00	\$1.15	\$42.25
4	60.00	\$26.09	\$7.94	\$9.91	\$0.00	\$1.23	\$45.17
5	65.00	\$28.26	\$8.60	\$9.91	\$0.00	\$1.31	\$48.08
6	70.00	\$30.44	\$9.27	\$9.91	\$0.00	\$1.39	\$51.01
7	75.00	\$32.61	\$9.93	\$9.91	\$0.00	\$1.47	\$53.92
8	80.00	\$34.78	\$10.59	\$9.91	\$9.92	\$1.78	\$66.98
9	85.00	\$36.96	\$11.25	\$9.91	\$9.92	\$1.86	\$69.90
10	90.00	\$39.13	\$11.92	\$9.91	\$9.92	\$1.94	\$72.82

Apprentice to Journeyworker Ratio: 1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53
SPECIALIZED EARTH MOVING EQUIP > 35 TONS	6/1/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$0.00	\$80.48
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$0.00	\$82.22
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$0.00	\$82.82
SPRINKLER FITTER	4/1/2026	\$56.54	\$13.60	\$7.45	\$9.41	\$0.00	\$87.00
SPRINKLER FITTERS LOCAL 669	7/1/2026	\$56.54	\$13.60	\$7.45	\$9.41	\$0.00	\$87.00
SPRINKLER FITTERS LOCAL 669	10/1/2026	\$56.54	\$13.60	\$7.45	\$9.41	\$0.00	\$87.00
	1/1/2027	\$56.54	\$14.55	\$7.50	\$9.41	\$0.00	\$88.00
	4/1/2027	\$59.83	\$14.55	\$7.50	\$9.41	\$0.00	\$91.29
	7/1/2027	\$59.83	\$14.55	\$7.50	\$9.41	\$0.00	\$91.29
	10/1/2027	\$59.83	\$14.55	\$7.50	\$9.41	\$0.00	\$91.29
	1/1/2028	\$59.83	\$15.50	\$7.55	\$9.41	\$0.00	\$92.29

Apprentice: SPRINKLER FITTER							
Effective Date: 4/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	43.00	\$28.36	\$9.64	\$0.00	\$0.00	\$0.00	\$38.00
2	48.00	\$31.66	\$9.64	\$0.00	\$0.00	\$0.00	\$41.30
3	52.00	\$34.29	\$13.60	\$7.45	\$1.15	\$0.00	\$56.49
4	56.00	\$36.93	\$13.60	\$7.45	\$1.15	\$0.00	\$59.13
5	59.00	\$38.91	\$13.60	\$7.45	\$1.40	\$0.00	\$61.36
6	64.00	\$42.21	\$13.60	\$7.45	\$1.40	\$0.00	\$64.66
7	68.00	\$44.85	\$13.60	\$7.45	\$1.40	\$0.00	\$67.30
8	72.00	\$47.48	\$13.60	\$7.45	\$1.40	\$0.00	\$69.93
9	76.00	\$50.12	\$13.60	\$7.45	\$1.40	\$0.00	\$72.57
10	80.00	\$52.76	\$13.60	\$7.45	\$1.40	\$0.00	\$75.21

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: SPRINKLER FITTER							
Effective Date: 7/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	43.00	\$28.36	\$9.64	\$0.00	\$0.00	\$0.00	\$38.00
2	48.00	\$31.66	\$9.64	\$0.00	\$0.00	\$0.00	\$41.30
3	52.00	\$34.29	\$13.60	\$7.45	\$1.15	\$0.00	\$56.49
4	56.00	\$36.93	\$13.60	\$7.45	\$1.15	\$0.00	\$59.13
5	59.00	\$38.91	\$13.60	\$7.45	\$1.40	\$0.00	\$61.36
6	64.00	\$42.21	\$13.60	\$7.45	\$1.40	\$0.00	\$64.66
7	68.00	\$44.85	\$13.60	\$7.45	\$1.40	\$0.00	\$67.30
8	72.00	\$47.48	\$13.60	\$7.45	\$1.40	\$0.00	\$69.93
9	76.00	\$50.12	\$13.60	\$7.45	\$1.40	\$0.00	\$72.57
10	80.00	\$52.76	\$13.60	\$7.45	\$1.40	\$0.00	\$75.21

Apprentice to Journeyworker Ratio: 1:1

TELECOMMUNICATION TECHNICIAN	12/28/2025	\$53.26	\$13.75	\$8.40	\$6.96	\$0.00	\$82.37
TELECOMMUNICATION TECHNICIAN	6/28/2026	\$54.41	\$14.00	\$8.43	\$7.03	\$0.00	\$83.87
ELECTRICIANS LOCAL 7	1/3/2027	\$55.56	\$14.25	\$8.47	\$7.09	\$0.00	\$85.37

For apprentice rates and ratios see "Apprentice- ELECTRICIAN"

Apprentice: TELECOMMUNICATION TECHNICIAN							
Effective Date: 12/28/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.30	\$7.65	\$0.63	\$0.00	\$0.00	\$29.58
2	45.00	\$23.97	\$7.65	\$0.70	\$0.00	\$0.00	\$32.32
3	50.00	\$26.63	\$13.75	\$7.53	\$0.00	\$0.00	\$47.91
4	55.00	\$29.29	\$13.75	\$7.61	\$0.00	\$0.00	\$50.65
5	65.00	\$34.62	\$13.75	\$9.84	\$0.00	\$0.00	\$58.21
6	70.00	\$37.28	\$13.75	\$11.30	\$0.00	\$0.00	\$62.33

Apprentice: TELECOMMUNICATION TECHNICIAN							
Effective Date: 6/28/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$21.76	\$7.80	\$0.63	\$0.00	\$0.00	\$30.19
2	45.00	\$24.48	\$7.80	\$0.70	\$0.00	\$0.00	\$32.98
3	50.00	\$27.21	\$14.00	\$7.53	\$0.00	\$0.00	\$48.74
4	55.00	\$29.93	\$14.00	\$7.61	\$0.00	\$0.00	\$51.54
5	65.00	\$35.37	\$14.00	\$9.84	\$0.00	\$0.00	\$59.21
6	70.00	\$38.09	\$14.00	\$11.30	\$0.00	\$0.00	\$63.39

Apprentice to Journeyworker Ratio: 1:1

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS	2/10/2026	\$66.89	\$12.84	\$15.57	\$8.02	\$0.00	\$103.32
BRICKLAYERS LOCAL 3	8/1/2026	\$69.09	\$12.84	\$15.57	\$8.02	\$0.00	\$105.52
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	2/1/2027	\$70.49	\$12.84	\$15.57	\$8.02	\$0.00	\$106.92

Apprentice: TERRAZZO FINISHERS							
Effective Date: 2/10/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.45	\$12.84	\$15.57	\$8.02	\$0.00	\$69.88
2	60.00	\$40.13	\$12.84	\$15.57	\$8.02	\$0.00	\$76.56
3	70.00	\$46.82	\$12.84	\$15.57	\$8.02	\$0.00	\$83.25
4	80.00	\$53.51	\$12.84	\$15.57	\$8.02	\$0.00	\$89.94
5	90.00	\$60.20	\$12.84	\$15.57	\$8.02	\$0.00	\$96.63

Apprentice: TERRAZZO FINISHERS							
Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.55	\$12.84	\$15.57	\$8.02	\$0.00	\$70.98
2	60.00	\$41.45	\$12.84	\$15.57	\$8.02	\$0.00	\$77.88
3	70.00	\$48.36	\$12.84	\$15.57	\$8.02	\$0.00	\$84.79
4	80.00	\$55.27	\$12.84	\$15.57	\$8.02	\$0.00	\$91.70
5	90.00	\$62.18	\$12.84	\$15.57	\$8.02	\$0.00	\$98.61

Apprentice to Journeyworker Ratio: 1:5

TERRAZZO MECHANIC	2/1/2026	\$67.97	\$12.84	\$15.57	\$7.99	\$0.00	\$104.37
BRICKLAYERS LOCAL 3	8/1/2026	\$70.17	\$12.84	\$15.57	\$7.99	\$0.00	\$106.57
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	2/1/2027	\$71.57	\$12.84	\$15.57	\$7.99	\$0.00	\$107.97

Apprentice: TERRAZZO MECHANIC							
Effective Date: 2/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$33.99	\$12.84	\$15.57	\$7.99	\$0.00	\$70.39
2	60.00	\$40.78	\$12.84	\$15.57	\$7.99	\$0.00	\$77.18
3	70.00	\$47.58	\$12.84	\$15.57	\$7.99	\$0.00	\$83.98
4	80.00	\$54.38	\$12.84	\$15.57	\$7.99	\$0.00	\$90.78
5	90.00	\$61.17	\$12.84	\$15.57	\$7.99	\$0.00	\$97.57

Apprentice: TERRAZZO MECHANIC							
Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$35.09	\$12.84	\$15.57	\$7.99	\$0.00	\$71.49

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: TERRAZZO MECHANIC Effective Date: 8/1/2026							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
2 60.00		\$42.10	\$12.84	\$15.57	\$7.99	\$0.00	\$78.50
3 70.00		\$49.12	\$12.84	\$15.57	\$7.99	\$0.00	\$85.52
4 80.00		\$56.14	\$12.84	\$15.57	\$7.99	\$0.00	\$92.54
5 90.00		\$63.15	\$12.84	\$15.57	\$7.99	\$0.00	\$99.55
Apprentice to Journeyworker Ratio: 1:5							
TEST BORING DRILLER	6/1/2026	\$53.25	\$10.90	\$9.75	\$9.80	\$0.00	\$83.70
LABORERS							
LABORERS - FOUNDATION AND MARINE	12/1/2026	\$54.75	\$10.90	\$9.75	\$9.80	\$0.00	\$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	6/1/2026	\$49.37	\$10.90	\$9.75	\$9.80	\$0.00	\$79.82
LABORERS							
LABORERS - FOUNDATION AND MARINE	12/1/2026	\$50.87	\$10.90	\$9.75	\$9.80	\$0.00	\$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	6/1/2026	\$49.25	\$10.90	\$9.75	\$9.80	\$0.00	\$79.70
LABORERS							
LABORERS - FOUNDATION AND MARINE	12/1/2026	\$50.75	\$10.90	\$9.75	\$9.80	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS	12/1/2023	\$38.42	\$13.78	\$12.15	\$3.00	\$0.00	\$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$0.00	\$80.77
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$0.00	\$82.51
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$0.00	\$83.11
TUNNEL WORK - COMPRESSED AIR	6/1/2026	\$61.48	\$10.90	\$9.75	\$10.25	\$0.00	\$92.38
LABORERS							
LABORERS (COMPRESSED AIR)	12/1/2026	\$62.98	\$10.90	\$9.75	\$10.25	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2026	\$63.48	\$10.90	\$9.75	\$10.25	\$0.00	\$94.38
LABORERS							
LABORERS (COMPRESSED AIR)	12/1/2026	\$64.98	\$10.90	\$9.75	\$10.25	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	6/1/2026	\$53.55	\$10.90	\$9.75	\$10.25	\$0.00	\$84.45
LABORERS							
LABORERS (FREE AIR TUNNEL)	12/1/2026	\$55.05	\$10.90	\$9.75	\$10.25	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2026	\$55.55	\$10.90	\$9.75	\$10.25	\$0.00	\$86.45
LABORERS							
LABORERS (FREE AIR TUNNEL)	12/1/2026	\$57.05	\$10.90	\$9.75	\$10.25	\$0.00	\$87.95

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$37.25	\$10.90	\$9.75	\$6.60	\$0.00	\$64.50
LABORERS	12/1/2026	\$38.54	\$10.90	\$9.75	\$6.60	\$0.00	\$65.79
LABORERS - ZONE 4 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WATER METER INSTALLER	3/17/2026	\$52.76	\$13.50	\$10.85	\$7.10	\$0.00	\$84.21
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2026	\$56.26	\$12.00	\$10.85	\$7.10	\$0.00	\$86.21
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2027	\$58.26	\$12.00	\$10.85	\$7.10	\$0.00	\$88.21
	9/17/2027	\$60.26	\$12.00	\$10.85	\$7.10	\$0.00	\$90.21
	3/17/2028	\$62.26	\$12.00	\$10.85	\$7.10	\$0.00	\$92.21
	9/17/2028	\$64.26	\$12.00	\$10.85	\$7.10	\$0.00	\$94.21
	3/17/2029	\$66.26	\$12.00	\$10.85	\$7.10	\$0.00	\$96.21
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.

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Work of the Contract is shown and described in Drawings and Project Manual entitled:

Walnut Street Retaining Wall Repairs
Department of Public Services
City of North Adams
July 2026

Tighe & Bond, Inc.
Consulting Engineers
Westfield, Massachusetts

2. The Work includes the following major items:
 - a. Replacement of approximately 150 feet of retaining wall along Walnut Street.
 - b. Bypass and rerouting of utilities within the limits of excavation for the retaining wall.
 - c. New drainage manholes and catch basins on Oak Avenue.
 - d. Surface restoration following wall replacement, including road resurfacing and seeding on Walnut Street and permanent patching on Oak Avenue.
 - e. Bid alternative for road resurfacing on Oak Avenue.

B. Related Requirements

1. Section 00800 - Supplementary Conditions

1.2 SUBMITTALS

A. Informational Submittals

1. Submit copies of permits or approvals required for the Work, prior to initiating the Work.

1.3 PROJECT/SITE CONDITIONS

A. Permits

1. Obtain the permits and approvals listed below:
 - a. Permits and licenses of a temporary nature necessary to perform the Work.
 - b. Permits for disposal of construction wastes including disposal of cleared and grubbed materials.

- c. Other permits or licenses required for the Contractor's operations or required elsewhere in the Contract Documents and not included herein.
 - 2. Obtain required time extensions to permits obtained by the Contractor, if construction authorized by permits has not been completed by the expiration date noted on these permits.
 - 3. Obtain permits and approvals from appropriate jurisdictional agencies and property owners for use of premises not furnished by the Owner, and for all off-site areas.
 - 4. Submit copies of permits prior to performance of Work authorized by permits.
- B. Existing Conditions
- 1. Use of Premises and Off-site Work
 - a. The Work shall occur on the Owner's property and temporary easements obtained by the Owner within the limits of Work shown on the Drawings.
 - b. Obtain permits and approvals for use of any land and access thereto that is deemed necessary for the Work, where such land is not available for use by the Owner, including land for temporary construction facilities, access and egress, or for storage of materials. Confine apparatus and storage to such additional areas.
 - c. Obtain permits and written approvals from appropriate jurisdictional agencies for the use of premises not available for use by the Owner, including all offsite staging areas, borrow pits and waste areas. Submit copies of all permits and approvals to the Owner prior to using areas.
 - d. Provide for the disposal of waste materials off-site in accordance with all applicable laws.
 - e. Adhere to the limits of Work and traffic control plans as indicated, to minimize obstruction to traffic and inconvenience to the Owner, general public, and residents in the vicinity of the Work, and to protect people and property. Keep fire hydrants on or adjacent to the Work accessible to fire fighting equipment at all times.
 - f. Make temporary provisions for the use of sidewalks and maintain functioning gutters, stormwater systems, drainage ditches, and culverts.
 - g. Maintain public access to businesses and residences including driveways and parking lots at all times during the Work.

PART 2 PRODUCTS

2.1 MATERIALS FURNISHED BY OWNER

- A. The Owner will not furnish any materials, labor or equipment under this Contract.

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01140

WORK RESTRICTIONS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Work Schedule
 - 2. Construction Constraints
 - 3. Vehicle Access
 - 4. Available Work Area
 - 5. Site Usage Plan
- B. Related Requirements
 - 1. Section 01310 - Coordination
 - 2. Section 01325 - Scheduling of Construction

1.2 SUBMITTALS

- A. Incorporate the requirements of this Section in the project schedule submitted under Section 01325.
- B. Action Submittals
 - 1. Submit site usage plan within 30 days of the Notice to Proceed.

1.3 WORK SCHEDULE

- A. Conduct the Work during daylight hours on Monday through Friday, and within the time between 7:00 a.m. and 5:00 p.m. No work is to be done on Owner's holidays, Saturdays, Sundays or outside of the work hours described above.
- B. Cutting of paved surfaces, excavation within any paved roadway, or pavement resurfacing activities is not allowed from November 15th to April 1st.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 CONSTRUCTION CONSTRAINTS

- A. The following are constraints for the Work. Incorporate these constraints into the schedule required to be submitted under Section 01325.
 - 1. Construction activities shall not begin until Contractor has coordinated utility relocations by others.
 - 2. Maintain access to driveways or temporary driveways for houses #369, #365, and #357 at all times during construction.

3.2 AVAILABLE WORK AREA

- A. The Owner will obtain temporary easements for use by the Contractor during construction within the limits of work shown on the drawings. No construction vehicles or activities will be permitted outside the limit of work.
- B. Limits of construction are defined on the Drawings. No work will be permitted to be performed outside these boundaries.

3.3 SITE USAGE PLAN

- A. Submit a site usage plan showing all proposed staging areas, locations of all office and storage trailers, and material laydown areas. The site usage plan should be a drawing showing the proposed locations and shall include on-site traffic modifications and temporary utilities as may be applicable.

END OF SECTION

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SECTION 01230

ALTERNATES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Alternate No. 1 – Reconstruction of Oak Avenue
- B. Related Requirements
 - 1. Section 01630 – Product Substitution During Construction
 - 2. Special Provisions

1.2 DEFINITIONS

- A. Alternate: An amount proposed by Bidder and stated on the Bid form for certain work defined in this Section 01230 that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change in the scope of construction to be completed either in quantity or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each Alternate is the net addition to or deduction from the Contract Price to incorporate the Alternate into the Work. No other adjustments are made to the Contract Price.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent Work as necessary to completely integrate the Alternate into the Work.
 - 1. Include as part of each Alternate miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of the Alternate.
- B. Execute accepted Alternates under the same conditions as other Work of the Contract.

1.4 ALTERNATES

- A. Alternate No. 1 – Reconstruction of Oak Avenue
 - 1. General
 - a. Alternate No. 1 includes the addition of road resurfacing and curbing on Oak Avenue to the limits shown on the Drawings.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 DIVISION 0 AND DIVISION 1 WORK INCIDENTAL TO THE CONTRACT PRICE

- A. No separate measurement or payment will be made for Work called for in Division 0 or Division 1 of the MassDOT Standard Specifications, unless specifically covered under the Bid items listed below. All costs associated with this Work will be considered incidental to the Contract Bid price.
- B. Divisions 2 through 16 of the Project Manual are superseded with Division II and III of the MassDOT Highway Division Standard Specifications for Highways and Bridges 2026, as amended, and the Special provisions attached.
- C. Measurement and Payment for Work is defined in the Standard Specifications and/or in the Special Provisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01310

COORDINATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Project Management
 - 2. Coordination
 - 3. Project Meetings
- B. Related Requirements
 - 1. Section 01140 - Work Restrictions
 - 2. Section 01325 - Scheduling of Construction
- C. Related Work Not Included
 - 1. Operation of existing facilities will be performed by the Owner unless otherwise specified. The Owner will assist in arranging operation of any existing facilities or equipment required by the Contractor to connect to existing facilities, and the Contractor shall not operate existing valves or equipment. Only the Owner will operate Owner valves.

1.2 SUBMITTALS

- A. Incorporate the requirements of this Section, as well as Work which may impact the existing system operation, or the operations of any adjacent utility, in the project schedule submitted under Section 01325.
- B. Informational Submittals
 - 1. Submit to the affected utility company, the Owner, and the Engineer, in writing, all requests for temporary shutdowns of facilities or interruption of operations. No shutdowns or interruptions to existing operations will be permitted except as outlined in this Section. Submit requests at least 2 weeks prior to the beginning of the Work requiring shutdown or interruption. No shutdown shall occur without the approval of the utility company or the Owner.
 - 2. At the pre-construction conference, supply to the Owner the cell phone number of a responsible person who may be contacted during off-hours for emergencies 24 hours a day, seven days a week.
 - 3. Prepare a contact list of phone numbers, including cell phone numbers, and emails for all Project personnel and submit to the Engineer at the pre-construction conference. Include Contractor, Owner, Engineer, and City personnel including police, fire, and ambulance.
 - 4. Submit to the Owner and Engineer, in writing, all requests for valve operations at least 2 weeks prior to commencing operation.

1.3 PROJECT MANAGEMENT

- A. Retain a full-time Superintendent, satisfactory to the Owner and Engineer. The Superintendent shall not be changed except with the consent of the Owner and Engineer. The Superintendent shall be in full charge of the Work.
- B. Complete the Work in a continuous uninterrupted operation. Use sufficient personnel and adequate equipment to complete the Work within the Contract Time.

1.4 COORDINATION

- A. Do not interfere with the operation of the existing facilities.
- B. Perform all coordination necessary to complete connections to the existing pipelines.
- C. Coordinate with appropriate utility companies, as well as with the Owner, where the Work crosses or is adjacent to existing utilities.

