

**Town of Moriah, N.Y.  
Water and Sewer Main Replacement  
Phase II**

**Contract No. TM-2021-G**



**Issued for Bidding**

**Town of Moriah**

**Supervisor:** Thomas R. Scozzafava

**Councilmembers:**

Paul Salerno, Deputy Supervisor

Thomas Anderson

Matthew Brassard

Nathan Gilbo

**Town Clerk:**

Rose French

**Wastewater Treatment Plant:**

Carl (Chip) Perry

**Water and Sewer Department:**

Arthur Morgan

**March 2021**

BOOK 1 OF 1



3903 Main Street, Warrensburg, NY 12885 (P) 518-623-5500  
464 Main Street, P.O. Box 1360, Oneonta, NY 13820 (P) 607-441-3246

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**TOWN OF MORIAH  
ESSEX COUNTY, NEW YORK  
WATER AND SEWER MAIN REPLACEMENT – PHASE II**

**ADVERTISEMENT FOR BIDS**

Sealed Bids for the construction of the Town of Moriah, Water and Sewer Replacement – Phase II project will be received, by the Town of Moriah, at the Moriah Town Hall located at 38 Park Place, Port Henry, NY 12974, until **10 A.M.** local time on **Wednesday, April 28, 2021**, at which time the Bids received will be publicly opened and read.

The Project consists of work including providing all labor, materials, machinery, tools, equipment and other means of construction necessary and incidental to the completion of work shown on the plans and described in these specifications including, but not necessarily limited to the following: 1,280± linear feet of water main replacement, approximately 16 water service lines, 840± linear feet of sanitary sewer main replacement and rehabilitation, approximately 17 sanitary sewer laterals, 380± square feet of sidewalk demolition and replacement, and approximately 600 tons of pavement restoration at 1<sup>st</sup> Lane, 2<sup>nd</sup> Lane, and College Street in the Village of Port Henry, NY.

Bids shall be on a unit price basis with any additive alternate bid items as indicated in the Bid Form.

Specifications and standard proposals, including Addenda, if any, for the proposed work may be obtained on the New York State Contract Reporter account “Essex County Department of Community Development & Planning”, and additionally on the County’s website at: <https://www.co.essex.ny.us/bidders/publicbids.aspx>. For questions on the specifications and bidding, please contact the project engineer, Cedarwood Engineering Services, PLLC, by email at [jsoukup@cedarwoodengineering.com](mailto:jsoukup@cedarwoodengineering.com) or by telephone at (518) 623-5500. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the locations identified above.

All bids must be made on the official Bid Form or an exact copy by reproduction thereof and enclosed in a sealed envelope. No bidder may withdraw his bid within forty-five calendar days after the actual date of the opening thereof. Each bid must be accompanied by a bid security in the amount of five percent of the maximum bid price, as determined by adding the base bid and all alternatives, in accordance with the Instructions to Bidders.

The successful bidder will be required to furnish construction performance and payment bonds in the full amount of the contract price.

The successful bidder will be required to comply with all provisions of the Federal Government Equal Employment Opportunity clauses issued by the Secretary of Labor on May 21, 1968 and published in the Federal Register (41CFR Part 60-1, 33 F.2 7804).

The Town received a New York State Community Development Block Grant, NYS CDBG Project # 758PR155-16, to fund a portion of the project. The successful bidder shall comply with all provisions set forth within the contract documents included as Appendix A of the Agreement.

Minority and Women-Owned Business Enterprises (M/WBE) businesses and Section 3 businesses are strongly encouraged to participate in this Community Development Block Grant funded project. An overall goal of 30% has been established for this project based on a combination of 15% MBE and 15% WBE participation. Upon contract award, Contractor will be required to prepare an MWBE Utilization Plan to demonstrate MWBE participation, prior to contract execution and Notice to Proceed. The Town, the recipient of the Community Development Block Grant (CDBG) funds, is an equal opportunity

employer. For more information on the requirements associated with CDBG funds, please see their website:

- <http://www.nyshcr.org/AboutUs/Procurement/Contractinformation.htm>
- <http://www.nyshcr.org/Programs/NYS-CDBG/GrantAdministration.htm>

A pre-bid conference will be held at **9 A.M.** local time on **Wednesday, April 7, 2021** at the Moriah Town Court, located at 42 Park Place, Port Henry, NY 12974. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

Owner:

Town of Moriah  
38 Park Place  
Port Henry, NY 12974

Engineer:

Cedarwood Engineering Services  
Warrensburg, NY 12885  
518-623-5500  
jsoukup@cedarwoodengineering.com  
Title: Project Manager

Date: **March 29, 2021**

Owner reserves the right to reject