1.5 PROJECT MEETINGS

- A. Pre-Construction Conference
 - 1. The Contractor shall be prepared to discuss the following subjects at the Pre-Construction Conference. Documentation for these items is required to be submitted within the time frames included in individual specification sections.
 - a. Project scheduling
 - b. Sequencing of critical path Work items
 - c. Shop Drawing procedures
 - d. Project changes and clarification procedures
 - e. Use of sites, access to Work areas, office and storage areas, security and temporary facilities
 - f. Contractor safety plan and representative
 - g. Progress payments and procedures
 - h. Required documentation
 - i. Project personnel contact list
- B. Progress Meetings
 - 1. Progress meetings will be held as requested by the Owner or as required by the Progress of the Work.
 - 2. The Contractor's Superintendent shall attend all progress meetings.
 - 3. At a minimum, progress meetings will review Work progress, schedule, Shop Drawing submission schedule, Applications for Payment, and other matters needing discussion and resolution.
 - 4. Review the schedule with all parties to be affected by upcoming work.
 - 5. Review the monthly construction report required under Section 01325.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.1 GENERAL**

- A. Notify DIGSAFE at 1-888-344-7233 at least 72 hours prior to any digging, trenching, rock removal, demolition, borings, backfill, grading, landscaping, or any other earth moving operations.

3.2 COORDINATION WITH THE OWNER'S OPERATIONS

- A. Notify the Owner and Engineer, in writing, a minimum of 1 week in advance of commencing Work on site. Work on site shall not occur until all permits are obtained.
- B. Notify the Owner and Engineer, in writing, a minimum of 1 week before commencing any work which may affect the Owner's operations.
- C. Perform all construction activities so as to avoid interference with operations of the facility and the work of others.
- D. Coordinate the following operations with the Owner and the Engineer:
 - 1. Operation of existing valves. The opening and closing of existing valves will be performed by the Owner.
 - 2. Refilling, disinfection, flushing and re-activation of the existing pipeline and new water mains.
 - 3. Timing and duration of linestopping activities.

3.3 SEQUENCE OF CONSTRUCTION

- A. Constructing the proposed improvements while maintaining existing operations will require a specific sequence of construction. The Contractor will be allowed reasonable flexibility in scheduling the construction activities. Provide a detailed construction schedule as required in Section 01325.

3.4 SHUTDOWNS

- A. Water service shutdowns as a result of pipeline construction activities are not permitted, unless otherwise noted in this Section. Existing water mains owned by other utilities shall not be shut down unless authorized by the appropriate utility company and the Owner. Notify water system customers regarding interruptions in service at least one week in advance. Coordinate with the Owner regarding scheduling such notifications. An existing main shall not be shut off for more than 6 hours.
- B. Rescheduling or reactivation of any temporary shutdowns may be required if an emergency occurs in the distribution system, such as a major pipeline break or fire.
- C. Test all pipelines, valves and appurtenances and place in operating condition before the final tie-ins are made to connect new equipment to the existing facility.

END OF SECTION

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SECTION 01321

COLOR AUDIO-VIDEO DOCUMENTATION SURVEY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Pre-construction color video recording of existing surface features.

1.2 DEFINITIONS

- A. Zone of Influence is defined as any area within the immediate construction site which may be affected by equipment traffic, material stock piles, temporary staging areas including a minimum 200 feet along each side of adjoining streets to the construction site.

1.3 SUBMITTALS

A. Informational Submittals

1. Submit audio-video recording of preconstruction areas in the manner described in this section. Do not commence with construction activities until the recordings are submitted and approved.
2. Video documentation must occur within 6 months prior to the start of work on the subject street. If video documentation is more than 6 months prior to the start of work, these areas or streets must be videoed again prior to commencement of work in that area or street, and submitted to the Engineer.

1.4 QUALITY ASSURANCE

- A. Personnel shall have at least 3 years experience actively engaged in color audio-video recording documentation and survey projects.
- B. Documentation shall be performed during times of good visibility when there is no precipitation or snow cover. The Owner is not responsible for the removal of snow, leaves, debris or parked vehicles.

PART 2 PRODUCTS

2.1 FORMAT

- A. Audio-video recording shall be in digital versatile/video disc (DVD) format. Video output from camera(s) used must be capable of producing NTSC-500 lines. Resolution in the Y channel, minimum 500 TV lines at center. Geometric Distortion shall not exceed 2% of picture height at any point in picture area.

2.2 RECORDING INFORMATION

- A. The audio-video recording shall have the potential to convey 1 video track and 1 audio track. The video and audio tracks shall be recorded simultaneously as original live recordings and shall not be copies of other audio or video recordings. These recordings shall consist of a fixed elevation video record of the Zone of Influence of construction and the commentary of the videographer making the video record.

- B. Video recordings shall, by electronic means, display continuously and simultaneously generated transparent digital information to include the date and time of recording, the engineering stationing corresponding to the stationing on the Drawings or as directed by the Engineer, the name of the street, easement or building being documented, the project name, direction of travel and the viewing side. The date and time shall appear in the upper left hand corner of the picture -- example:

Time 8:35:15

Date 9/20/79

- C. The project name, name of street or easement, house or building number, engineering stationing, direction of travel and viewing side shall appear on the lower half of the screen -- example:

N. on First St. W/E

84+20

PART 3 EXECUTION

3.1 CONSTRUCTION AUDIO-VIDEO PROCEDURES

- A. Perform audio-video documentation as follows:
1. Prior to the start of on-site construction activities to depict pre-construction conditions
- B. Audio-video documentation shall commence on Walnut Street at Station 0+00 and proceed to 100 feet beyond the end of the proposed retaining wall, viewing side to side. Documentation shall also record Oak Avenue at Station 100+00 and proceed to 50 feet on both sides of the intersection with State Street, viewing side to side.
- C. Coverage shall include, but not be limited to, the entire roadway, existing driveways, sidewalks, curbs, ditches, streets (including condition of paving for full width), intersections, landscaping, trees, culverts, catch basins, head walls, fences, mailboxes, retaining walls, visible utilities and all buildings and structures located within the Zone of Influence. Include existing faults, fractures, defects or other imperfections exhibited by the above-mentioned surface features.
- D. Houses and buildings shall be identified visually by house or building number, when possible, in such manner that the progress of the taping and proposed construction areas may be located by reference to the houses and buildings.
- E. Recordings produced under this Contract shall be turned over to the Engineer on an every other day basis so the Owner may review and monitor quality and progress. Any portion of the recording coverage deemed unacceptable by the Owner or Engineer shall be re-recorded at no additional cost to the Owner.
- F. DVDs and cases shall be properly identified by recording number, location, project name, and become the property of the Owner. A record of the contents of each DVD shall be supplied by a run sheet identifying each segment in the tape by location, i.e., roll number, street or easement viewing, disc time, viewing side, starting point, traveling direction and ending point.

END OF SECTION

SECTION 01325

SCHEDULING OF CONSTRUCTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Progress Schedule
- B. Related Requirements
 - 1. Section 01140 - Work Restrictions
 - 2. Section 01310 - Coordination

1.2 PROGRESS SCHEDULE

- A. Graphically show the order and interdependence of activities, sequence of Work, how the start of a given activity depends on completion of preceding activities, and how completion of an activity may restrain the start of subsequent activities.
- B. The Work shall be planned by the Contractor and his Project field superintendent in coordination with all Subcontractors and Suppliers whose Work is shown on the Progress Schedule.
- C. Include, at a minimum, the following activities on the Progress Schedule:
 - 1. Project mobilization
 - 2. Submittal and approval of Shop Drawings
 - 3. Procurement of equipment and critical materials
 - 4. Installation of equipment and critical materials
 - 5. Fabrication of special equipment and material, and its installation and testing
 - 6. Final inspecting and testing
 - 7. Punchlist
 - 8. Final cleanup
 - 9. Other activities that may be critical to the Progress Schedule
 - 10. All activities of the Owner and the Engineer which affect progress and/or affect required dates for completion of the Work
- D. Take into consideration Shop Drawing submittal and approval time, the delivery times of equipment and materials, Subcontractors' Work, availability and abilities of workmen, weather conditions, any restrictions in operations at the Work site, and all other items that may affect completion of the Work within the Contract Time.
- E. The Progress Schedule shall reflect the requirements and constraints outlined in Section 01310, Coordination.
- F. The Progress Schedule shall reflect Work restrictions outlined in Section 01140.

- G. Show information in such detail that duration times of activities will range from one to 15 days. The selection and number of activities shall be subject to the approval of the Owner and Engineer.
- H. The Progress Schedule should show description of each activity and activity duration in calendar days.
- I. Submit the Progress Schedule on maximum sheet size 30-inches high by the width required.

1.3 SUBMITTALS

A. Informational Submittals

- 1. Submit four prints of the preliminary Progress Schedule prepared in accordance with Article 2.05 of Section 00700 and the requirements of this section. Progress schedule must be submitted within 10 days after the Effective Date of the Agreement. Progress Schedule must be approved by the Owner and Engineer before the first progress payment will be made.
- 2. Revised analyses - Within 10 days after receipt of the review comments, submit four prints of the Progress Schedule revised in accordance with those comments.
- 3. Periodic reports - On the first progress meeting of each month, submit four prints of the updated Progress Schedule, as well as a report of construction activities in the prior month.
- 4. Before initiating the Work, submit an estimated monthly rate of Contractor payments for the project. If the payment schedule deviates from the original projection, submit a revised rate of expenditure schedule.

1.4 PERIODIC REPORTS

- A. At the first scheduled progress meeting of each month, present a construction report which details the Work performed during the preceding period. The report shall include the following at a minimum:
 - 1. Actual progress of Work. Update the Progress Schedule accordingly.
 - 2. The Progress Schedule, or revised Progress Schedule, should show the portions of the Progress Schedule impacted by the Work progress.
 - 3. Activities or portions of activities completed during the reporting period, and their total value as basis for Contractor's periodic request for payment. Payment made will be based on the total value of such activities completed or partially completed after verification by the Engineer.
 - 4. State the percentage of the Work actually completed and scheduled as of the report date, and the progress along the critical path in terms of days ahead of or behind the dates defined in the Progress Schedule.
 - 5. If the Work is behind the dates set forth in the Progress Schedule, also report progress along other paths with negative slack.
 - 6. Include a narrative which includes:
 - a. A description of problem areas, anticipated and current
 - b. Delaying factors and their impact

c. An explanation of corrective actions taken or proposed

7. Show the date of latest revision.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Action Submittals
 - 2. Informational Submittals

1.2 DEFINITIONS

- A. Action Submittals – includes written and graphic information submitted by Contractor that requires Engineer's approval.
- B. Informational Submittals – includes information submitted by Contractor that does not require Engineer's approval. The Engineer will acknowledge receipt of such documents and provide comments when the submittals lack the detail required by the Contract Documents.

1.3 ACTION SUBMITTALS

- A. Shop Drawings
 - 1. Shop Drawings as defined in the General Conditions, and as specified in individual work sections include, but are not necessarily limited to, custom-prepared data such as fabrication and erection/installation drawings, schedule information, piece part drawings, actual shop work manufacturing instructions, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certification, as applicable to the Work.
 - 2. Shop Drawings shall be of standardized sizes to enable the Owner to maintain a permanent record of the submissions. Approved standard size drawings shall be
 - a. 24 inches by 36 inches
 - b. 22 inches by 34 inches
 - c. 11 inches by 17 inches
 - d. 8.5 inches by 11 inches
 - 3. Submit Shop Drawings at the proper time to prevent delays in delivery of materials. Coordinate submittals for related or interdependent equipment.
 - 4. Advise the Engineer in writing of any deviations from the requirements of the Contract Documents.
 - 5. Check all Shop Drawings regarding measurements, size of members, materials, and details to determine if they conform to the Contract Documents. Shop Drawings found to be inaccurate, not in compliance, or otherwise in error shall be returned to the Subcontractors or Suppliers for correction before submission to the Engineer. Drawings that are current shall be marked with the date, name, and approval stamp of the Contractor.

6. All details on Shop Drawings submitted for approval shall show clearly the relation of the various parts to the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the Shop Drawings before being submitted for approval.
 7. Detailed installation drawings (sewers, equipment, piping, electrical conduits and controls, HVAC work, and plumbing, etc.) shall be drawn to scale and fully dimensioned.
 8. No material or equipment shall be purchased or fabricated until the required Shop Drawings have been submitted and approved. Materials and equipment and the work involved in their installation or incorporation into the Work shall then be as shown in and represented by the Shop Drawings.
 9. Until the necessary approval has been given, do not proceed with any portion of the work, the design or details of which are dependent upon the design or details of work, materials, equipment or other features for which approval is required.
 10. If submitted equipment requires modifications to the structures, piping, layout, or other details shown on the Drawings, details of the proposed modifications must also be submitted for approval. If such equipment and modifications are approved, perform all Work necessary to make such modifications at no additional cost to the Owner.
- B. Product Data: Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare-parts listing, and printed product warranties, as applicable to the Work.
- C. Samples and color selection charts: Provide sample, when requested by individual Specification to establish conformance with the Specifications, and as necessary to define color, texture and pattern selections available.
- D. Product Substitutions: In accordance with Section 01630.
- E. Operation and Maintenance Manuals: In accordance with Section 01770.
- F. Site Usage Plan: In accordance with Section 01140.

1.4 INFORMATIONAL SUBMITTALS

- A. Schedule of Submittals
1. Submit a preliminary Schedule of Submittals within 10 days of the Effective Date of the Agreement in accordance with Article 2.05 of Section 00700.
- B. Schedule of Manufacturers and Suppliers

1. Submit a schedule of manufacturers and Suppliers within 7 days after Notice to Proceed including the names and addresses of the manufacturers and Suppliers of materials and equipment to be incorporated into the Work.
- C. Schedule of Major Products
 1. Submit a schedule of major products within 30 days after Notice to Proceed including a complete list of major products proposed for use, with specification section number, name of manufacturer, trade name, and model number of each product.
- D. Product Listing and Manufacturers Qualifications
 1. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation and reference standards. Specifically identify the products, the anticipated schedule for delivery and storage, and the estimated value thereof for materials which the Contractor intends to request approval for off-site storage.
- E. Certificates of Compliance
 1. General:
 - a. Submit sworn certificates from the manufacturer or material supplier that the materials and fabrications provided under the Specification section conform with the Contract Documents.
 - b. Certificates shall be signed by an officer of the manufacturer's corporation and witnessed by a Notary Public.
 2. Welding: Submit in accordance with individual Specification sections.
 3. Installer: Prepare written statements on manufacturer's letterhead certifying that installer complies with requirements as specified in individual Specification sections.
 4. Material Test: Prepared by qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
 5. Certificates of Successful Testing or Inspection: Submit when testing or inspection is required by Laws and Regulations or governing agency, or when specified in individual Specification sections.
 6. Manufacturer's Certificate of Compliance: In accordance with individual Specification sections.

1.5 PROCEDURES

- A. Coordination
 1. Prepare and submit documentation in advance of fabrication and product manufacturer, so that the installation will not be delayed, other related work can be properly coordinated, and there is adequate time for review and resubmission, if required.
 2. Provide no less than 30 days for review of submittals from the time received by the Engineer. For submittals of major equipment, that require more than 30 days

to review, due to complexity and detail or those requiring review by multiple engineering disciplines, Engineer will notify Contractor of the circumstances and identify the anticipated date when the submittal will be returned.

3. Re-submittals will be subject to same review time.
 4. No extension of time will be authorized due to failure to provide approvable submittals sufficiently in advance of the Work.
- B. Review Shop Drawings, product data, and samples prior to submission and verify and determine:
1. Field measurements
 2. Conformance with the Contract Documents. Advise the Engineer in writing of any deviations from the requirements of the Contract Documents.
 3. Delete or strike out information that is not applicable to the Work.
- C. Upload the electronic submittal files via Procore. Access to Procore will be provided by the Engineer. Files must be in .pdf format. The submittals will be returned in electronic .pdf format via Procore.
- D. Numbering: Submissions shall be accompanied by a transmittal form referencing the project name and applicable Specification section. Submittals shall be numbered sequentially, with the applicable Specification section and a hyphen preceding the number. (e.g. Submittal number 11330-01). Resubmittals shall bear the same transmittal number with a revision number commencing with "1" (e.g. Submittal number 11330-01-1).
- E. Provide a copy of the Submittal Certification Form (copy attached at the end of this section) which shall be attached to every copy of each submittal as required under Article 7.16 A.2 of Section 00700. Apply the Contractor's stamp and initials or signature certifying that the submission has been thoroughly reviewed for completeness, compliance with the Contract Documents, coordination with adjacent construction and dimensional compatibility. Items submitted without the stamp or that are incomplete will be returned by the Engineer for rework and resubmission.
- F. Provide a copy of the PE Certification Form (copy attached at the end of this section) which shall be attached to every copy of each submittal stamped by another Professional Engineer. Items submitted without the completed certification form will be returned by the Engineer for resubmission.
- G. Distribute copies of reviewed submittals along with the Engineer's transmittal to concerned parties with instructions to promptly report any inability to comply with the provisions or integrate the requirements with interfacing work.
- H. Partial and Incomplete Submittals
1. Shop Drawings shall be submitted as a complete package by Specification section, unless otherwise reviewed and approved by the Engineer. It is the intent that all information, materials, and samples associated with each Specification section be included as a single submittal for the Engineer's review.
 2. Engineer will return entire submittals if preliminary review deems it incomplete including:
 - a. Missing or incomplete Submittal Certification Form

- b. Insufficient number of copies
 - c. Missing content
- 3. Partial submittals may be considered, at Engineer's option, only when necessary to expedite the Project.
- 4. Partial submittals shall be clearly identified as such on the transmittal to identify missing components.
- I. Submittals not required by the Specification will be returned without review or action code.
- J. Resubmission
 - 1. Make corrections and modifications required by the Engineer and resubmit until approved.
 - 2. Clearly identify changes made to submittals and indicate other changes that have been made other than those requested by the Engineer.
 - 3. A maximum of two re-submissions of each shop drawing will be reviewed, checked and commented upon without charge to the Contractor (total of 3 submittals). Any additional submissions which are required by the Engineer to fulfill the stipulations of the Contract Documents will be charged to the Contractor as described in paragraph 7.16.E.2 of Section 00700.
- K. Distribution
 - 1. Distribute approved Shop Drawings and approved product data to the Project Site and elsewhere as required to communicate the information to Suppliers, Subcontractors, and field personnel.

1.6 ENGINEER'S REVIEW

- A. The Engineer will review submittals for design, general methods of construction and detailing. The Engineer's review and approval of submittals shall not be construed as a complete check nor does it relieve the Contractor from responsibility for any departures or deviations from the requirements of the Contract Documents unless he has, in writing, called the Engineer's attention to such deviations at the time of submission. It will not extend to means, methods, technique, sequences, or procedures of construction (except where specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.
- B. The Engineer's review of the submittals shall not relieve the Contractor from the responsibility for proper fitting of the Work, or the responsibility of furnishing any work required by the Contract Documents which may not be indicated on the submittals. The Contractor shall be solely responsible for any quantities shown on the submittals.
- C. If the Contractor considers any correction indicated on the submittals to constitute a change to the Contract Documents, the Contractor shall provide written notice to the Engineer at least 7 working days prior to release for manufacture.
- D. When the submittals have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

- E. Action submittals as defined in paragraph 1.2 will be reviewed and returned under one of the following codes:
1. Approved (Action Code 1) is assigned when there are no notations or comments on the submittal. Equipment or materials may be released for manufacture, provided that it complies with requirements of the Contract Documents.
 2. Approved as Noted (Action Code 2) is assigned when there are notations or comments on the submittal, but the equipment or materials may still be released for manufacture. All notations and comments must be incorporated in the final product. Resubmission is not necessary.
 3. Revise and Resubmit (Action Code 3) is assigned when there are notations and comments requiring a resubmittal of the package. Work cannot proceed until the submittal is revised and resubmitted for review.
 4. Not Approved (Action Code 4) is assigned when the submittal contains non-specified items or does not meet the requirements of the Contract Documents. It may also be assigned when there is a significant amount of missing material required for the Engineer to perform a complete review. The entire package must be resubmitted, revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the requirements of the Contract Documents.
- F. Informational submittals as defined in paragraph 1.2 do not require approval by the Engineer. Such submittals will be returned under one of the following codes:
1. Receipt Acknowledged (Action Code 5) is assigned when the submittal is provided for documentation purposes and is acknowledged as received. Comments may be noted using this action code.
 2. Revise and Resubmit (Action Code 6) is assigned when there are notations and comments requiring a resubmittal of the package.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SUBMITTAL CERTIFICATION FORM

PROJECT: _____
ENGINEER: _____ ENGINEER'S PROJECT NO.: _____
CONTRACTOR: _____ CONTRACTOR'S PROJECT
NO.: _____

TRANSMITTAL NO.: _____ SUBMITTAL NO.: _____
SPECIFICATION NO.: _____ DRAWING NO: _____
DESCRIPTION: _____
MANUFACTURER: _____

The above referenced submittal has been reviewed by the undersigned and I/we certify that the materials and/or equipment meets or exceeds the project specification requirements; that field measurements, dimensions, quantities, specified performance criteria, installation requirements, materials, catalog numbers and related materials have been verified; that all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the work has been determined and verified; that review includes all information related to the contractor's sole responsibility for means, methods, techniques, sequences, and procedures of construction and safety; and item has been coordinated with the overall project with:

NO DEVIATIONS

A COMPLETE LIST OF DEVIATIONS AS FOLLOWS:

SUBMITTED BY: _____ DATE: _____

GENERAL CONTRACTOR'S STAMP

PE CERTIFICATION FORM

The undersigned hereby certifies that he/she is a Professional Engineer registered in the Commonwealth of Massachusetts and that he/she has been employed by

_____ to design
(Name of Contractor)

(Insert PE Responsibilities)

In accordance with Specification section _____ for the

(Name of Project)

The undersigned further certifies that he/she has performed the said design in conformance with all applicable local, state and federal codes, rules and regulations; and, that his/her signature and PE stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the

(Insert Name of Owner)

or Owner's representative within seven days following written request therefor by the Owner.

PE Name

Contractor's Name

Signature

Signature

Title

Title

Address

Address

SECTION 01450

QUALITY CONTROL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Quality assurance and control of the Work
 - 2. Testing and inspection services
 - 3. Product test reports
 - 4. Manufacturer's field service
- B. Related Requirements
 - 1. Section 01451 - Independent Testing Services
 - 2. Testing requirements are described in various Sections of the Project Manual.

1.2 SUBMITTALS

- A. Informational Submittals
 - 1. Product test reports

1.3 QUALITY ASSURANCE

- A. Monitor quality control over Suppliers, products, services, site conditions, and workmanship to produce Work of specified quality.
- B. Comply fully with manufacturer's instructions. Should these instructions conflict with the Specifications, request clarification from the Owner before proceeding.
- C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or requirements indicate higher standards or more precise workmanship.

1.4 TESTING SERVICES FURNISHED BY CONTRACTOR

- A. Furnish all testing services required for materials and equipment proposed to be used in the Work, and quality control tests made in the field including:
 - 1. Concrete materials and mix designs
 - 2. Concrete in place
 - 3. Modified proctor analyses for all borrow materials used on the Project
 - 4. Modified proctor analysis of all subgrade material to be compacted during surface preparation and fine grading and compaction work
 - 5. Sieve analyses for all borrow materials used on the Project
 - 6. Soil structure and nutrient analyses for all loam and topsoil used on the Project

7. Compaction tests performed during trench backfilling and compaction, rough grading and site preparation, fine grading and compaction of roadway and sidewalk subgrades, and placement of roadway and sidewalk subbase materials
 8. Design of asphalt mixtures
 9. Asphalt in place
 10. All other tests and engineering data as required in the Contract Documents.
- B. Testing agencies must meet the requirements of Section 01451.
 - C. An independent commercial testing laboratory, with current Massachusetts certification, shall perform all tests that require the services of a laboratory to determine compliance with the Contract Documents. Independent testing laboratory requirements are defined under Section 01451.
 - D. Secure and deliver the required number of samples to the laboratory as required by the Contract Documents.
 - E. Notify Owner and Engineer of time, location and material being sampled.
 - F. Schedule necessary testing laboratory services.
 - G. Furnish written reports of each test within 48 hours of completion of testing.
 - H. Notify the Engineer 48 hours prior to operations requiring inspections and laboratory testing services so the Engineer may witness testing. All failed test areas shall be re-worked and re-tested until passing results are obtained.
 - I. The Owner may hire its own independent testing laboratory for quality control tests made in the field or laboratory on materials and equipment during and after their incorporation in the Work. Cooperate with the Owner and independent testing laboratory and furnish samples of materials, design, mix, equipment, tools, storage, and assistance as requested.
 - J. Re-work all failed test areas until passing results are obtained. All re-tests required as a result of the Contractor's failure to perform the work in accordance with the Contract Documents shall be at the Contractor's expense.

1.5 PRODUCT TEST REPORTS

- A. Submit 2 copies of product test reports where required by the Contract Documents.

1.6 SUPPLIERS' FIELD SERVICE

- A. Provide qualified field service and installation personnel from material and equipment Suppliers to observe site conditions, installation techniques, quality of workmanship, equipment start-up, adjustment, and performance test where required by the Contract Documents. Observations are to be reported and incorporated in the Work procedures.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01451

INDEPENDENT TESTING SERVICES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Independent testing services including geotechnical and concrete inspection and testing
 - 2. Testing laboratory services
- B. Related Requirements
 - 1. Special Provisions
 - 2. MassDOT Standard Specifications for Highways and Bridges 2026

1.2 REFERENCES

- A. General
 - 1. ASTM E329 – Standard Specifications for Agencies Engaged in the Testing and/or Inspection of Materials used in Construction
- B. Soil Testing
 - 1. American Association of State Highway and Transportation Officials (AASHTO)
- C. Concrete Testing
 - 1. Cement and Concrete Reference Laboratory (CCRL)

1.3 SUBMITTALS

- A. Informational Submittals
 - 1. Qualifications, experience, and certifications of each proposed testing service
 - 2. Certificate of calibration for testing equipment
 - 3. Inspection and test reports

1.4 QUALITY ASSURANCE

- A. General
 - 1. Comply with the requirements of Section 01450, Quality Control, for testing and inspection requirements.
 - 2. Testing services shall have the following general qualifications:
 - a. Minimum five years as a firm with the type of testing specified.
 - b. Ability to provide timely field testing services to minimize the impact of the testing requirements on construction progress.

- c. Certification to perform the specified services in the state in which the Work is to be performed.
- 3. Testing services proposed by the Contractor shall be subject to review by the Owner and Engineer. Any testing firm not acceptable to the Owner or Engineer will be rejected.
- B. All testing agencies and laboratories must meet the requirements of ASTM E329.
- C. Testing company shall have been in business for a minimum of the last 5 years providing applicable testing services.
- D. Testing equipment shall be calibrated at maximum 12 month intervals by devices of accuracy traceable to National Bureau of Standards. Submit copy of certificate of calibration made by accredited calibration agency.
- E. Testing shall be in accordance with applicable codes and regulations referenced in individual Specification Sections, and with selected standards of the American Society for Testing and Materials.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 TESTING SERVICES – GENERAL

- A. Provide testing services meeting the following:
 - 1. Provide qualified personnel promptly on notice.
 - 2. Perform inspections required by the Contract Documents. Sample and test materials and observe methods of construction to determine compliance with applicable standards and with the requirements of the Contract Documents.
 - 3. Take specimens and samples for testing, as required in individual Specification Sections. Provide all sampling equipment and deliver all specimens and Samples.
 - 4. Promptly notify the Owner and the Engineer of irregularities or deficiencies in the Work which are observed during performance of services.
 - 5. Promptly submit 2 copies of reports of inspections and tests to the Owner, and one copy to the Engineer including:
 - a. Date issued
 - b. Project title and number
 - c. Testing laboratory or agency name and address
 - d. Name and signature of inspector
 - e. Date of inspection or sampling
 - f. Record of temperature and weather
 - g. Date of test
 - h. Identification of product and Specification Section
 - i. Location of Project

- j. Type of inspection or test
 - k. Results of tests and observations regarding compliance with Contract Documents
- B. Perform additional tests and services as required to assure compliance with the Contract Documents.
- C. Obtain Owner's approval of testing laboratory before performing testing services.
- D. Coordinate with testing laboratory.
- 3.2 GEOTECHNICAL TESTING
- A. Provide field testing and laboratory services for geotechnical soil testing required the Special Provisions or the MassDOT Standard Specifications.
- 3.3 CONCRETE TESTING
- A. Provide qualified independent field and laboratory testing service to perform the concrete testing required the Special Provisions or the MassDOT Standard Specifications.
- B. The concrete testing laboratory shall have been inspected by the CCRL within the past five years.
- C. The testing laboratory shall be licensed by the Commonwealth of Massachusetts.
- D. Field testing technicians shall have a Grade 1 concrete field technician license as issued by the American Concrete Institute (ACI).
- 3.4 COORDINATION WITH TESTING LABORATORY
- A. Provide testing laboratory personnel access to site and manufacturer's operations.
- B. Provide laboratory with representative samples of materials to be tested in required quantities.
- C. Furnish labor and facilities:
- 1. To provide access to Work to be tested.
 - 2. To facilitate inspections and tests.
 - 3. For laboratory's exclusive use for storage and curing of test samples.
 - 4. to provide forms for preparing concrete test beams and cylinders.
- D. Notify laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.
- E. Arrange with laboratory and pay for additional inspections, samples, and tests required for Contractor's convenience.

END OF SECTION

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SECTION 01520

CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Field office
 - 2. Temporary sanitary and first-aid facilities

1.2 QUALITY ASSURANCE

- A. Maintain temporary construction facilities in proper and safe condition throughout the progress of the Work.

1.3 TEMPORARY SANITARY AND FIRST AID FACILITIES

- A. Provide suitably enclosed chemical or self-contained toilets for the use of the labor force employed on the Work. Toilets shall be located near the Work sites and secluded from observation insofar as possible. Toilets shall be serviced weekly, kept clean and supplied throughout the course of the Work.
- B. Contractor shall enforce proper use of sanitary facilities.
- C. Use of the Owner's sanitary facilities by the Contractor is prohibited.
- D. Provide a first aid station at the site.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01550

TRAFFIC REGULATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Traffic requirements
 - 2. Traffic officers

1.2 PAYMENT PROCEDURES

- 1. Refer to the Special Provisions for procedures relating to payment for the Work.
- 2. Schedule, document and pay for traffic officers if they are required. Contractor will be reimbursed for payment of traffic officers only after invoices have been paid.
- 3. Owner will deduct from monies due Contractor for the following abnormal and unreasonable expenses:
 - a. Contractor caused delays in the prosecution of work that result in hiring traffic officers for more hours than would have been required during normal prosecution of work.
 - b. Reconstruction and/or reinstallation of any portions of the work, as a result of improper initial installation or defective material, for which traffic officers are required.
 - c. Traffic officers required at a site where Contractor is not working or outside of Contractor's standard work day as a result of obstructions to traffic that remain in the traveled way.
 - d. All other incidents resulting from Contractor's operations requiring traffic officers that would not normally be encountered during the progress of a well-organized project employing proper construction methods.
 - e. When traffic officers are requested for the convenience of Contractor and are not otherwise considered necessary to the work.

1.3 REFERENCES

- A. Manual of Uniform Traffic Control Devices, U.S. Department of Transportation

1.4 TRAFFIC REQUIREMENTS

- A. Adhere to all applicable City of North Adams ordinances that relate to traffic control.
- B. Provide a traffic control plan to Engineer for approval showing traffic control signs, barrels, cones, traffic officers, including detour signs, meeting the approval of Engineer, Owner and local Police Departments in accordance with the Manual of Uniform Traffic Control Devices.
- C. Determine the location of each day's work and implement the approved traffic control plan. If the plan requires the use of traffic officers, notify the Police Department.

- D. Contractor shall have no claim of delay if he does not notify the Police Department of his scheduled location in time to arrange for traffic officers.
- E. Hand deliver written notice to individual houses affected by driveway and side road closings or detours a minimum 24 hours in advance. A recommended parking area outside the work limits shall be included in the notice.

1.5 TRAFFIC OFFICERS

- A. Uniformed traffic officers shall be required at locations deemed necessary by Owner, working in conjunction with local Police and Fire Departments, for the protection of the public.
- B. The Police Chief or his representative, in consultation with Owner's representative, will determine the number of officers required for the work.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01570

TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Dust control
 - 2. Drainage and erosion control
 - 3. Compost filter tubes
 - 4. Sediment trapping devices
- B. Related Requirements
 - 1. Special Provisions

1.2 SUBMITTALS

- A. Informational Submittals
 - 1. Materials proposed for use in dust control
 - 2. Compost filter tubes and sediment trapping devices

PART 2 PRODUCTS

- A. See Special Provisions and MassDOT Standard Specifications

PART 3 EXECUTION

3.1 DUST CONTROL

- A. Control dust during the Work. Use a mechanical street sweeper daily.
- B. Prevent dust from becoming a nuisance or hazard. During construction, excavated material and open or stripped areas are to be policed and controlled to prevent spreading of the material.
- C. Control dust during the work on-site using calcium chloride and/or water.
- D. During the Work on-site, all paved road and driveway surfaces shall be scraped and broomed free of excavated materials on a daily basis. The surfaces shall be hosed down or otherwise treated to eliminate active or potential dust conditions and the natural road or wearing surface shall be exposed.

3.2 DRAINAGE AND EROSION CONTROL

- A. Control erosion and siltation during the construction through mulching, haybales, siltation fencing, diversion and control of storm water run-off, ponding areas and similar methods.
- B. Provide and maintain sediment trapping systems.

- C. Discharge surface runoff from any disturbances to the site into silt containment basins. Utilize siltation prevention measures including haybale and geotextile fences before discharge to drainage systems.
- D. Install sediment trapping devices in catch basins located in existing paved areas with sediment trapping devices to minimize the transport of sediment through the subsurface stormwater collection system.

3.3 COMPOST FILTER TUBES

- A. See the Special Provisions

3.4 RESTORATION

- A. Provide erosion control, seed and mulch and netting for surface restoration of areas disturbed during construction activities.
- B. Provide temporary stabilization of disturbed areas that remain inactive greater than 14 consecutive days to minimize erosion. Methods to minimize erosion may include but are not limited to:
 - 1. Spreading straw and/or providing temporary planting stabilization.
 - 2. Installing jute netting.
 - 3. Preparing surfaces to increase the runoff flow path, reduce the runoff flow velocity, or create small storage pockets to retain surface flows. Methods of accomplishing this include using mechanical devices such as track equipment or sheep's foot rollers.
- C. Restore the ground surface in brush and/or woodland areas by machine spreading of existing stripped surface soils (loam and humus), liming, fertilizing, seeding and mulching, as well as installing jute netting where required by steep slopes.
- D. Salvage existing loam and topsoil and stockpile this material for re-spreading where originally removed. On backfilling, grading shall be returned to preconstruction contours and the stockpile of loam shall be spread over areas disturbed during construction activities.
- E. Place mulch on seeded areas. Use jute netting on areas having a slope greater than 3 horizontal to 1 vertical, to anchor the mulch until a satisfactory growth is obtained. If seeding is not possible because of the time of the year, apply mulch and netting to stabilize the area until such time as seed can be sown.
- F. Provide grading, refertilizing, reseeding, remulching and/or netting to maintain the restored areas until the Work is accepted by the Owner.
- G. Seed shall be as specified under the requirements of Item 765.

3.5 CLEANING

- A. Remove any sediment that builds up around the haybales or catch basins.
- B. Clean sediment trapping devices periodically during the Work. Devices shall be cleaned on a weekly basis, or more frequently if the devices become clogged.
- C. Clean catch basins that collect sediment as a result of the Work.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Products and Materials
 - 2. Product Delivery Requirements
 - 3. Packaging, Handling and Storage Requirements
 - 4. Inspection of Offsite Work

1.2 QUALITY ASSURANCE

- A. Review all contract Drawings and Specifications with respect to specific system characteristics, applicability of materials and equipment for the intended purposes, sizes, orientation, and interface with other systems, both existing and proposed, and certify that the materials and equipment proposed will perform as specified prior to submitting shop drawings.
- B. Provide sworn certificates as to quality and quantity of materials where specified or requested by the Engineer.
- C. Obtain concurrence of the Engineer prior to processing, fabricating, or delivering material or equipment.

1.3 PRODUCTS AND MATERIALS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by a single manufacturer unless specified otherwise.
- B. Use only new and first quality material in the Work. Material shall conform to the requirements of these Specifications and be approved by the Engineer. If, after trial, it is found that sources of supply that have been approved do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the Contractor shall furnish approved materials from other approved sources.
- C. Immediately remove defective materials and equipment from the site, at no additional cost to the Owner. The Contractor may be required to furnish sworn certificates as to the quality and quantity of materials before materials are incorporated in the Work.
- D. Engineer has the right to approve the source of supply of all material prior to delivery.

1.4 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

- D. Progressively deliver materials and equipment to the Site so there will be neither delay in progress of the Work nor an accumulation of material that is not to be used within a reasonable time.
- E. Deliver products to the Site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to the manufacturer, grade, quality, source, and other pertinent information.

1.5 PACKAGING, HANDLING AND STORAGE REQUIREMENTS

- A. Provide storage and handling of all materials and equipment required for the Work.
- B. Except as otherwise indicated in the Contract Documents, determine and comply with the manufacturer's recommendations on product storage, handling, and protection. Provide manufacturer's documentation on recommended storage procedures when requested by the Engineer.
- C. Properly store and protect all equipment immediately upon its arrival. All equipment shall be stored in a clean, dry, heated, secured, and insured indoor facility satisfactory to the Engineer. Equip drive motors with thermostatically controlled strip heaters. Outdoor storage with plastic, canvas, plywood or other cover will not be allowed except where specific approval for designated items not containing electrical components or bearings is obtained from the Engineer. This approval does not relieve the Contractor of responsibility for proper protection of materials.
- D. Familiarize workmen and subcontractors with hazards associated with materials, equipment, and chemicals specified herein and take all necessary safety precautions.
- E. Areas available on the construction site for storage of material and equipment shall be as shown on the Drawings or approved by the Owner.
- F. Materials and equipment to be incorporated in the Work shall be handled and stored by the manufacturer, fabricator, supplier, and Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft, or damage of any kind to the material or equipment.
- G. Protect finished surfaces including floor surfaces, stairs, joints, and soffits of passageways from damage until accepted by the Engineer.
- H. Promptly remove materials from the site of the Work which have become damaged or are unfit for the use intended or specified. The Contractor will not be compensated for the damaged materials or their removal costs.
- I. Handle, haul, and distribute all materials and all surplus materials on the different portions of the Work, as necessary or required. Provide suitable and adequate storage room for materials and equipment during the progress of the Work, and be responsible for the protection, loss of, or damage to materials and equipment furnished, until the final completion and acceptance of the Work.
- J. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

- K. All materials and equipment to be incorporated in the Work shall be placed so as to not damage any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Keep materials and equipment neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to the Owner.
- L. No material or equipment will be permitted to be stored in any of the Owner's facilities, unless otherwise approved by the Engineer.
- M. Do not store material or equipment in any wetland or environmentally sensitive area. Stockpile sites shall be level, devoid of mature stands of natural vegetation, and removed from drainage facilities and features, wetlands, and stream corridors.
- N. Contractor shall be fully responsible for loss or damage to stored materials and equipment.
- O. No item judged rusty, corroded or otherwise damaged during storage will be accepted. Any electrical or instrumentation item determined by the Engineer to be damaged shall be removed from the Site and replaced by a completely new item in first class condition. Items not properly stored will not be considered for any partial payment.
- P. Provide protective and preventive maintenance during storage consisting of manually exercising equipment where required, inspecting mechanical surfaces for signs of corrosion or other damage, lubricating, applying any coatings as recommended by the equipment manufacturer as necessary for its protection and other precautions as necessary to assure proper protection of equipment stored.
- Q. Treat ferrous surfaces not receiving finish coats of paint with rust preventive coating, and protect non-ferrous metal work and devices with suitable wrappings.

1.6 INSPECTION OF OFFSITE WORK

- A. The Owner and Engineer will inspect Work performed away from the construction site during fabrication, manufacture, or testing, or before shipment. Give 2 weeks written notice regarding the place and time where such fabrication, manufacture, testing, or shipping will be done.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01630

PRODUCT SUBSTITUTION DURING CONSTRUCTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Product substitution procedures

1.2 CONTRACTOR'S OPTIONS

- A. For materials or equipment (hereinafter products) specified only by performance or reference standard, select product meeting that standard, by any Supplier. To the maximum extent possible, provide products of the same generic kind from a single source.
- B. For products specified by naming several products or manufacturers, select any one of the products or Suppliers named, which fully complies with the Drawings and Specifications. Another "or-equal" product can also be considered by the Engineer if it complies with the provisions of Article 7.04, Section 00700. If a product proposed by the Contractor does not qualify as an "or-equal" item, then it can be considered as a proposed substitute item, and the Contractor must comply with the requirements of Article 7.05, Section 00700.
- C. For products specified by naming products or manufacturers and followed by words indicating that no "or-equal" item or substitution is permitted, there is no option and no substitution will be allowed.
- D. Where more than one choice is available as a Contractor's option, select product that is compatible with other products already selected or specified.

1.3 SUBSTITUTIONS

- A. If in the Engineer's sole discretion a product proposed by the Contractor does not qualify as an "or-equal" item under the provisions of Article 7.04 of Section 00700, it can be considered a proposed substitute item. Submit information required under Article 7.05, Section 00700 for proposed substitutes.
- B. The Engineer will consider written requests from the Contractor for substitutions within 30 days after the Notice to Proceed. After this period, requests will be considered only in case of unavailability of product or other conditions beyond control of the Contractor.
- C. Submit 5 copies of request for substitutions. Submit a separate request for each proposed substitution. In addition to the submittal requirements outlined in Article 7.05 of Section 00700, include the following in each substitution request:
 - 1. For products or Suppliers:
 - a. Product identification, including Supplier & manufacturer's name and address.
 - b. Manufacturer's literature with product description, performance and test data, and reference standards.
 - c. Samples, if appropriate.

- d. Name and address of similar projects on which product was used, and date of installation.
- 2. For construction methods (if specified):
 - a. Detailed description of proposed method.
 - b. Drawings illustrating method.
- 3. Such other data as the Engineer may require to establish that the proposed substitution is equal to the product, Supplier or method specified.
- D. The substitution request shall include written certification and statements that are outlined in Article 7.05 of Section 00700.
- E. A request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 - 2. Will provide same or better guarantees, warranties or bonds for proposed substitution as for specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives all claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities having jurisdiction.
- F. A proposed substitution will not be accepted if:
 - 1. Acceptance will require changes in the design concept or a substantial revision of the Contract Documents.
 - 2. It will delay completion of the Work.
 - 3. It is intended or implied on a Shop Drawing and is not accompanied by a formal request for substitution from the Contractor.
- G. The Contractor is responsible for all costs relating to substitution requests.
- H. Approval of a substitution does not relieve the Contractor from the requirement for submission of Shop Drawings as set forth in the Contract Documents.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01725

PRESERVATION AND RESTORATION OF PROJECT FEATURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Protection and replacement of trees, shrubs, signs, property markers, fences, and related project features.
2. Taking precautions, providing programs, and taking actions necessary to protect public and private property and facilities that are outside the demolition scope from damage.

1.2 DEFINITIONS

A. Underground Structures

1. Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, and manholes, chambers, electrical and signal conduits, tunnels and other existing subsurface work located within or adjacent to the limits of the Work.
2. Underground structures known to the Engineer are shown on the Drawings to the extent that locations are available. This information is shown for the assistance of the Contractor in accordance with the best information available, but is not guaranteed to be correct or complete. The Contractor shall be responsible for checking on the actual locations of water, sewer, gas electric and telephone service connection lines to avoid potential interferences.

B. Surface Structures

1. Surface structures are defined as existing buildings, structures and other facilities above the ground surface. Included with such structures are their foundations or any extension below the surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks and all other facilities that are visible above the ground surface.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 REPAIR/RESTORATION

- A. Trees, shrubs, and similar items shall not be removed except where indicated on the drawings or as necessary to access the required demolition work, as approved by the Engineer. Items to be removed shall be clearly marked as directed by the Engineer. If objects not to be removed are damaged or removed, they shall be repaired or replaced to their original condition.
- B. Trees and shrubs on private property, which are removed or damaged by the Contractor shall be replaced in kind.

- C. Signs, fences, property markers, walls, guard rails and other public or private property that are outside the demolition scope shall be replaced in kind if damaged. Supports and protective devices required shall be provided.
- D. Underground and Surface Structures
 - 1. In the event of damage, injury or loss to existing utilities and structures that were not indicated to be removed or abandoned, whether shown on the Drawings or not, make all reasonable efforts to facilitate repairs and to mitigate the impact of such events upon the utility or structure owner's normal operations. Restore the existing utility or structure to the condition required by the owner of the utility or structure or at least to the condition found immediately prior to the Work. In the event that the utility owner elects to make the repairs, provide all reasonable access and assistance, and reimburse the utility owner for the cost of repairs. If utility service is interrupted due to damage to facilities, alternate facilities shall be provided.
 - 2. All other existing surface facilities, including but not limited to, guard rails, posts, guard cables, signs, poles, markers and curbs which are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at the Contractor's expense unless otherwise indicated in other sections of these specifications.
 - 3. Wherever water, sewer, gas or petroleum mains, electric or telephone lines, cables or other utilities and structures are encountered and may be in any way interfered with, inform the Engineer and the appropriate utility company. Cooperate with the Engineer and utility company in the protection, removal, relocation, and replacement of structures and facilities.
 - 4. Prior to proceeding with any demolition or construction, notify in writing owners of utilities and structures within the vicinity of the proposed Work.
 - 5. Work affecting water distribution systems, which will take fire hydrants out of service, must be coordinated with the local fire department. The Contractor shall be prepared to restore fire flows in the event of an emergency or to provide for temporary fire flow service in accordance with the requirements of the local fire department.
 - 6. Materials used for relocation or replacement of utilities and structures shall be of an equivalent material, type, class, grade and construction as the existing or as approved by the respective owners thereof, unless otherwise shown or specified.
 - 7. When any survey monument or property marker, whether of stone, concrete, wood or metal, is in the line of any trench or other demolition or construction work and may have to be removed, notify the Engineer in advance of removal. Under no circumstances shall any monument or marker be removed or disturbed by the Contractor or by any of his Subcontractors, employees or agents, without the permission of the Engineer. Monuments or markers removed or disturbed shall be reset by a land surveyor licensed in the State where the Work is located at the Contractor's expense. Should any monuments or markers be destroyed through accident, neglect or as a result of the Work under this Contract, the Contractor shall, at his own expense, employ a land surveyor licensed in the State where the Work is located to re-establish the monument or marker.

3.2 PROTECTION

- A. The construction of certain portions of the project may require excavation within the root systems of trees. Roots with a diameter of 2 inches or more within the excavation shall not be cut. If necessary, excavation shall be made with small powered equipment or by hand to comply with this requirement. It may be necessary to excavate from more than one direction to avoid damage to the roots.
- B. The trunks of trees that are to remain and are within the swing radius of the excavating machine bucket when fully extended shall be wrapped with burlap and 2 inch by 4 inch protective wood slats (8 inch spacing maximum) wired around the circumference of the trees to protect them from damage.
- C. Tree limbs shall not be cut except upon written approval of the Owner and the Engineer. Tree limbs cut shall be painted with approved forestry paint manufactured specifically for that purpose.
- D. Underground and Surface Structures
 - 1. Sustain in their places and protect from direct or indirect injury underground and surface structures designated to remain within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure. Before proceeding with the work of sustaining and supporting such structure, satisfy the Engineer that the methods and procedures to be used have been approved by the party owning same.
 - 2. Pay utility service company charges related to the temporary support of utility poles if required to complete the Work.
 - 3. Assume risks associated with the presence of underground and surface structures within or adjacent to the limits of the Work. The Contractor shall be responsible for damage and expense for direct or indirect injury caused by his Work to any structure. Immediately repair damage caused by the Work to the satisfaction of the owner of the damaged structure.

END OF SECTION

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SECTION 01770

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Documentation required for the transfer of the completed Work to the Owner
2. Final Cleaning

1.2 SUBMITTALS

A. Closeout Submittals

1. As-built drawings
2. Evidence of payment and release of liens
3. List of Subcontractors, service organizations, and principal vendors

1.3 SUBSTANTIAL COMPLETION

- A. Refer to Article 15.03 in 00700, General Conditions, for procedures relating to obtaining Substantial Completion. Refer to 00520, Agreement, for Contract Times.

1.4 PROJECT CLOSEOUT DOCUMENTS

- A. As-Built Drawings - Submit as-built drawings for review, approval, or comment. The as-built drawings shall show the completed work, including all deviations from the original Drawings. As-built drawings shall depict the location of all piping installed under this Contract, as well as field changes. Take swing ties to all underground work from a minimum of two horizontal locations. Vertical dimensions to all below grade work shall also be obtained. All fittings, bends, valves and other appurtenances shall be shown. At a minimum, the following information shall be shown on the as-built drawings.
 1. Ties to all buried fittings (including tees, crosses, bends, reducers, wyes, offsets, adapters, sleeves, caps, plugs), valves, services and structures from two horizontal measurements to permanent surface reference points, and depth below permanent grade. Permanent surface reference points are manholes, catch basins, power poles, and above-grade structures.
 2. Ties to all surface structures (including manholes, catch basins, vaults, valve boxes, hydrants, curb stops, cleanouts, wet wells, outlets, etc.) from two horizontal measurements to permanent surface reference points. Re-station surface structures if stationed on Drawings.
 3. Ties to other utility crossings, abandoned pipelines, and sewer service stubs, from two horizontal measurements to permanent surface reference points include depth below permanent grade and spacing between crossing utilities.
 4. Invert and rim elevation of all gravity pipelines and structures including manholes, catch basins, below-grade structures, wet wells, septic tanks and distribution boxes as appropriate.

5. Depth of ledge at changes in profile but not more than 25-foot intervals.
 6. Changes to pipe size and materials.
- B. Provide warranties and bonds for items so listed in pertinent sections of the Project Manual.
 - C. Provide evidence of compliance with requirements of governmental agencies having jurisdiction.
 - D. As specified in Article 15.06.A of Section 00700, provide evidence that all Work, materials and equipment will pass to Owner free and clear of any Liens or other title defects upon final payment. Such evidence may take the form of receipts or releases from all Subcontractors and Suppliers and an affidavit from Contractor as to the completeness of the receipts and releases as described in Section 00700 Article 15.06.A.3.
 - E. Provide list of Subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

1.5 FINAL PAYMENT

- A. Refer to Article 15.05 and 15.06 in 00700, General Conditions, for procedures relating to final inspection and payment.
- B. The Contract shall be considered complete and final payment made, only when:
 1. All provisions of the Contract Documents have been strictly adhered to.
 2. The project and premises have been left in good order, including removal of all temporary construction, Contractor-owned and extraneous materials.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 CLEANING

- A. Remove and entirely dispose of material or debris that has washed, flowed or has been placed in existing watercourses, ditches, gutters, drains, pipe, or structures, for work done under the Contract work limits. Leave ditches, channels, drains, pipes, structures, and watercourses in a clean and neat condition upon completion of the Work.
- B. Restore or replace any public or private property damaged or removed during the course of the Work. Property shall be returned to a condition at least equal to that existing immediately prior to the beginning of operations. Complete all highway or driveway, walk, and landscaping work using suitable materials, equipment and methods. Perform restoration of existing property, signs or structures promptly as work progresses; do not leave restoration work until the end of the Contract Time.

END OF SECTION

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SPECIAL PROVISIONS

SPECIAL PROVISIONS

City of North Adams

Walnut Street Retaining Wall Repairs

SCOPE OF WORK

All work under this contract shall be done in conformance with the *Commonwealth of Massachusetts Department of Transportation Standard Specifications for Highways and Bridges* 2026 Edition as amended, the *Construction Standard Details as of June 2026*, the *2015 Overhead Signal Structure and Foundation Standard Drawings*, *MassDOT Traffic Management Plans and Detail Drawings*, the latest *Manual on Uniform Traffic Control Devices for Streets and Highways with Massachusetts Amendments*, the *1990 Standard Drawings for Signs and Supports*, the *1968 Standard Drawings for Traffic Signals and Highway Lighting*, and the latest edition of the *American Standard for Nursery Stock*, will govern.

All Massachusetts Department of Transportation (MassDOT) documents can be found online at: <https://www.mass.gov/massdot-highway-division-manuals-and-publications>

DISPOSAL OF SURPLUS MATERIALS

Surplus material obtained from any type of excavation, and not needed or suitable for further use as determined by the Engineer shall become the property of the Contractor and shall be removed from the site during the construction period and disposed of legally. The removal and disposal of surplus material shall adhere to the regulations and requirements of local authorities governing the disposal of such materials, at no additional compensation. Suitable materials obtained from other work items shall be incorporated into the work as fill material at appropriate locations as determined by the Engineer. Suitable materials from other work items will not be measured for payment under appropriate fill items.

MATERIAL REMOVED AND STACKED

The Contractor shall carefully remove, transport and stack all material that, in the opinion of the Engineer, is salvageable. The material shall be stacked at the DPW facility. The Contractor shall coordinate with the City of North Adams to schedule drop-off times identify locations for stacking materials. The Town has the right to reject any and all materials, even those identified for stacking, at which time they will become the property of the Contractor and be removed from site for no additional compensation.

TRAFFIC CONTROL

The Contractor shall provide traffic controls for construction operations in accordance with applicable MassDOT and Federal Standards, Section 850, and the details included on the drawings at no additional compensation. The Contractor will be reimbursed for traffic police required by the Police Department under Item 880. and safety signing under Item 852. All other traffic control devices shall be incidental to the project costs.

ARCHITECTURAL ACCESS BOARD TOLERANCES

The Contractor is hereby notified that they are ultimately responsible for constructing all project elements in strict compliance with the current Architectural Access Board (AAB)/Americans with Disabilities Act (ADA) rules, regulations and standards.

All construction elements in this project associated with sidewalks, walkways, pedestrian curb ramps and curb cuts are controlled by 521 CMR - Rules and Regulations of the Architectural Access Board.

The AAB Rules and Regulations specify maximum slopes and minimum dimensions required for construction acceptance. There is no tolerance allowed for slopes greater than the maximum slope nor for dimensions less than the minimum dimensions.

DRAINAGE & SANITARY SEWER

It shall be the Contractor's responsibility to maintain drainage and sanitary sewers functioning properly in the areas under construction prior to the time when the final system is put into use. All pipes and structures within the limits of this Contract shall be left in a clean and operable condition at the completion of the work. All work shall be included under the relevant drainage and sanitary sewer items without additional compensation. Any adjustments made to new drainage or sanitary sewer structures will be included under the Contract unit price for each respective structure.

Where new pipe is shown on the drawings to be connected into an existing structure to remain, the existing structure shall be first cleaned to remove all debris and other material. The existing structure wall shall be carefully and neatly cored to provide the minimum size opening required for the insertion of the new pipe. The proposed pipe end shall be set or cut off flush with the inside face of the existing structure wall and the remaining space around the pipe completely filled with cement grout for the full thickness of the structure wall. No separate payment will be made for connecting to existing structures.

Existing shaped inverts shall be reconstructed as necessary to provide a smooth and uniform flow channel from the new pipe through the existing structure.

All existing pipes to be abandoned shall be plugged with brick masonry not less than 8 inches in thickness in conformance with the Standard Specifications, Section 201.62 at no additional cost.

Contractor shall perform video inspection of all manholes and connected pipes immediately following cleaning. Camera speed shall not exceed 30-ft per minute. Video output should be recorded in high-quality digital formats (such as MPEG2 or better). On-screen displays or voice-overs must log the date, street name/number, camera direction, and pipe material. There will be no additional payment for this work.

BORROW MATERIAL TESTING

In accordance with MassDOT requirements and the following:

Contractor shall provide representative samples of borrow materials taken from the source. Tag, label, and package the Samples as requested by Engineer. Provide access to the borrow site for field evaluation and inspection.

Provide sieve analysis (ASTM C136) from certified soils testing laboratory for all borrow materials. Take and test a sample, at no additional cost to the Owner for each 500 CY of borrow material placed. The Engineer reserves the right to require more frequent testing than that which is specified above should the borrow characteristics change.

Contractor shall provide modified proctor analysis (ASTM D1557) and soil classification (ASTM D2487) from certified soils testing laboratory for all borrow or backfill materials, inclusive of excess material reused on site as backfill, at the frequency specified above at no additional cost to the Owner.

SOIL COMPACTION TESTING

In accordance with MassDOT requirements and the following:

Contractor shall provide compaction test results (i.e. ASTM D6938 or ASTM D1556) at a frequency of one test for every 200 cubic yards of material backfilled or at a minimum of one test per lift. The Engineer will determine the locations and lifts to be tested. Additional compaction testing may be required when there is evidence of a change in the quality of moisture control or the effectiveness of compaction.

SAWCUTTING ASPHALT AND CONCRETE PAVEMENT

In accordance with MassDOT Standard Specifications and the following:

The work shall include sawcutting existing asphalt or cement concrete as required to provide a smooth and uniform joint between existing pavement to remain and new pavement proposed. Sawcutting pavement will include all cutting required to reach the aggregate subbase regardless of depth. Sawcuts required for execution of the work shall be considered incidental to the project cost.

EROSION/SEDIMENTATION CONTROL

All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the Contractor or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The Contractor shall immediately control any erosion problems that occur at the site and shall also immediately notify the Engineer who reserves the right to require additional erosion and/or damage prevention controls s/he may deem necessary.

Contractor is responsible for dust control during the Work in accordance with Section 01570. The cost of materials, equipment, and labor associated with dust control are considered incidental to the project cost.

ITEM 120.**EARTH EXCAVATION****CUBIC YARD**

The work under this item shall conform to the relevant provisions of Section 120 of the Standard Specifications and the following:

The work shall include removal and legal disposal of all materials obstructing the execution of scheduled work as shown on the Drawings and/or as directed by the Engineer, except those materials for which payment is made as part of other items of this Contract.

Work shall also include, but is not limited to, the removal of existing stone/masonry walls, pipes, asphalt, concrete pads, foundations, slabs, buried brick, cobblestones, masonry, tracks and ties, timber, cinders, or materials from previous constructions if encountered. In addition, work under this item may include the removal and discarding of existing fences, curb, curb corners, and curb inlets not to be removed and reset or removed and stacked.

Should unsatisfactory subgrade material be encountered, the Engineer may direct that excavation be carried to the depth of satisfactory material and be backfilled with suitable borrow.

Suitable material from earth excavation shall be incorporated into the project as fill at locations approved by the Engineer. Unsuitable material shall be removed and disposed by the contractor.

Method of Measurement

Earth excavation will be measured by the cubic yard, from existing grades to the bottom of the required subgrade. Depth of excavation shall be limited to the depths required to install the work unless additional depths to remove unsuitable material is approved by the Engineer.

All excavation for storm water basins, piping, structures, and clearing and grubbing (including stumps) shall be inclusive to the respective items and will not be measured for payment under Item 120.

Basis of Payment

Payment will be paid for at the Contract unit price per cubic yard, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

All excavation for proposed pipe, structures, curbing, and clearing and grubbing (including stumps) will be paid for separately under its respective Contract item.

ITEM 127.1**REINFORCED CONCRETE EXCAVATION****CUBIC YARD**

The work performed under these items shall conform to the relevant provisions of Section 120 and the following:

Reinforced concrete excavation shall include the removal and disposal of the existing reinforced concrete retaining wall in its entirety.

Method of Measurement

Reinforced concrete excavation will be measured for payment by the cubic yard, complete in place. Measurements are assumed to be taken in a horizontal or vertical plane and shall not exceed otherwise defined pay limits.

Basis of Pavement

Reinforced concrete excavation will be paid for at the contract unit price per cubic yard, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 144.**CLASS B ROCK EXCAVATION****CUBIC YARD**

The work performed under these items shall conform to the relevant provisions of Section 140 of the Standard Specifications and the following:

Class B rock excavation shall include the removal and disposal of rock for the lines and grades shown for the concrete retaining wall and as directed by the Engineer.

This Item shall also consist of rock foundation preparation for the proposed retaining wall.

Submittals**A. Survey Submittals**

1. Survey of finished prepared rock foundation surface.
2. Final wall alignment and footing survey prior to concrete placement.
3. Surveys shall be prepared and stamped by a Massachusetts Registered Professional Land Surveyor.

Preparation of Rock for Foundation**A. Rock Excavation Requirements**

1. Excavate to competent, sound rock foundation.
2. Work shall include the following:
 - i. Survey exposed rock prior to excavation.
 - ii. Excavate unsuitable, loose, weathered, fractured, or decomposed rock.
 - iii. Excavate to lines and grades shown on the Drawings or as directed by the Engineer.
 - iv. Shape the foundation to provide a stable bearing surface.
 - v. Remove overhangs and unstable rock.
 - vi. Remove all loose material from joints and crevices.
3. Prepared rock surfaces shall be level and contain no overhangs.
4. Transitions at footing elevations changes shall be no steeper than 1H:1V.

B. Rock Cleaning

1. Following excavation, thoroughly clean the rock surface using approved air and/or water jetting methods.
2. Additional cleaning by hand methods including barring, picking, scaling, or hand excavation shall be performed as necessary to remove loose rock, fractured rock, sand, fines, and debris.
3. The final surface shall remain clean until concrete placement.

C. Rock Joint and Cavity Treatment

1. All joints, cavities, crevices, and depressions shall be cleaned prior to filling.
2. All openings larger than 1" wide shall be filled with an approved concrete mixture. Openings less than 1" wide shall be filled with an approved non-shrink grout.

D. Rock Surface Shaping

1. Depressions shall be filled with concrete to the underside of the footing elevation.
2. Concrete fill surfaces shall receive a roughened finish with minimum 1/4-inch amplitude and grooves oriented parallel to the wall alignment.

E. Foundation Approval

1. The prepared rock foundation shall be inspected and approved by the Engineer prior to placement of reinforcement.
2. Contractor shall submit survey of the prepared rock foundation to the Engineer prior to schedule inspection.
3. No concrete shall be placed on unapproved foundation surfaces.

Method of Measurement

Class B Rock Excavation will be measured for payment by the cubic yard, complete in place. Measurements are assumed to be taken in a horizontal or vertical plane and shall not exceed otherwise defined pay limits. No separate measurement shall be made for rock foundation preparation.

Basis of Pavement

Class B Rock Excavation will be paid for at the contract unit price per cubic yard, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

No separate payment will be made for rock preparation, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 151.**GRAVEL BORROW****CUBIC YARD**

The work under this item shall conform to the relevant provisions of Section 150. of the Standard Specifications and the following:

Method of Measurement

Gravel borrow will be measured for payment per cubic yard to the lengths, widths, and depths approved by the Engineer. All depth measurements shall be compact in place and no shrinkage or swell factors will be applied. Tonnage receipts will not be accepted for measurements.

Basis of Payment

Gravel borrow will be paid for at the Contract unit price per cubic yard, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

ITEM 210.**SANITARY SEWER MANHOLE****EACH**

The work under this item shall conform to the relevant provisions of Section 201, 230, and 259 of the Standard Specifications and the following:

Submittals

Submit Shop Drawings, showing all details of construction, including, but not limited to, structure dimensions, reinforcing, joints, and pipe connections to structures.

Submit on all materials and products included in this specification, including, but not limited to, manhole rungs, manhole frames and covers, damp-proofing coating, brick masonry, mortar, and non-shrink water-proof grout.

Submit design calculations including verification of adequate anti-flotation features and lateral earth pressures. Calculations shall verify that the manhole structure has been designed to withstand the burial depth, submergence due to flooding, flotation, and dead and live loads.

Quality Assurance

The structures shall be subject to standard MassDOT Quality Assurance procedures precast concrete units.

The quality of materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Engineer, or other representative of the Owner. Such inspection may be made at the place of manufacture or at the Site after delivery, or at both places, and the materials shall be subject to rejection at any time on account of failure to meet any of the Specification requirements, even though samples may have been accepted as satisfactory at the place of manufacture.

Manholes shall be designed for lateral earth pressures and to resist flotation.

Products**Precast Concrete Manhole Sections**

Precast concrete barrel sections and transition top sections, shall conform to M4.09.0.

The wall thickness shall not be less than 5 inches for 48-inch diameter reinforced barrel sections, 6 inches for 60-inch diameter reinforced barrel sections and 7 inches for 72-inch diameter reinforced barrel sections.

Top sections shall be eccentric except that flat top sections shall be used where shallow cover requires a top section less than 4 feet as shown on the Drawings.

Barrel sections shall have tongue and groove joints.

Precast concrete barrel sections with precast top slabs and precast concrete transition sections shall be designed for a minimum of AASHTO HS20-44 loading plus the weight of the soil above at 120 pcf.

The date of manufacture and the name and trademark of the manufacturer shall be clearly marked on each precast section.

Precast concrete bases shall be monolithically constructed. The thickness of the bottom slab of the precast bases shall not be less than the barrel sections or top slab whichever is greater. Precast concrete bases shall be constructed with a 6-inch extended base, unless otherwise shown on the Drawings.

Knock out panels for piping shall be provided in precast sections at the locations shown on the Drawings. They shall be integrally cast with the section, 2½ inches thick and shall be sized as shown on the Drawings. There shall be no steel reinforcing in knock out panels.

The side wall height of the base section shall be a minimum of 12 inches above the top of the pipe coming into the manholes.

Brick Masonry

Bricks shall conform to M4.05.1.

Bricks for invert construction shall be considered acceptable for use as Sewer Brick (Type SM).

Poured concrete inverts will not be allowed in sewer structures.

Mortar used in the brickwork shall conform to M4.04.3.

Jointing Precast Manhole Sections

Tongue and groove joints of precast manhole sections shall be sealed with a preformed flexible joint sealant. The preformed flexible joint sealant shall conform to ASTM C990.

Manhole Rungs

Manhole rungs shall be drop front design, 14 inches wide with an abrasive step surface, steel reinforced, copolymer, polypropylene, plastic. Manhole rungs shall conform to OSHA requirements.

Flexible Pipe to Structure Connectors

The flexible pipe-to-structure connectors shall be designed to provide a positive seal between the connector and the structure wall and between the connector and the pipe.

The flexible boot shall be manufactured of EPDM synthetic rubber in accordance with ASTM C443 and C923 and shall be 3/8 inch thick or greater.

The external bands shall be made entirely of 304 series non-magnetic stainless steel.

The flexible connectors shall be provided with a wedge-type or toggle-type expander to secure the pipe in the structure opening.

The flexible connectors shall meet the following criteria, in accordance with ASTM C923:

- Shall not leak when subjected to a head pressure of 10 psi for 10 minutes.
- Shall have the ability to deflect 7 degrees in any direction without leakage under the head pressure conditions described above.
- Shall not leak when subject to a load of 150 lbs./in. pipe diameter and the head pressure conditions described above.

Dampproofing

Dampproofing is required for all sanitary sewer structures.

Provide two coats of bituminous dampproofing on outer surfaces of precast manholes at the rate of 20-25 square feet per gallon in accordance with manufacturer's instructions.

Dampproofing coating shall be a factory-applied asphalt compound specially made to adhere to below grade concrete structures.

The dampproofing shall be:

- Sonoshield semi-mastic, as manufactured by BASF;
- Dehydratine 4 by Euclid Chemical;
- RIW Marine Liquid by Toch Brothers;
- or approved equal.

Non-Shrink, Water Proof Grout

Non-shrink, water-proof grout shall be:

- Hallemite;
- Waterplug;
- Embeco;
- or approved equal.

Execution

Installation

Precast sewer manhole installation shall conform to MassDOT specifications for precast unit installation and the following:

Install the precast sections in a manner that will result in a watertight joint. Seal the joints of precast concrete barrel sections with the preformed flexible joint sealant used in sufficient quantity to fill 75% of the joint cavity. Fill the outside and inside precast section joints with non-shrink grout and finish flush with the adjoining surfaces. Plug holes in the concrete barrel sections required for handling or other purposes with a non-shrink, water-proof grout or concrete and rubber plugs, and finish flush on the inside.

Pipe Connections and Stubs

Connect pipe stubs for future extensions to the structures as shown on the Drawings and close the stub end by a suitable watertight plug.

For pipes with smooth exterior surfaces (PVC, ductile iron, HDPE pressure pipe, steel, etc), use flexible pipe-to-structure connectors.

Where flexible pipe-to-structure connectors cannot be used, such as pipes with rough, irregular or corrugated exterior surfaces (concrete, corrugated metal, HDPE drainage pipe, etc.):

- After the new pipe has been set in place, completely fill the hole around the new pipe and structure with non-shrink, water-proof grout.
- Place a 6-inch-thick concrete encasement a total of 12 inches in length around the pipe stub adjacent to the exterior wall of the structure. Concrete shall have a 28-day compressive strength of 3,000 psi.

Manhole Rung Installation

Steel reinforced copolymer polypropylene plastic steps shall be press fitted by hand driven hammer into preformed holes in cured precast sections, on 12-inch centers, by the precast concrete manufacturer.

Brickwork

Mix mortar only in such quantity as may be required for immediate use and use before the initial set has taken place. Do not retain mortar for more than one and one-half hours and constantly work over with a hoe or shovel until used. Anti-freeze mixtures will not be allowed in the mortar. No masonry shall be laid when the outside temperature is below 40°F unless provisions are made to protect the mortar, bricks, and finished work from frost by heating and enclosing the work with tarpaulins or other suitable material. The Engineer's decision as to the adequacy of protection against freezing shall be final.

Construct channels and shelves of brick as shown on the Drawings. The brick channels shall correspond in shape with the lower half of the pipe. The top of the shelf shall be set at the elevation of the crown of the highest pipe and shall be sloped 1 inch per foot to drain toward the flow through channel. Construct brick surfaces exposed to sewage flow with the nominal 2 inch by 8 inch face exposed (i.e., bricks on edge).

Testing

Vacuum Test for Manholes - Gravity Sewer Lines

After a manhole has been constructed, conduct a manhole acceptance test using the following vacuum test procedure:

- Plug all lift holes with an approved non-shrink grout.
- Plug all pipes entering the manhole, taking care to securely brace the plug from being drawn into the manhole.
- Place the test head at the inside of the top of the precast concrete cone section and inflate the seal in accordance with the manufacturers' recommendations.

- Draw a vacuum of 10 inches of mercury and shut off the vacuum pump. With the valves closed measure the time for the vacuum to drop to 9 inches. The manhole shall pass if the time is greater than:
 - 1 min. 0 sec. for 0-ft. to 10-ft. deep manholes
 - 1 min. 15 sec. for 10-ft. to 15-ft. deep manholes
 - 1 min. 30 sec. for 15-ft. to 25-ft. deep manholes

If the manhole fails the initial test, make repairs with a non-shrink grout. Re-test until a satisfactory test is obtained.

Cleaning

Clean new manholes and existing manholes immediately upstream and downstream of the work of silt, debris and foreign matter of any kind, prior to final inspection.

Method of Measurement

Sanitary sewer manhole will be measured for payment by the each, regardless of depth, at the locations shown on the drawings or as directed, complete in place.

Basis of Payment

Sanitary sewer manhole will be paid for at the contract unit price per each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

No separate payment will be made for excavation (excluding rock), dewatering, or stone bedding, but all costs in connection therewith shall be included in the Contract unit bid price.

Rock excavation shall be measured and paid for separately under Class B Rock Excavation, Item 144.

ITEM 212.**TEMPORARY SANITARY SEWER MAIN****LUMP SUM**

The work under this item shall conform to the relevant provisions of Section 230 of the Standard Specifications and the following:

General

The Contractor shall provide, maintain, monitor, and remove a temporary sanitary sewer bypass system as necessary to maintain continuous sanitary sewer service during construction operations involving existing sanitary sewer mains, manholes, and appurtenances.

The bypass system shall be designed to convey all existing sanitary sewer flows around the work area without interruption of service, surcharge, overflow, or backup into upstream properties. Bypass systems may consist of either pumped or gravity systems subject to approval by the Owner and Engineer.

The Contractor shall be solely responsible for determining field flow conditions, sizing the bypass system, maintaining uninterrupted sanitary sewer service, preventing spills and overflows, and complying with all applicable local, state, and federal regulations.

Any flow information provided by the Owner or Engineer is approximate and for informational purposes only. The Contractor shall verify field conditions and design the bypass system accordingly.

Bypass operations shall not begin until the bypass system has been fully installed, tested, and approved by the Engineer. Once initiated, bypass operations shall remain continuous until the permanent sanitary sewer system has been restored to service unless otherwise approved by the Engineer.

Submittals

Submit a bypass plan stamped by a Professional Engineer registered in the Commonwealth of Massachusetts a minimum of 60 calendar days prior to bypass operations. No bypass operations shall commence until the bypass plan has been reviewed and accepted by the Engineer.

The bypass plan shall include, at a minimum:

- Proposed bypass routing plan
- Bypass piping sizes and materials
- Design calculations
- Estimated flow rates
- Pump capacities and pump curves (if applicable)
- Emergency response procedures
- Emergency contact list
- Monitoring procedures
- Maintenance procedures
- Traffic and pedestrian protection measures
- Noise and odor mitigation measures
- Spill containment and cleanup procedures
- Proposed sequencing and duration of bypass operations

Materials

Materials for the bypass system shall be provided and operated by one bypass pumping company. Materials include, but are not limited to pumps, pipes, hoses, valves, and fittings.

All bypass piping and hoses shall be watertight and suitable for sanitary sewer service. Temporary bypass piping installed above ground shall be adequately restrained and protected against movement, leakage, weather, traffic loading, and vandalism. Provide insulation, heat tracing, or other protective measures as necessary to prevent freezing.

Pumped System Requirements

Pumped bypass systems shall be capable of conveying the peak anticipated sanitary sewer flow, including infiltration and inflow conditions, without surcharge, overflow, or interruption of service.

The Contractor shall provide primary pumping equipment, standby pumping equipment, power supply, fuel supply, and all associated controls and appurtenances necessary for continuous operation.

Standby pumping equipment with 100 percent backup capacity shall be installed on site and immediately available during all bypass operations.

All pumped bypass flow handling systems shall be equipped with a fault detection system capable of wirelessly notifying the Contractor in the event of system failure. Contractor shall maintain personnel available 24 hours per day during active bypass operations.

Gravity System Requirements

Gravity bypass systems may be used only where approved by the Engineer.

Gravity bypass systems shall be designed to maintain continuous sanitary sewer flow, prevent surcharge and overflow, prevent infiltration and exfiltration, and protect the public and adjacent property.

Temporary gravity sewer piping shall be adequately supported and protected against settlement, displacement, crushing, and leakage.

Connections to existing sewer structures shall be watertight.

Installation & Operation

The temporary bypass system shall be fully operational prior to any shutdown, disturbance, removal, or modification of the existing sanitary sewer system. Provide a minimum of 48 hours notice to the Owner and Engineer prior to commencement of bypass operations. Sewage diverted around the work area shall be discharged back into the sanitary sewer system at an approved downstream location. Under no circumstances shall sewage be discharged onto the ground surface, into storm drainage systems, or into waterways.

The Contractor shall provide all necessary plugs, bulkheads, weirs, diversion structures, and appurtenances required to divert flow around the work area.

The Contractor shall continuously monitor bypass operations to ensure proper system

performance.

The Contractor shall implement measures necessary to minimize odor, noise, vibration, traffic disruption, and impacts to adjacent properties.

Above-ground bypass piping crossing active sidewalks, driveways, or roadways shall either be buried, or be protected with ramps or other approved protection systems capable of supporting anticipated traffic loads.

All bypass components, temporary piping, diversion structures, and appurtenances shall be removed upon completion of the work.

Affected areas shall be restored to original condition or better at no additional cost.

Spill Response

The Contractor shall immediately contain, clean, disinfect, and report all sewage spills, overflows, or releases at no additional cost to the Owner. Cleanup procedures shall comply with all applicable local, state, and federal regulations.

The Contractor shall be solely responsible for damages, fines, penalties, cleanup costs, and claims resulting from bypass system failure or sewage release.

Method of Measurement

Temporary Sanitary Sewer Bypass will be measured on a lump sum basis.

Basis of Payment

Temporary Sanitary Sewer Bypass will be paid for at the Contract lump sum price, which price shall include all labor, equipment and incidental costs required to complete the work. 50% of the lump sum will be paid upon successful setup of the bypass. Remaining payment schedule will be paid upon removal.

ITEM 221.**FRAME AND COVER****EACH**

The work under this item shall conform to the relevant provisions of Section 220 of the Standard Specifications and the following:

All manholes frames and covers shall be as manufactured by East Jordan Iron Works or approved equal.

Manhole frames shall have a minimum weight of 240 pounds. Manhole covers shall be approximately 26-inch diameter with a minimum weight of 200 pounds. The assembly shall be a non-locking type.

Method of Measurement

Frame and Cover will be measured for payment per each, complete in place. Frame and covers for Special Manholes (SWTU) will not be measured for payment under Item 221.

Basis of Payment

Frame and Cover will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 222.3 FRAME AND GRATE (OR COVER)– MUNICIPAL STANDARD EACH

The work under this item shall conform to the relevant provisions of Section 220 of the Standard Specifications and the following:

All catch basin frames and grates shall be as manufactured by East Jordan Iron Works or approved equal.

Catch basin frames shall be 24" x 24" x 8" nominal size. Frame shall be three flange when adjacent to granite curb or granite inlet, and four flange in all other cases. Six-inch or four-inch versions may be substituted only when installation of the 8" frame is impractical and when approved by the Engineer.

Catch basin frames shall have a minimum weight of 265 pounds for 3-flange and 295 pounds for 4-flange. Catch basin grates shall be approximately 23-7/8 inches square, with a minimum weight of 190 pounds and have square openings of approximately 2-1/4 inches. The assembly shall be a non-locking type.

Method of Measurement

Frame and grate – municipal standard will be measured for payment per each, complete in place.

Basis of Payment

Frame and grate – municipal standard will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 223.1**FRAME AND GRATE (OR COVER)**
REMOVED AND STACKED**EACH**

The work under this item shall conform to the relevant provisions of Section 220 of the Standard Specifications and the following:

The work shall include removal and stacking of frames and grates (or covers) as shown on the drawings and as directed by the Engineer. The Contractor shall take precaution not to damage existing frames and grates (or covers) during removal or stacking. A location will be provided at the City of North Adams DPW yard for stacking the frames and grates (or covers).

Method of Measurement

Frame and grate (or cover) removed and stacked will be measured for payment per each, complete in place.

Basis of Payment

Frame and grate (or cover) removed and stacked will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

ITEM 250.08 **8 INCH POLYVINYL CHLORIDE SANITARY SEWER PIPE** **FOOT**

Work performed under this item shall conform to the relevant provisions of Section 230 of the Standard Specifications and the following:

The work shall include installation of Schedule 40 PVC pipe to repair the bypassed existing sewer. The limits of the PVC pipe are shown on the drawings.

Pipe materials shall meet the requirements of M.5.03.7. Pipe shall be firmly joined with an approved coupling.

All plastic sanitary sewer pipe shall be encased in 3/4-inch crushed stone conforming to M2.01.4 and shall be placed 6" below and above the outside of the pipe. The stone shall extend to both trench walls.

Method of Measurement

8-inch polyvinyl chloride sanitary sewer pipe will be measured for payment per foot, complete in place. All measurements shall be taken in the horizontal plane and shall be measured starting from the exterior face of the manhole.

Basis of Payment

8-inch polyvinyl chloride sanitary sewer pipe will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for sawcutting, excavation (excluding rock), dewatering, connection to existing structures, stone bedding, testing, replacing existing pipe damaged during construction, removal and disposal of existing pipe, or plugging abandoned pipe ends, but all costs in connection therewith shall be included in the Contract unit price bid.

Rock excavation shall be measured and paid for under Item 144. – Class B Rock Excavation.

ITEM 269.06

**6 INCH SLOT PERFORATED
CORRUGATED PLASTIC PIPE (SUBDRAIN)**

FOOT

Work performed under this item shall conform to the relevant provisions of Section 260 of the Standard Specifications. This item shall pertain to the drainage system behind the retaining wall including the geotextile wrapped drainage pipe.

Materials

The work shall include installation of Schedule 40 PVC drain pipe. The limits of the PVC pipe are shown on the drawings. Pipe materials shall meet the requirements of M.5.03.7. Pipe shall be firmly joined with an approved coupling.

Method of Measurement

The drainage system will be measured for payment per foot, complete in place. All measurements shall be taken in the horizontal plane. The drainage system includes the 6" perforated PVC pipe, geotextiles, and crushed stone.

Basis of Payment

The drainage system will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

<u>ITEM 302.06</u>	<u>6 INCH DUCTILE IRON WATER PIPE</u>	<u>FOOT</u>
	<u>(RUBBER GASKET)</u>	
<u>ITEM 302.08</u>	<u>8 INCH DUCTILE IRON WATER PIPE</u>	<u>FOOT</u>
	<u>(RUBBER GASKET)</u>	
<u>ITEM 309.</u>	<u>DUCTILE IRON FITTINGS FOR WATER PIPE</u>	<u>LB</u>
<u>ITEM 347.1</u>	<u>1 INCH COPPER TUBING TYPE K</u>	<u>FOOT</u>
<u>ITEM 350.06</u>	<u>6 INCH GATE AND GATE BOX</u>	<u>EACH</u>
<u>ITEM 350.08</u>	<u>8 INCH GATE AND GATE BOX</u>	<u>EACH</u>
<u>ITEM 363.1</u>	<u>1 INCH CORPORATION COCK</u>	<u>EACH</u>
<u>ITEM 376.2</u>	<u>HYDRANT – REMOVED AND RESET</u>	<u>EACH</u>
<u>ITEM 381.</u>	<u>SERVICE BOX</u>	<u>EACH</u>
<u>ITEM 384.</u>	<u>CURB STOP</u>	<u>EACH</u>

Work performed under these items shall conform to the relevant provisions of Section 300 and the following:

Materials

All materials must be manufactured and supplied in accordance with applicable ANSI/AWWA standards latest revisions and must be American Made. All products that may have contact with drinking water must be certified to be in compliance with NSF/ANSI Standard 61(NSF 61) Annex G and must meet the weighted average lead content requirement and meet the new low lead requirements of the U.S. Safe Drinking Water Act. Note: NSF/ANSI Standard 61, Annex G (NSF 61- G) references NSF 372. Proof of certification must be furnished upon request.

Ductile Iron Pipe

Ductile iron pipe shall be designed in accordance with AWWA C150 and shall be manufactured in accordance with AWWA C151. Fittings and other materials referenced in this section shall conform to the latest edition of the references listed in of this section.

Unless otherwise indicated or specified in the Contract Documents, buried ductile iron pipe and fittings shall be Class 52 with push on joints.

Unless otherwise indicated or specified, buried pipe shall have an asphaltic exterior coating in accordance with AWWA C110, C151 or C153, as applicable.

Unless otherwise indicated or specified in the Contract Documents, buried fittings shall be ductile iron or gray iron with mechanical joints.

Pipe Joints

Push-on-joints and mechanical joints shall conform to ANSI/AWWA C111/A21.11.

Flanged joints shall be assembled with bolts and nuts, bolt studs with nut on each end, or studs with nuts in tapped flanges. Bolts and nuts shall be manufactured in accordance with ASTM A325, Type 1, Grade 5, hot-dipped galvanized finish, heavy hex head, 120,000 psi minimum tensile strength with X-Heavy nuts. Nuts and bolts shall be provided with an anti-seize, thread lubricating compound.

Gaskets for flanged joints shall be full face, 1/8 inch red rubber. Ring gaskets shall be provided for piping 14 inches in diameter and larger.

Where indicated on the Drawings, provide restrained joints. Gaskets shall meet the material requirements of ANSI/AWWA A21.11/C111 for mechanical joint gaskets.

Restrained gasketed joints for rubber push-on joint pipe shall be Fast-Grip® by American Cast Iron Pipe Company, Field Lok 350® by US Pipe and Foundry Co., or equal. Contractor is to supply the Owner with four new gasket disassembly drive shims as a part of the project.

Pipe Fittings

Fittings shall be ductile iron or gray iron.

Fittings less than or equal to 12 inches in size shall conform to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 and shall have a 350 psi pressure rating.

Fittings greater than 12 inches in size shall conform to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 and shall have the following pressure ratings:

- Fittings greater than 12 inches and less than or equal to 24 inches - 350 psi
- Fittings greater than 24 inches - 250 psi

Mechanical joint retainer glands shall be installed on all mechanical joints. Retainer glands shall be specifically designed to fit standard mechanical joint bells with corrosion resistant, high strength, low-alloy T-head bolts conforming to ANSI/AWWA A21.11/C-111 and ANSI/AWWA A21.53/C-153. Retainer glands shall be manufactured of ductile iron conforming to ASTM A536-80, grade 60-42-10. Wedges shall be of hardened ductile iron and require the same torque in all sizes. These devices shall have a minimum 250 psi pressure rating with a minimum safety factor of 2:1 and shall be EBAA IRON, Inc., Megalug® series 1100 or equal. Glands shall be listed with Underwriters Laboratories and/or approved by Factory Mutual.

Anchoring tees shall have main run ends as indicated on the Drawings or as required for the installation. The branch shall have a plain end with an integral gland and rotating mechanical joint gland to provide a restrained connection with the adjacent valve or fitting (typically used for hydrant branches).

Couplings

Solid sleeves shall have long body type (12 inches min.) and mechanical joints with retainer glands.

Couplings and transitional couplings for pipe less than or equal to 12 inches in diameter shall consist of a long body cast iron sleeve and shall have gaskets suitable for the pipe being joined. The bolts and nuts shall be corrosion resistant high strength, low alloy steel such as Cor-Ten steel or an approved equal. Couplings shall be Romac style 501, Dresser style 153, Rockwell type 441, or equal. Transition couplings for pipe less than or equal to 12 inches in diameter shall be Dresser Style 162, Rockwell Type 441, Smith Blair Omni Style 442, or equal.

Provide couplings with an exterior epoxy coating.

Gaskets, Glands, Nuts, and Bolts

Gaskets, glands, nuts, bolts and accessories shall conform to ANSI/AWWA C111/A21.11 or

C153/A21.53, as appropriate.

Gaskets shall be of plain tipped rubber, suitable for exposure to the liquid within the pipe. Lubricants must be suitable for the type of fluid to be carried by the pipeline and shall be NSF approved for water service.

Glands shall be ductile or cast iron.

Bolts shall be high strength, low alloy.

Thrust Blocks/Anchor Blocks/Joint Restraints

Joint restraints shall be used at all bends, fittings, hydrants, valves and piping as specified in the paragraphs mentioned below and in accordance with restraint as indicated on the Drawings. Where indicated on the Drawings, provide restrained joints suitable for a 200-psi working pressure. Gaskets shall meet the material requirements of ANSI/AWWA A21.11/C111 for mechanical joint gaskets

Restrained joints for rubber-type push-on joint pipe shall be Lok-Ring® Joint by American Cast Iron Pipe Company, TR FLEX® by US Pipe and Foundry Co., Snap-Lok® by Griffin Pipe Products Co., or equal.

Mechanical joint retainer glands shall be installed on all mechanical joints, except where rodding is used. Retainer glands shall be specifically designed to fit standard mechanical joint bells with corrosion resistant, high strength, low-alloy T-head bolts conforming to ANSI/AWWA A21.11/C-111 and ANSI/AWWA A21.53/C-153. Retainer glands shall be manufactured of ductile iron conforming to ASTM A536-80 grade 60-42-10. Wedges shall be of hardened ductile iron and require the same torque in all sizes. These devices shall have a minimum 250 psi pressure rating with a minimum safety factor of 2:1 and shall be EBAA IRON, Inc., series 1100 or equal. Glands shall be listed with Underwriters Laboratories and/or approved by Factory Mutual.

Evidence of joint restraint materials shall be the manufacturer's certification or certified test results indicating conformance with the requirements of these Specifications.

Rods, clamps with washers, straps and other harnessing hardware shall be stainless steel type 304 or 316 and installed in accordance with the manufacturer's recommended installation procedures, as approved.

After each "locking" joint is assembled, the pipe shall be extended until the locking system "bottoms out" in order to avoid accumulated joint movement when the system is pressurized.

Retainer glands, such as Megalugs, shall be installed in accordance with the manufacturers' written instructions.

Thrust blocks and anchor blocks, shall be installed in addition to the above-mentioned joint restraints and shall be used at all hydrants. Minimum bearing area of thrust blocks shall be as indicated on the drawings. Anchor block sizes shall be as shown on the Drawings. Felt roofing paper shall be placed to protect pipe joints. Concrete shall not be placed over bolts, nuts or to prevent the removal of joints.

Concrete for thrust blocks and anchor blocks shall have a minimum strength of 3,000 psi. All cement concrete must be from an approved ready-mix producer listed on the QCML. Transit mix concrete may be used subject to approval. Straps and anchors shall be cold-rolled steel, painted with bitumastic.

Copper Tubing

Copper tubing shall be seamless, soft annealed, Type K meeting the requirements and specifications of ASTM B57, B68, and B88 as they apply to Type K copper tubing.

Corporations

Corporations shall have ball type valve. Inlet connection is to have AWWA (reinforced CC, CS, Mueller) thread. Outlet connection shall be compression end fittings. Compression fittings shall be properly sized for pipes to be joined.

Corporations will be rated for a minimum 200 psi working pressure.

Saddles

Saddles shall be used for all water services larger than 1-1/2". Saddle specifications are:

- Body: Ductile Iron meeting ASTM A-536-80, Grade 65-45-12.
- Thread: AWWA (reinforced CC, CS, Mueller).
- Finish: Epoxy coated or 10 mil of fusion applied nylon.
- Bolts/Nuts/Washers: Type 304 (18-8) stainless steel.
- Gaskets: Heavy duty compounded for water.
- Straps: Type 304 (18-8) stainless steel with Teflon coated threads.
- Welds: Passivated for resistance to corrosion.

Curb Stop

Curb stops shall be ball valve type, open right, with no waste. Outlet and inlet shall be compression end fittings. Compression fittings shall be properly sized for pipes to be joined.

All curb stops shall be rated for a minimum 200 psi working pressure.

Service Box

Service boxes shall be Buffalo Style 95E, non-screw type, tar coated, cast iron, sliding type arch pattern base with inlaid covers. Covers shall be held in place with bronze bolts and the word "Water" shall be cast into the cover. Service boxes shaft shall have a minimum inside diameter of 2-1/4 inches. The minimum weight of a complete service box shall be 40 lbs.

Test Connections

Install air release, test connections, and blow offs in the piping for pressure testing and disinfection at locations to be determined by the Contractor and approved by the Engineer.

Corporation cocks shall be in accordance with ANSI/AWWA C800 and shall be 3/4 inch diameter with CC thread on inlet by iron pipe thread flare on outlet as manufactured by Mueller, Ford, McDonald or equal.

Copper tubing shall be annealed Type K soft tubing and shall conform to the requirements of ASTM B88.

Upon completion of testing and disinfection, remove the corporation cock and replace with a brass plug and the copper tubing removed. Field swab the brass plug for disinfection in accordance with AWWA C651.

Damaged/Defective Pipe

Defective pipe or fittings will be rejected for use on this project. Defective pipe is classified as follows:

- Damage to interior lining
- Insufficient lining thickness
- Pipe out of round
- Damaged pipe barrel area
- Damaged pipe bells or spigots
- Missing, misplaced or illegible marking and identification
- Outside pipe diameter exceeding allowable tolerance

If defective pipe is discovered after it has been installed, it shall be removed and replaced with sound pipe, at no additional cost to the Owner.

Valves General

Pressure and temperature ratings shall be as scheduled.

Valve sizes shall be the same size as the upstream pipe, unless otherwise indicated.

Provide accessories including bolts, nuts, glands, and gaskets.

Extended Stems - Where insulation is indicated or specified, provide extended stems arranged to receive insulation.

Valves shall have the same end connections as the pipeline in which it is installed.

Provide 125# ANSI B16.1, ANSI/AWWA C115/21.15 standard flange drilling for valves with flanged ends inside buried structures. Provide 1/8 inch full-face red rubber gaskets at all flanged connections.

Buried valves shall have mechanical joint ends compatible with the piping systems in which they are installed in accordance with ANSI/AWWA C111/A21.11-85 and Mega-Lug type retainer glands. Provide mechanical joint accessories, including glands, SBR rubber gaskets, tee head bolts, and nuts with the valves. Provide stainless steel bolts and nuts.

Mechanical joint ends shall be compatible with ductile iron O.D. pipe.

Valves and appurtenances shall be of the size shown on the Contract Drawings.

Equipment of the same type shall be from one manufacturer, unless otherwise approved.

Valves, hydrants, and appurtenances shall have the name of the manufacturer, flow directional arrows, and the working pressure for which they are designed cast in raised letter upon some appropriate part of the body.

Valves for water distribution systems shall be certified to NSF 61 and NSF 372.

Bolts shall be 304 stainless steel with hex heads and hex nuts in accordance with ASTM A-307 and A-563, respectively.

Provide buried valves with standard valve box with tee-handle operator.

Gate Valves

Gate valves shall be resilient seat type suitable for underground service complying with the requirements of AWWA C509. C509 gate valves shall be cast iron or ductile iron.

Gate valves shall be designed to be bubble tight for 250 psig water working pressure with no leakage past the seat from either side of the disc, and shall be hydrostatically tested to 500 psig. Gate valves shall be of the non-rising stem (N.R.S.) design.

Small diameter gate valves (12-inch and smaller) shall be set vertically (spur gearing). Gate valves shall open LEFT (counter clockwise).

Buried gate valves shall be furnished with 2 inch square operating nuts.

Cast iron shall meet the specifications of ASTM A126, Class B. Castings shall be clean and sound without defects that will impair their service. No plugging or welding of such defects will be allowed. Ductile iron shall meet the standards of ASTM A536.

The resilient-seated disc wedge shall be of the resilient wedge fully supported type, either cast iron or ductile iron. Solid guide lugs shall travel within channels in the body of the valve. The disc and guide lugs shall be fully encapsulated in SBR (styrene butadiene rubber) or EPDM rubber. Disc wedges that are not 100% fully encapsulated shall not be acceptable. Provide guide caps of an acetal copolymer bearing material to protect the rubber-encapsulated solid guide lugs from abrasion for long life and ease of operation.

The seat shall be SBR or EPDM rubber, matching the disc encasement. The seating surface (rubber) shall be specially designed so as to provide a smooth waterway, without depressions or cavities, which might trap debris and interfere with tight closures.

The body, bonnet, and gate shall be cast/ductile iron, constructed in accordance with AWWA C509. The bonnet to body seal shall incorporate a flat neoprene gasket. Bonnet and body flanges shall be fully machined to assure proper sealing of the gasket.

Gate valve stems shall be of bronze rolled bar stock in accordance with ASTM B584, and shall have a forged thrust collar. The thrust collar shall be factory lubricated, and the thrust collar and its lubrication shall be isolated by the O-Rings from the water way and from outside contamination, providing permanent lubrication for long term ease of operation. An anti-friction thrust washer shall be provided both above and below the thrust collar for ease of operation.

Gate valves shall have O-Ring sealed stems with one O-Ring located below the thrust collar and two O-Rings located above the thrust collar. The two O-Rings located above the thrust collar shall be replaceable with the valve still in service in the fully open position.

Coat internal and external exposed ferrous surfaces of the valve with a fusion-bonded, thermosetting powder epoxy coating suitable for potable water service conforming to AWWA

C550. Coating shall be non-toxic and shall impart no taste to water. Coating thickness shall be nominal 10 mils. Gate valves for water distribution systems shall be certified to NSF 61.

Seal internal and external exposed ferrous surfaces of the valve with two coats of asphaltic varnish (5 mils) suitable for potable water service conforming to AWWA C550. Coating shall be non-toxic and shall impart no taste to water. Coating thickness shall be nominal 10 mils. Gate valves for water distribution systems shall be certified to NSF 61.

Gate valves shall be as manufactured by U.S. Pipe Metroseal (Model 250), Mueller (Model 2360), American Flow Control (AFC-2500), Clow (2630 Series), equivalent by Kennedy Valve or M&H Valve Company, or equal.

Valve Boxes

Provide a valve box of the adjustable type of heavy pattern, constructed of cast iron and provided with a 6 inch cast iron cover for each buried valve.

Valve boxes shall be manufactured by Mueller Co., Bingham & Taylor, or approved equal.

Valve boxes shall be round, 2-piece, sliding type, cast iron. The upper section of each box shall have a flange on top having sufficient bearing area to prevent settling. The bottom of the lower section shall be belled to enclose the operating nut of the valve. The barrel shall be 5-1/2 inch O.D. minimum.

Boxes shall be of lengths consistent with pipe depths. Boxes shall be adjustable, with a lap of at least 6 inches when in the most extended position.

Slot covers for easy removal.

Covers for valve boxes on water mains shall have the word "WATER" cast in the top.

Coat valve boxes with coal-tar pitch enamel or other approved coating.

Valve boxes shall be suitable for the size valve on which they are used. The length of the lower section shall be adequate for trench adjustment, no top or mid-section adapters.

Provide one tee-handled wrench for every four valves installed, unless additional wrenches are required due to variations in valve bury depth. Wrenches shall be field measured to accommodate the depth of bury and provide waist high operation.

Submittals

The Contractor shall submit to the Engineer for approval, a "Certificate of Compliance" for every component of the water system to be used in the project, showing that the manufacturers meet the above-mentioned requirements. Water system components shall not be delivered to the project site unless the Contractor has an approved "Certificate of Compliance" by the Engineer.

Cleaning Pipe and Fittings

Clean and remove foreign matter from the interior of each pipe and fitting before placing in the trench. Remove pipe and fittings whose interior has been contaminated with oil, gasoline or kerosene and replace at no additional cost to the Owner. Remove pipe and fittings whose interior

has been contaminated with any material which is a regulated drinking water contaminate or which damages the cement and replace at no additional cost to the Owner. Should foreign material or contaminants be observed in previously installed pipe, cease work until foreign material or contaminated pipe is decontaminated or removed.

Remove all lumps, blisters, and excess asphaltic coating from the bell and spigot ends of each pipe or fitting. The outside of the spigot and the inside of the bell shall be wire-brushed and wiped clean and be dry and free from oil and grease before the pipe or fitting is laid.

On all ductile iron pipe or fittings, the bell of the pipe and the spigot of the adjacent pipe or fitting shall be wire-brushed and cleaned of rust and dirt. The bell of the pipe or fitting and the spigot of the adjacent pipe shall then be lubricated with the joint lubricant furnished with the pipe, and used in accordance with the manufacturer's directions.

Installation

Pipe Alignment

Lay and maintain the pipe at the required lines and grades as shown on the Drawings. Fittings shall be at the locations indicated on the Drawings with joints centered, and spigots properly fitted. No deviation shall be made from the line and grade indicated on the Drawings, except with the approval of the Engineer.

Joint Openings and Deflection:

The maximum allowable joint openings and deflection for push-on joint pipe and restrained joint pipe shall be one-half the manufacturer's maximum allowable opening and deflection.

Radius curves indicated on the Drawings or approved during Shop Drawing review shall be made using full lengths of pipe. The use of short lengths of pipe and extra joints in order to make a smaller radius turn will not be allowed without the written approval of the Engineer.

Line or Grade Conflicts with Other Structures:

Wherever obstructions not shown on the Drawings are encountered during the progress of the Work and interfere to such an extent that an alteration in the pipe layout is required, the Engineer will order a deviation from the line and grade at locations where obstructions such as culverts, ducts, wire and/or pipes are encountered. The pipe shall be laid over or under such obstacles with a minimum clearance of 6 inches. The Engineer reserves the right to make the decision to go over or under obstructions during construction.

Where underground conditions indicate a change of alignment or grade, such change shall be made only with the written consent of the Engineer.

Except at locations indicated on the Drawings by the profile, do not establish high points where air can accumulate.

Pipe Installation

Keep trenches dewatered while installing pipe until all required pipe joints have been made and the trench has been backfilled above the water table to a point where pipe uplift will not occur when the pipe is empty.

Carefully lower pipe and fittings into the trench piece by piece by means of a crane, ropes or other

tools or equipment, in such a manner as to prevent damage to pipeline materials and protective coatings and linings. Under no circumstances shall pipeline materials be dropped or dumped into the trench.

Carefully inspect pipe and fittings for cleanliness and defects prior to placing them in the trench. Install underground warning tape over the pipe.

Prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.

When laying pipe, the spigot end shall be centered in the bell, the pipe forced home and the joint completely assembled. The pipe shall be adjusted to correct line and grade and secured in place with approved backfill material, properly tamped under and around the pipeline.

Cutting Pipe

Furnish pipe in full lengths. Cut ductile iron pipe without damage to the pipe or cement lining. The cutting shall be done to leave a smooth end at right angles to the axis of the pipe.

Cut ductile iron pipe either by the use of compression-type chain cutters which exert an even continuous force on the wall of the pipe or by power driven abrasive wheels.

On ductile iron pipe using rubber joints, the outside edge of the cut end must be tapered back approximately ¼ inch at an angle of about 30 degrees so as to provide for the proper assembly of this joint.

Restrained Joints, Mechanical Joints, and Thrust Blocks

Thrust blocks and restraining joint assemblies shall be installed in conformance with Drawings and/or the manufacturer's specifications and Section 301.60 I of the Standard Specifications.

Minimum depth of cover over the top of the water pipe shall be five (5) feet unless otherwise directed by the Engineer. Maximum depth of cover to the top of the water pipe shall be six (6) feet unless otherwise directed by the engineer or as indicated on the Drawings.

Prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.

When laying pipe, the spigot end shall be centered in the bell, the pipe forced home and the joint completely assembled. The pipe shall be adjusted to correct line and grade and secured in place with approved backfill material, properly tamped under and around the pipeline.

When laying the pipe, remove and replace fittings that do not allow a sufficient and uniform space for joints at no additional cost to the Owner.

Furnish pipe in full lengths. Cut ductile iron pipe without damage to the pipe or cement lining. The cutting shall be done to leave a smooth end at right angles to the axis of the pipe.

Cut ductile iron pipe either by the use of compression-type chain cutters which exert an even continuous force on the wall of the pipe or by power driven abrasive wheels.

On ductile iron pipe using rubber joints, the outside edge of the cut end must be tapered back approximately ¼ inch at an angle of about 30 degrees so as to provide for the proper assembly of this joint.

Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, to avoid obstructions or where long-radius curves are permitted, the maximum amount of deflection allowed shall not exceed that of what is included in AWWA C600 and shall be approved by the Engineer.

Radius curves indicated on the Drawings or approved during Shop Drawing review shall be made using full lengths of pipe. The use of short lengths of pipe and extra joint in order to make a smaller radius turn will not be allowed without the written approval of the Engineer.

Push-on joints shall be made in accordance with the manufacturer's instructions. Install gaskets in the pipe bell after lowering the pipe into the trench for installation. Thoroughly clean the bell and spigot of dirt and tar blisters in the trench utilizing a wire brush or bristle brush. Insert rubber gasket in the groove of the bell end of the pipe beginning at the bottom of the bell and working to the top of the bell. Apply lubricant per the manufacturer's recommendations utilizing a paint brush to the pipe gasket and the pipe spigot to be joined. Place a clean rag under the joint to protect the joint from dirt caused by unintentional grounding of the pipe during jointing. Upon completion, remove the rags. Align the plain end of the pipe to be laid and insert in the bell of the pipe to which it is to be joined and push home with a jack or by other means. After joining the pipe use a metal feeler to make certain that the rubber gasket is correctly located.

Valve Installation

Refer to the Drawings and piping system specification Sections for specific valve applications and arrangements.

Locate valves for easy access and provide separate support where necessary.

Install valves and unions for each fixture and item of equipment arranged to allow equipment removal without system shutdown. Unions are not required on flanged devices.

Install valves in horizontal piping with stem at or above the center of the pipe.

Install valves in a position to allow full stem movement.

Install valves and actuators to be plumb in the vertical direction.

Deactivation of Water Mains

Excavate and remove sections of the existing water main as shown on the Drawings. Repairs and capping of the main shall be in accordance with the Drawings.

After the pipe has been capped, the top sections of all gate boxes shall be removed and stacked, the holes filled in with suitable backfill material and patched with bituminous concrete in the area of the gate box.

The deactivation of the water mains shall be done upon completion of:
Installation and successful testing of the new pipeline, including all hydrants and appurtenances,
and Removal and reconnection of all building services from the existing pipelines to the new

pipelines.

Approval for the deactivation of the water mains by the Engineer or Owner.
Surface repair methods shall meet the requirements of the applicable surface repair items.

Disinfection and Testing

General

The Contractor shall employ trained personnel aware of the need to carefully observe prescribed construction practices and disinfection procedures in order to prevent contamination to the distribution system.

The competent person(s) responsible for the disinfection processes and bacteriological sampling shall be familiar with AWWA C651- Standards for Disinfecting Water Mains and experienced with the Continuous Feed Method of disinfection. The Engineer shall approve disinfection procedures in advance.

Bacteriological sampling shall be made in full accordance with AWWA C651 and under the supervision of the Engineer.

An independent commercial laboratory certified for analyzing public drinking water supplies by the State Department of Environmental Protection and U.S. Environmental Protection Agency shall analyze all bacteriological samples and provide certified results to the Engineer and/or Owner for review prior to restoring or placing the system into service.

Water Main Pipe

Before being placed into service, all new water pipelines shall be chlorinated using the Continuous Feed Method specified in AWWA C651 – Section 4.4.3. The Engineer shall approve the procedure in advance.

The Contractor will determine the location of the chlorination and sampling points in the field. The Contractor shall install taps for chlorinating, sampling and expulsion of air and shall uncover, backfill and plug the taps as required.

Prior to disinfecting the water main, the main shall be completely filled to remove all air pockets and then flushed to remove particulate. The flushing velocity in the main shall not be less than 3.0 ft/s unless the Engineer and/or Owner determine that the conditions do not permit the required flow to be discharged to waste.

TABLE 1

Required Flow to Flush Pipelines (40 psi residual pressure in water main)*

Pipe Diameter (in)	Flow Required to Produce 2.5 ft/s (Approximate) Velocity in Main	Number of 2 ½ inch Hydrant Outlets
4	100 gpm	1
6	200 gpm	1
8	400 gpm	1

10	600 gpm	1
12	900 gpm	2
16	1600 gpm	2

**AWWA C651, AWWA Standard for Disinfecting Water Mains*

At a point not more than 10 feet downstream from the beginning of the new main, water entering the new main shall receive a dose of chlorine fed at a constant rate such that the water will not have less than 25 mg/L (PPM) free chlorine throughout the entire section of pipe to be chlorinated.

TABLE 2

Chlorine Required to Produce 25-mg/L Concentration in 100 Feet of Pipe – By Diameter*

Pipe Diameter (in)	100 % Chlorine (Pounds)	1% Chlorine Solution (Gals.)
4	0.013	0.16
6	0.030	0.36
8	0.054	0.65
10	0.085	1.02
12	0.120	1.44
16	0.217	2.60

**AWWA C651, AWWA Standard for Disinfecting Water Mains*

The chlorinated water is to remain in the new pipeline for at least 24-hours. After a contact time of 24-hours there should be a free chlorine concentration of not less than 10 mg/L (PPM). During this period, proper precautions are to be taken to prevent this chlorinated water from flowing back into the existing system.

All valves and hydrants within the treated section shall be operated to ensure disinfection of the appurtenances.

The Tablet Method consisting of placing calcium hypochlorite granules or tablets in the water main as it is being installed and then filling the main with potable water and allowing it to set for a contact period is not acceptable.

The interior of all pipe, fittings and valves used in making a repair or tie-in shall be swabbed or sprayed with a one percent (1%) hypochlorite solution before they are installed.

Final Flushing

Following the chlorination period, all treated water shall be flushed from the lines at their extremities and replaced with water from the distribution system.

Flushing the main is to be accomplished at as high a velocity as possible consistent with the ability of the Contractor to collect the discharge water for proper disposal.

All treated water flushed from the lines shall be disposed of by discharging to the nearest sanitary sewer or by other approved means provided in AWWA C651 and acceptable to the City.

Flushing shall be done in strict conformance with all applicable local, state and federal regulations. No discharge of chlorinated water to any storm sewer or natural watercourse will be allowed.

Bacteriological analyses

After the 24-hour disinfection period and all chlorine solution has been thoroughly flushed, the bacteriological sampling and analysis of the replacement water may then be performed.

Bacteriological sampling shall be made by the Contractor's competent person(s) in full accordance with AWWA C651- Section 5, Bacteriological Tests and under the supervision of the Engineer.

Analysis shall be performed by an independent commercial laboratory certified by the State Department of Environmental Protection and U.S. Environmental Protection Agency for analyzing public drinking water supplies. All results shall be provided to the Engineer for review.

Two consecutive sets of acceptable samples, taken at least 16-hours apart are required prior to placing the main into service. Samples shall be collected every 1,200 ft of the new water main, plus one set from the end of the line and at least one from each branch greater than one pipe length. Failure of any one of the bacteriological test samples shall require rechlorination and retesting by the Contractor.

The line shall not be placed in service until the bacteriological requirements of AWWA C651 are met.

Hydrostatic Testing

The Contractor shall complete interim pressure testing of the pipelines prior to tapping for services. The Contractor shall pressure test again up to the closed curb stops after installing services and prior to final acceptance. Both pressure tests are required to pass.

For water mains, the pressure test shall not be conducted until the new main has been flushed clean, disinfected and the chlorinated water properly disposed of. After acceptable completion of the water system disinfection, the Contractor may commence pressure testing of the new water main.

Run pressure test and leakage test simultaneously in accordance with ANSI/AWWA C600.

Test pressure shall be 200 psi for the first five minutes of the test followed by 150 psi for the next 2-hours. No leakage shall be allowed. Test pressure shall not exceed pipe or thrust-restraint design pressures.

The hydrostatic test shall be of at least 2-hour duration or until such time as the Engineer indicates acceptance of the pipeline.

Test pressure shall not vary during the duration of the test.

On pipelines where the elevation along the route of construction varies substantially, the Engineer reserves the right to valve off and test portions of the line.

On extensive construction jobs, the Engineer reserves the right to require the testing of individual portions of the line as construction proceeds rather than await completion of the entire project in order to undertake a pressure or leakage test.

Do not operate valves in either direction at differential pressure exceeding the rated valve working pressure. Use of a test pressure greater than the rated valve pressure can result in trapped test

pressure between the gates of a double-disc gate valve. For tests at these pressures, the test setup should include a provision, independent of the valve, to reduce the line pressure to the rated valve pressure on completion of the test. The valve can then be opened enough to equalize the trapped pressure with the line pressure, or fully opened if desired.

Test pressure shall not exceed the rated pressure of the valves when the pressure boundary of the test section includes closed, resilient-seated gate valves or butterfly valves.

If cast-in-place thrust blocks are installed, no pipeline is to be placed under pressure or subjected to hydrostatic pressure until at least 5 days have elapsed after the concrete thrust blocks have been installed. If high early strength concrete is used in the concrete thrust blocks, the hydrostatic pressure can be applied to the main after 2 days have elapsed from time of construction of the thrust blocks.

The Contractor will be allowed to complete backfilling as hereinbefore specified, prior to undertaking the leakage and pressure tests. Backfilling prior to conducting tests will be at the option of the Contractor with the exception of intersections, driveways, crosswalks and other such locations where holding open the trench may adversely affect the public.

Pipelines may be subjected to hydrostatic pressure and inspected for leakage at any convenient time after the trench has been partially backfilled. Partial backfilling shall consist of filling along the center of the pipe length and leaving the joint open for inspection.

The Contractor shall complete interim pressure testing of the pipelines prior to tapping for services. The Contractor shall pressure test again up to the closed curb stops after installing services and prior to final acceptance. Both pressure tests are required to pass.

Operation of Existing Water System

Do not operate any valve or other control device on the existing water system for any purpose. Do not make any tap or cut-ins to the existing water system without the approval of the Engineer and unless an authorized representative of the Owner is present.

When the Contractor's operations require the adjustment of any hydrant, valves, or other control device on the existing system, the Owner will provide authorized personnel for the purpose of supervising the operation of these control devices. Provide the personnel for the operation of these devices.

Preparation

Conduct connections to the existing system under the Engineer's direction.

To allow for proper filling, venting, testing, etc., install any corporation stops and/or special fittings which may be required. All such installation will be subject to the Engineer's approval.

Foreign materials left in pipelines during installation often results in valve or hydrant seat leakage during pressure tests. Thorough flushing is recommended prior to a pressure test by partially opening and closing valves and hydrants several times under expected line pressure, with flow velocities adequate to flush foreign material out of the main, valves and hydrants.

Procedure

On completion of the pipeline or any valved section thereof, fill pipeline with water and test. Draw

water from the existing water system under the direction of the Engineer and the Water Department.

Before applying the specified test pressure, expel air completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, install corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, close the corporation cocks and apply the test pressure. At the conclusion of the pressure test, either remove and plug or leave in place the corporation cocks at the discretion of the Owner.

Slowly fill each valved section of pipe with water, and apply the specified test pressure as described in this section by means of a pump connected to the pipe in a manner satisfactory to the Engineer. Valves shall not be operated in either the opening or closing direction at differential pressures above the rated pressure. The system shall be stabilized at the test pressure before conducting the leakage test.

Examination Under Pressure

Examine exposed pipes, fittings, valves, hydrants, and joints carefully during the test.

Repair or replace any cracked or defective pipe, fittings, valves, hydrants, or joints that are discovered following the pressure tests with sound material and repeat the test until it is satisfactory to the Engineer.

Leakage Test

Leakage is defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof to maintain pressure after the pipe has been filled with water and the air has been expelled. Testing shall include all hydrants and hydrant branches. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD\sqrt{P}}{148,000}$$

L = allowable leakage, in gallons per hour

S = length of pipe tested, in feet

D = nominal diameter of the pipe, in inches

P = average test pressure during the leakage test, in pounds per square inch (gauge)

This formula is based on an allowable leakage of 10.5 gpd/mi/in of nominal diameter at a pressure of 150 psi.

When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gph/in. of nominal valve size will be allowed.

When hydrants are in the test section, the test shall be made against the closed main valve in the hydrant.

Acceptance of Installation - acceptance will be determined on the basis of allowable leakage. If any test of laid pipe discloses leakage greater than that specified in this section, locate and make

approved repairs as necessary until the leakage is within the specified allowance at no additional cost to the Owner.

Visible leaks are to be repaired, regardless of the amount of leakage.

Method of Measurement & Basis of Payment

All work and materials under these items will be paid for at the respective contract unit price under the items named above for the performance and completion of the work as herein specified.

No separate payment will be made for sawcutting, excavation regardless of depth (excluding rock), dewatering, connection to existing systems, pipe bedding, testing, replacing existing pipe damaged during construction, removal and disposal of existing pipe, or plugging abandoned pipe ends, but all costs in connection therewith shall be included in the Contract unit price bid.

Rock excavation shall be measured and paid for under Item 144. – Class B Rock Excavation.

ITEM 345.61**4 INCH TEMPORARY WATER MAIN****LUMP SUM**

Work performed under these items shall conform to the relevant provisions of Section 301 and the following:

General

The work under this item shall include furnishing, installing, disinfecting, testing, maintaining, operating, monitoring, and removing all temporary water main piping, fittings, valves, appurtenances, temporary services, and incidental materials necessary to maintain continuous potable water service during construction of the proposed water main system.

The temporary water main system shall be designed and installed to provide continuous potable water service to all affected customers during all phases of construction. The Contractor shall maintain the temporary water main system in safe and continuous operation twenty-four (24) hours per day, seven (7) days per week until the permanent water main has been accepted by the City of North Adams. Temporary water mains shall not be removed until written authorization is provided by the Water Department.

The Contractor shall be solely responsible for maintaining uninterrupted water service, protecting water quality, preventing contamination, maintaining fire protection, and complying with all applicable local, state, and federal regulations.

Submittals

Submit a temporary water main plan a minimum of 60 calendar days prior to installation.

The temporary water main plan shall include:

- Proposed temporary water main routing
- Pipe materials and sizes
- Locations of fittings and appurtenances
- Temporary service connection details
- Proposed sequencing
- Estimated shutdown durations
- Disinfection procedures
- Testing procedures
- Freeze protection measures
- Traffic and pedestrian protection measures
- Emergency response procedures
- Emergency contact information

No temporary water main installation shall commence until the submittal has been reviewed and accepted by the Engineer and Water Department.

Material

All temporary water main materials shall be new or like-new condition and suitable for potable water service.

All temporary water piping, fittings, valves, hoses, and appurtenances shall comply with applicable AWWA standards and NSF 61 requirements for potable water contact materials. The temporary

water main system shall be watertight, clean, and free from contaminants, odors, or materials that may adversely affect water quality.

Pipe and fittings shall be Schedule 40 steel pipe or equal.

All temporary piping and hose connections shall be adequately restrained and protected from leakage, movement, freezing, traffic loading, vandalism, and environmental exposure. Contractor shall provide insulation, heat tracing, or other protective measures as necessary to prevent freezing.

All temporary service pipe connections to existing hydrants shall be provided with a tee with a valve for each nozzle connection, with provisions to allow direct connection by the Fire Department to the hydrant without removal of the temporary pipe.

Installation & Operation

Care shall be exercised throughout installation and operation to prevent contamination of existing water mains and the temporary water service system. The interior of all temporary water piping, hoses, fittings, and appurtenances used for potable water service shall be disinfected prior to use in accordance with AWWA C651, applicable Massachusetts regulations, and Specification Section 300 – Water Systems.

The Contractor shall immediately report any suspected contamination, loss of pressure, cross connection event, or water quality issue to the Water Department. Any temporary water main found to be contaminated or otherwise unsuitable for potable use shall be immediately removed from service, disinfected, retested, and approved prior to reuse. The Contractor shall be responsible for all corrective actions, flushing, sampling, disinfection, and restoration associated with contamination events caused by construction operations.

Temporary water mains shall be pressure tested, disinfected, flushed, and approved prior to being placed into service.

The Contractor shall maintain continuous water service to all affected customers except during approved shutdown periods. The Contractor shall coordinate all shutdowns, valve operations, service transfers, and temporary connections with the City of North Adams Water Department. The Contractor shall not interrupt water service without prior written approval from the Water Department. The Contractor shall provide advance notification to all affected customers in accordance with City of North Adams requirements prior to any planned interruption of service.

Operation of existing valves shall be performed only by the City of North Adams unless otherwise authorized in writing.

The Contractor shall provide and maintain primary and secondary emergency contacts available twenty-four (24) hours per day, seven (7) days per week during operation of the temporary water main system.

The Contractor shall furnish, install, maintain, and remove all temporary service connections required to maintain uninterrupted customer water service. Temporary service pipes, tubing and hoses shall not create tripping hazards or unsafe conditions for pedestrians or vehicles. Where temporary piping crosses sidewalks, driveways, or roadways, piping shall either be buried or be protected with ramps or other approved protection systems capable of supporting anticipated

traffic loads. Temporary service pipes must be buried with a minimum of 5 feet cover if maintained through the winter.

Upon completion of the work and acceptance of the permanent water main system, the Contractor shall remove all temporary piping, fittings, valves, appurtenances, and temporary services. All disturbed areas shall be restored to original condition or better at no additional cost.

Method of Measurement

4 Inch Temporary Water Main will be measured on a lump sum basis.

Basis of Payment

4 Inch Temporary Water Main will be paid for at the Contract lump sum price, which price shall include all labor, materials, equipment, and incidental costs required to complete the work. 50% of the lump sum will be paid upon successful setup of the bypass. Remaining payment schedule will be paid upon removal.

ITEM 622.**THRIE BEAM GUARDRAIL****FOOT**

The work under this item shall conform to the relevant provisions of Section 601 of the Standard Specifications and the following:

The work shall include installation of guardrail and posts as shown on the drawings and as directed by the Engineer. Thrie Beam Guardrail shall be anchored to the retaining wall as shown on the drawings.

Materials

Steel posts shall be fabricated from new structural steel sections conforming to the dimensions and designs shown on the plans.

Posts shall conform to the requirements of ASTM A36. Galvanizing shall meet the requirements of MassDOT M7.10.0: Galvanized Coatings.

Method of Measurement

Thrie Beam Guardrail will be measured for payment per foot. All measurements shall be taken in the horizontal plane.

Basis of Payment

Thrie Beam Guardrail will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for steel posts, base plates, anchor plates, anchor bolts, and washers but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 643.**CURVED TOP CHAIN LINK FENCE VINYL COATED****FOOT**

The work under this item shall conform to the relevant provisions of Section 644 of the Standard Specifications and the following:

The work shall include installation of fence and posts as shown on the drawings and as directed by the Engineer. Curved top chain link fence shall be attached to the three beam guard rail posts as shown on the drawings.

Materials

All fence post mounting brackets shall be fabricated from ASTM A36 (Grade 36) steel. All brackets and connection plates shall be galvanized after fabrication in accordance with MassDOT M7.10.0: Galvanized Coatings.

All bolts, nuts, and washers shall conform to ASTM F3125, A325 Type 1 Galvanized requirements. Nuts shall be heavy hex conforming to ASTM A563, and washers shall conform to ASTM F436.

Method of Measurement

Curved top chain link fence will be measured for payment per foot. All measurements shall be taken in the horizontal plane.

Basis of Payment

Curved top chain link fence will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for drilling the three beam guard rail posts, or installing the mounting brackets, bolts, nuts, and washers but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 645.172**72 INCH CHAIN LINK FENCE (PIPE TOP RAIL)
VINYL COATED (LINE POST OPTION)****FOOT**

The work under this Item shall conform to Section 644 of the Standard and Supplemental Specifications and the following:

The work shall include chain link fence and end posts at locations shown on the Drawings or directed by the Engineer. Installations shall conform to the MassDOT Construction Standard Details.

Method of Measurement

Chain link fence will be measured for payment by the foot from center of post to center of post, complete in place.

Basis of Payment

Chain link fence will be paid at the contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for end posts, excavation, auguring, driving posts, back filling, disposal of excess spoils, hardware and fasteners, or cement concrete, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 697.1**SILT SACK****EACH**

Work under this item shall conform to the relevant provisions of Sections 227 and 670 of the Standard Specifications and the following:

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800)-448-3636; Reed & Graham, Inc. Geosynthetics (888)-381-0800; The BMP Store (800)-644-9223; or approved equal.

Silt sacks shall be installed in retained existing and proposed catch basins and drop inlets within the project limits and as required by the Engineer.

The silt sack shall be as manufactured to fit the opening of the drainage structure under regular flow conditions, and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Silt sacks shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of silt sacks after each rainstorm and during major rain events. Silt sacks shall be cleaned periodically to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Owner.

When emptying the silt sack, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. The silt and sediment from the silt sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

All debris accumulated in silt sacks shall be handled and disposed of as specified in Section 227 of the Standard Specifications.

Method of Measurement and Basis of Payment

Silt sacks will be measured and paid at the Contract unit price per each, complete in place, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 698.3**GEOTEXTILE FABRIC FOR SEPARATION****SQUARE YARD**

Work under this item shall conform to the relevant provisions of Section 600 and M9.50.0 of the Standard Specifications and the following:

All geotextile fabrics must be listed on the QCML for the specified application to be approved on a MassDOT project. Geotextile for Separation shall have “application code 2” and be a NP-NW product.

Installation

Install geosynthetic products in accordance with the approved manufacturer’s QA/QC manuals. Manufacturer representative shall be on site to verify that the Contractor’s methods are consistent with manufacturer recommendations and shall certify that the installation meets manufacturer specification.

Method of Measurement

Item 698.3 will be measured at the contract unit per Square Yard, complete in place.

Basis of Payment

Payment shall be paid at the contract unit price and shall include all labor, materials, equipment, and incidental costs required to complete the work.

Any fasteners or appurtenances recommended or required by the manufacturer for installation shall be incidental to the relevant item.

ITEM 734.**SIGN REMOVED AND RESET****EACH**

The work under this item shall conform to the relevant provisions of Sections 828 and 840 of the Standard Specifications and the following:

The work shall include the careful removal and resetting of signs, attached hardware and supports from locations shown on the plans and as directed by the Engineer. The Contractor shall coordinate the removal of signs with the Department. Existing signs shall remain in place until removal is approved by the Department. Any sign damaged or lost either directly or indirectly as a result of the Contractor's operations shall be replaced by the Contractor at his own expense.

Signs removed shall be reset at specified locations on the plans and as directed by the Department.

Method of Measurement

Sign removed and reset will be measured for payment by each, complete in place.

Basis of Payment

Sign removed and reset will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for sign mounting hardware or any components of the sign or support damaged by the Contractor's operations, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 765.**SEEDING****SQUARE YARD**

Work under this item shall conform to the relevant provisions of Section 765 of the Standard Specifications and the following:

Submittals

Product data and specifications for the bonded fiber matrix, fertilizer, lime, and seed mixtures.

A certified statement shall be furnished to the Department by the Contractor prior to the start of work, stating the number of pounds of limestone, fertilizer, seed, and mulch, per 100 gallons of water and shall also specify the number of square yards of seeding that can be covered with the solution specified above.

Materials

Lime shall be in accordance with M6.01.0

Fertilizer shall be in accordance with M6.02.0

Seed shall be in accordance with M6.03.0. Seed mix for detention basin areas shall be as specified on the Drawings.

Bonded Fiber Matrix

Bonded fiber matrix shall be a hydraulically applied system of long strand residual wood fibers produced by thermo-mechanical defibration of wood chips and joined together by a high-strength non-toxic adhesive to create a continuous three-dimensional blanket that adheres to the soil surface to form a bonded fiber matrix. The system shall be applied to the soil as a viscous mixture, which upon drying creates a high-strength, porous and erosion resistant mat. Upon drying, the matrix shall not inhibit the germination and growth of plants in and beneath the layer.

The matrix shall retain its form despite rewetting.

The bonded fiber matrix shall be hydraulically applied at the rate of 4,000 pounds per acre, or in accordance with the manufacturer's recommendations and application requirements/specifics. The resultant coverage must be at least 1/8-inch-thick over the entire surface area. The bonded fiber matrix shall be applied from alternate directions to alleviate shadowing. Bonded fiber matrix shall not be applied within 24 hours of an expected rainfall.

Composition	Refined wood fiber 90% by weight, blended hydro colloidal based binder 10% by weight
Color	Natural
Moisture	9%-15%
Application	Conventional hydraulic seeding equipment with mechanical agitation at a rate of 4,000 pounds per acre
Thickness	1/8-1/4 inch after application
Mixing	40 pounds of fiber per 100 gallons of water

Hydro Seeding

After side slopes have received loam, they shall be traversed by a bulldozer to create ridges running perpendicular to the slope to impede the travel of stormwater runoff. The tracking shall be done prior to hydro seeding.

Lime, fertilizer, seed, and mulch shall be simultaneously applied in one operation by the use of an approved spraying machine. The materials shall be mixed with water in the machine and kept in

an agitated state in order that the materials may be uniformly suspended in water. The spraying equipment shall be so designed that when the solution is sprayed over an area, the resulting deposits of limestone, fertilizer, seed, and mulch shall be equal in quantity to those specified above.

Bonded fiber matrix shall be applied to all seeded areas on slopes steeper than 7%. The thickness of the matrix after application shall be 1/8 inch to 1/4 inch thick.

Seed shall be sown only between the periods from April 15th to June 1st, and from August 15th to October 1st.

If as a result of rain, the prepared seedbed becomes eroded, the Contractor shall rework the topsoil until it is smooth and re-hydro seed such reworked areas.

No seeded area will be acceptable until it is covered with a satisfactory, healthy stand of quality grass of the variety specified. A satisfactory stand of grass, as determined by the Department, shall consist of a uniform stand of at least 60% established permanent grass species, with a uniform count of at least 100 plants per square foot. If the results of the spray operation are unsatisfactory, the Contractor will be required to repeat the hydro seeding process as needed to achieve a thick stand of grass.

The Contractor shall protect seeded areas from damage and shall repair and maintain all areas. The Contractor shall repair and reseed all defective or non-growth grass areas during the following season.

The Contractor is fully responsible for providing adequate amounts of water to the seeded areas to provide an adequate growth. All areas to be seeded shall be hydro seeded. Hand seeding will not be allowed.

Method of Measurement

Seeding will be measured for payment by the square yard, complete in place. Each area to receive seed will be measured once regardless of the amount of times the area is seeded.

Basis of Payment

Seeding will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

ITEM 767.121**SEDIMENT CONTROL BARRIER****FOOT**

This item shall conform to the requirements of Section 751 and 767 of the Standard Specifications and the following:

General

The purpose of this item is to provide a linear, compost-filled barrier for filtering suspended sediments from storm water flow.

Materials

Material for the sediment control barrier shall be compost meeting M1.06.0, except that no manure or bio-solids shall be used. In addition, no kiln-dried wood or construction debris shall be allowed. Compost shall pass through a 3-inch sieve.

Sediment barriers shall be a minimum of 12 inches and maximum of 18 inches in diameter and shall be jute mesh or approved biodegradable material. Additional barriers shall be used at the direction of the Engineer.

Stakes for anchors, if required, shall be nominal two-inch x two-inch stakes.

Construction Methods

Tubes of compost may be filled on site or shipped. Tubes shall be placed, filled and staked in place as required to ensure stability against water flows. Stakes shall not be used to puncture tubes, but rather be placed on the downhill side of tubes to provide additional support. All tubes shall be tamped to ensure good contact with soil.

The Contractor shall ensure that the filter tubes function as intended at all times. Tubes shall be inspected after each rainfall and at least daily during prolonged rainfall. The Contractor shall immediately correct all deficiencies, including, but not limited to, washout, overtopping, clogging due to sediment, and erosion. The Contractor shall review location of tubes in areas where construction activity causes drainage runoff to ensure that the tubes are properly located for effectiveness. Where deficiencies exist, such as overtopping or wash-out, additional staking or compost material shall be installed as directed by the Engineer. Contractor shall remove sediment deposits as necessary to maintain the filters in working condition.

Filter tubes shall be removed by the Contractor when site conditions are sufficiently stable to prevent surface erosion, and after receiving permission to do so from the Department. All tube fabric shall be cut and removed and disposed of off-site by the Contractor. At the direction of the Engineer, the Contractor may rake out and seed mulch material so that it is no greater than two inches in depth on soil substrate.

Method of Measurement

Sediment control barriers will be measured for payment by the foot of barrier installed, complete in place. Measurements are assumed to be taken in a horizontal plane.

Basis of Payment

Sediment control barriers will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

No separate payment will be made for maintenance or replacement of barriers, removal and disposal of fabric and stakes, or raking and seeding of compost, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 880.**TRAFFIC POLICE FOR CONSTRUCTION
OPERATIONS****ALLOWANCE**

The Contractor shall furnish police services required to direct traffic on existing roadways where traffic is maintained. Police services are not anticipated for the majority of work.

The Contractor shall provide such police officers as may be deemed necessary by the City for the direction and control of all traffic traveling within and through the project area. The police officers shall be obtained from the City Police Department as applicable. The police officers shall be paid directly by the Contractor at the prevailing rate of wages established by the City.

Method of Measurement and Basis of Payment

Traffic police costs will be reimbursed at the actual invoice price received from the Police Department. Contractor will be reimbursed for payment of traffic officers only after invoices have been paid.

Owner will deduct from monies due Contractor for the following abnormal and unreasonable expenses:

1. Contractor caused delays in the prosecution of work that result in hiring traffic officers for more hours than would have been required during normal prosecution of work.
2. Reconstruction and/or reinstallation of any portions of the work, as a result of improper initial installation or defective material, for which traffic officers are required.
3. Traffic officers required at a site where Contractor is not working or outside of Contractor's standard work day as a result of obstructions to traffic that remain in the traveled way.
4. All other incidents resulting from Contractor's operations requiring traffic officers that would not normally be encountered during the progress of a well-organized project employing proper construction methods.
5. When traffic officers are requested for the convenience of Contractor and are not otherwise considered necessary to the work.

ITEM 904.4**4000 PSI, ¾ INCH 585 HP CEMENT CONCRETE****CY**

This Item shall consist of furnishing all labor, materials, equipment, formwork, curing, protection, and incidentals required to construct the reinforced concrete retaining wall complete in place as shown on the Drawings and specified herein.

No operation shall commence until all labor, materials, equipment, and services necessary to maintain continuous and uninterrupted progress of the Work are available.

Reference Standards

The following standards, latest edition unless otherwise noted, shall govern:

- A. MassDOT Standard Specifications for Highways and Bridges (2023)
- B. ACI 301 – Specifications for Structural Concrete
- C. ACI 305R – Hot Weather Concreting
- D. ACI 306R – Cold Weather Concreting
- E. ACI 308.1 – Guide to External Curing of Concrete
- F. ACI 318 – Building Code Requirements for Structural Concrete
- G. OSHA 29 CFR 1926

Where conflicts exist, the more stringent requirement shall govern.

Submittals

- A. Concrete Placement Plan
 - 1. Plan shall include placement sequence, construction joint locations, concrete delivery methods, vibration methods, formwork details, access plans, and contingency procedures.
 - 2. Formwork design and drawings shall be stamped by a Massachusetts Registered Professional Engineer.
- B. Concrete Curing Plan in accordance with ACI 308.1.
- C. Hot weather concrete protection and curing details in conformance with ACI 305R.
- D. Cold weather concrete protection and curing details in conformance with ACI 306R.
- E. Concrete Mix Design
 - 1. Mix design shall include cement type and content, water-cement ratio, aggregate gradation, slump, air content, admixtures, and strength history data.

Materials

Materials shall meet the requirements specified below and relevant Subsections of Division II: Construction Details and Division III, Materials Specifications of the MassDOT Standard Specifications for Highways and Bridges (2023).

CONCRETE:

All concrete shall meet the requirements of MassDOT Standard Section 901: Cement Concrete Item 904.4 4,000 psi, ¾-inch, 585 HP Cement Concrete. All concrete shall be from an approved supplier and manufacturer listed on the Massachusetts Department of Transportation QCML (Qualified Construction Materials List). All concrete constituents shall be in accordance with MassDOT Section M4: Cement and Cement Concrete Materials. Calcium chloride admixtures shall not be permitted.

FORMWORK:

Formwork shall conform to ACI 347. Forms shall maintain true alignment and grade, resist placement pressures, and prevent distortion or movement. Form ties shall be recessed a minimum of 1 inch from exposed surfaces. Tie holes shall be filled with non-shrink mortar.

Execution**Concrete Placement:**

Concrete placement shall conform to MassDOT Section 901 and ACI requirements.

Concrete shall not be placed on frozen surfaces, in standing water, or during unsuitable weather conditions. Concrete shall be placed continuously between construction joints whenever practicable.

Mechanical vibration shall be used to consolidate concrete and eliminate voids.

Forms shall not be removed until both of the following conditions are satisfied:

- A. A minimum of 7 days has elapsed since concrete placement, and
- B. The concrete has achieved at least 80% of the specified design compressive strength.

Concrete elements shall not be loaded until both of the following conditions are satisfied:

- A. A minimum of 28 days has elapsed since concrete placement, and
- B. The concrete has achieved 100% of the specified design compressive strength.

Construction joints shall be located at approved locations only. All joint surfaces shall be cleaned, roughened, and free of debris. Water stops shall be installed at all construction joints unless approved by the Engineer.

Field Quality Control

The Contractor shall provide the following testing and inspection in conformance with ACI 318:

- A. Slump tests
- B. Air content tests
- C. Concrete temperature measurements
- D. Compressive testing at 7, 14, and 28-day intervals.

All field and laboratory testing results shall be submitted to the Engineer for record.

The Contractor shall be responsible for continuous monitoring and recording of concrete temperature during batching, delivery, placement, and curing operations.

Concrete temperature at the time of placement shall be measured for each truckload and shall comply with applicable requirements of ACI 305R (Hot Weather Concreting) and ACI 306R (Cold Weather Concreting), as applicable.

The Contractor shall maintain a written temperature log for all placements and shall submit records to the Engineer upon request. Concrete outside of specified temperature limits shall be rejected or subject to corrective measures as directed by the Engineer.

Method of Measurement

4000 PSI, ¾" 585 HP Cement Concrete will be measured for payment on a per CUBIC YARD basis.

Basis of Payment

Concrete will be paid for at the Contract unit price, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 953.1**TEMPORARY SUPPORT OF EXCAVATION****LUMP SUM**

This item shall conform to the requirements of Section 900 of the Standard Specifications and the following:

General

The work under this Item shall consist of furnishing, designing, installing, maintaining, monitoring, modifying as required, and removing temporary support of excavation systems, temporary earth retaining systems, and all appurtenant materials and equipment necessary to safely complete the Work shown on the Drawings and specified herein.

Temporary support systems shall be designed and constructed to safely support excavation faces, surcharge loads, groundwater pressures, hydrostatic forces, utilities, adjacent structures, roadways, embankments, completed portions of the Work, and all other imposed loading conditions.

The Contractor shall provide all labor, materials, equipment, engineering, monitoring, maintenance, and incidentals necessary for a complete and functional temporary support system.

Types, arrangements, locations, and limits of temporary support systems shown on the Drawings, if any, are schematic and for informational purposes only. The Contractor shall be solely responsible for final selection, design, layout, sequencing, installation procedures, performance, maintenance, and removal of all temporary support systems.

The Contractor shall, at all times, be entirely responsible for the adequacy of temporary earth retaining and support of excavation systems used to permit the satisfactory and safe installation and construction of the work.

Systems shall provide adequate protection against damage to all existing utilities, structures and completed portions of the work, and shall prevent injury to persons. The Contractor shall immediately suspend operations and implement corrective measures whenever unsafe conditions, excessive movements, instability, or distress are observed.

Reference Standards

- A. OSHA 29 CFR 1926 Subpart P – Excavations
- B. FHWA GEC No. 8 – Temporary Shoring and Earth Retention

Submittals**A. Temporary Support of Excavation Drawings:**

- 1. At least twenty-one (21) calendar days prior to the start of installation, submit drawings for review by the Engineer. Drawings shall include plan layouts, sections, construction staging plans, details, and other relevant information.
- 2. All drawings shall be made and sealed by a registered Professional Engineer licensed to practice in the Commonwealth of Massachusetts.

B. Design Computations:

- 1. The Contractor shall also submit complete computations for the design of the temporary earth retaining and cofferdam systems proposed to be installed. The

design shall be in accordance with sound engineering practice and modern accepted principles of soil mechanics. It shall include the effects of all surcharge which may be reasonably anticipated.

2. The minimum factor of safety for temporary earth retaining and cofferdams systems shall be 1.5.
3. All computations shall be made and sealed by a registered Professional Engineer licensed to practice in the Commonwealth of Massachusetts.
4. Any systems intended to support permanent or temporary driveways shall be designed for H10 loading.
5. Computations shall be provided for control of groundwater and dewatering excavations.

The design and layout will be reviewed by the Engineer as to type and suitability, providing that the arrangements presented by the Contractor are satisfactory, but such review will not relieve the Contractor of the sole responsibility for the adequacy of the systems nor shall it be construed as a guarantee that the Contractor's proposed equipment, materials, and methods will be adequate for the work required at the locations of and for the work required by this contract.

Materials

Materials used for temporary support systems shall be new or used materials in good condition and suitable for the intended application.

All materials shall be free from defects, excessive corrosion, distortion, cracking, or other damage that could impair performance.

Execution

General

Temporary support systems shall be installed in accordance with the approved submittals and accepted engineering practice.

Excavation shall not proceed ahead of installed support systems beyond limits permitted by the approved design.

The Contractor shall take all precautions necessary to prevent lateral or inward movement of material along the sides or the bottoms of excavations.

It is expressly understood and agreed that whenever temporary earth retaining and support of excavation systems are used, it shall not relieve the Contractor of the sole responsibility for any damages or injury due to the installation or failure of the systems or the settling of the backfill, utilities, or of the adjacent ground, structures, utilities, or other work.

If voids occur, they shall be filled immediately with selected materials from the earth excavation to the satisfaction of the Engineer.

Inspection

The Contractor shall inspect and monitor adjacent structures, utilities, pavements, embankments, and completed Work affected by excavation activities.

Monitoring shall include visual observations and instrumentation where required by the Contract Documents or approved submittals.

The Contractor shall immediately notify the Engineer of any observed movement, settlement, cracking, instability, or distress.

Corrective measures shall be implemented immediately at no additional cost to the Owner.

Removal

Temporary earth retaining and support of excavation systems shall be removed as backfilling is done, and removal shall be conducted in such a manner so as to avoid any damage to the permanent structure or to other members of the systems.

During backfilling, temporary support elements shall not be removed until alternative support is available, such as substituted struts, backfill, or ability of the temporary earth retaining and cofferdam system to act as a cantilever without detrimental deflection. All voids left by removal of said systems shall be immediately filled.

All temporary earth retaining and support of excavation systems shall be removed at completion unless otherwise shown on the Drawings.

Method of Measurement

Temporary Support of Excavation will be measured on a lump sum basis and shall be inclusive of all design, engineering, submittals, monitoring, control of groundwater, protection of utilities, installation, incidentals, and removal.

Basis of Payment

Temporary Support of Excavation will be paid for at the Contract lump sum price, which price shall include all labor, equipment and incidental costs required to complete the work. 50% of the lump sum will be paid upon successful setup of the temporary earth retaining. Remaining payment schedule will be paid upon removal.

ITEM 998.1**MONTHLY PRICE ADJUSTMENT
FOR HMA MIXTURES****ALLOWANCE**

This provision applies to all projects using greater than 100 tons of hot mix asphalt (HMA) mixtures containing liquid asphalt cement.

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.

The Period Price of liquid asphalt for each monthly period will be determined by MassDOT 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. MassDOT will post this *Asphalt Weekly Monitor*. Poter and Partners has granted MassDOT the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

The Base Price for liquid asphalt for this Project shall be \$712.50 per ton.

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 a separate payment item and 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 determined by multiplying the number of tons of hot mix asphalt mixtures placed during each monthly period times the liquid asphalt content percentage (5.5% for all mixes) 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 an Owner approved extension of time.

<u>ITEM 998.2</u>	<u>MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL</u>	<u>ALLOWANCE</u>
<u>ITEM 998.3</u>	<u>MONTHLY PRICE ADJUSTMENT FOR GASOLINE</u>	<u>ALLOWANCE</u>

This provision applies to all projects which include excavation, borrow, and paving work.

The Price Adjustment will be based on the variance in price for the fuel component of various excavation, borrow, and paving items of work (see table below) only from the Base Price to the Period Price. This Price Adjustment will occur on a monthly basis.

The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month.

The Base Price for diesel fuel for this Project shall be \$4.497 per gallon.

The Base Price for gasoline for this Project shall be \$3.752 per gallon.

The Contract Price of the various excavation, borrow, and paving items will be paid under the respective items in the Contract. The Price Adjustment, as herein provided, upwards or downwards, will be a separate payment item and 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 fuel component of various excavation, borrow, and paving items of work.

The Price adjustment will be determined by multiplying the number of cubic yards of various excavation, borrow, and paving items of work completed during each monthly period with fuel usage factors developed by the Highway Research Board in Circular 158, dated July 1974. The quantity of fuel used will then be multiplied by the variance in price from the Base Price to the Period Price for diesel and gasoline fuel.

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 an Owner approved extension of time.

ITEMS COVERED	FUEL FACTORS	
	Diesel	Gasoline
Excavation and Borrow Work: Items 120., 127.1, 141.1, 144., 151. (Both Factors used)	0.29 Gallons / CY	0.15 Gallons / CY
Surfacing Work: All Items containing Hot Mix Asphalt	2.90 Gallons / Ton	Does Not Apply

ITEM 998.4**MONTHLY PRICE ADJUSTMENT
FOR PORTLAND CEMENT IN CONCRETE****ALLOWANCE**

This provision applies to all projects using greater than 100 cubic yards of Portland cement concrete containing Portland cement.

The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges. This Price Adjustment will occur on a monthly basis.

The Period Price of Portland cement for each monthly period will be determined by MassDOT 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 MassDOT website the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

The Base Price for Portland Cement for this Project shall be \$452.13 per ton.

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 a separate payment item and 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 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 an Owner approved extension of time.

ITEM 998.5**MONTHLY PRICE ADJUSTMENT
FOR STEEL****ALLOWANCE**

This provision applies to projects containing a price adjustment for structural steel and reinforcing steel as stipulated in the Advertisement for Bid. It applies to all structural steel as defined below and all reinforcing steel on the project. Compliance with this provision is mandatory, i.e., there are no “opt-in” or “opt-out” clauses. Price adjustments will be handled as described below and shall only apply to unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings, and unfabricated reinforcing steel bars.

Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

The Base Price for structural steel and reinforcing steel for this Project shall be \$1.32 per pound.

Price adjustments will only be made if the variances between Base Prices and Period Prices are 5% or more. A variance can result in the Period Price being either higher or lower than the Base Price. Once the 5% threshold has been achieved, the adjustment will apply to the full variance between the Base Price and the Period Price.

Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or fabricated reinforcing steel bars subject to a price adjustment by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will not include the costs of shop drawing preparation, handling, fabrication, coatings, transportation, storage, installation, profit, overhead, fuel costs, fuel surcharges, or other such charges not related to the cost of the unfabricated structural steel and unfabricated reinforcing steel.

The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

Base Prices and Period Prices are defined as follows:

Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Engineer and found in the Advertisement for Bid.

The Base Price Date is the month and year in which the Owner opened bids for the project. This date is used to select the Base Price Index.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices calculated based on the purchase date of the steel using an index of steel prices to adjust the Base Price.

The Period Price Date is the date the steel was delivered to the fabricator as evidenced by an official bill of lading submitted to the Engineer containing a description of the shipped materials, weights of the shipped materials and the date of shipment. This date is used to select the Period Price Index.

The index used for the calculation of Period Prices is the U.S. Bureau of Labor Statistics (BLS) Producer Price Index (PPI) Series ID WPU101702 (Not Seasonally Adjusted, Group: Metals and Metal Products, Item: Semi-finished Steel Mill Products.) As this index is subject to revision for a period of up to four (4) months after its original publication, no price adjustments will be made until the index for the period is finalized, i.e., the index is no longer suffixed with a “(P)”.

Period Prices are determined as follows:

Period Price = Base Price X Index Factor

Index Factor = Period Price Index / Base Price Index

Example of a Period Price Calculation:

Calculate the Period Price for December 2009 using a Base Price from March 2009 of \$0.82/Pound for 1,000 Pounds of ASTM A709 (AASHTO M270) Grade A36 Structural Steel Plate.

The Period Price Date is December 2009. From the PPI website*, the Period Price Index =218.0.

The Base Price Date is March 2009. From the PPI website*, the Base Price Index =229.4.

Index Factor = Period Price Index / Base Price Index = 218.0 / 229.4 = 0.950

Period Price = Base Price X Index Factor = \$0.82/Pound X 0.950 = \$0.78/Pound

Since \$0.82 - \$0.78 = \$0.04 is less than 5% of \$0.82, no price adjustment is required.

If the \$0.04 difference shown above was greater than 5% of the Base Price, then the price adjustment would be 1,000 Pounds X \$0.04/Pound = \$40.00. Since the Period Price of

\$0.78/Pound is less than the Base Price of \$0.82/Pound, indicating a drop in the price of steel between the bid and the delivery of material, a credit of \$40.00 would be owed to the Owner. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.

* To access the PPI website and obtain a Base Price Index or a Period Price Index, go to <http://data.bls.gov/cgi-bin/srgate>

END OF EXAMPLE

The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the respective contract pay items for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

No price adjustment will be made for price changes after the Contract Completion Date, unless the Owner has approved an extension of Contract Time for the Contract.

END OF DOCUMENT
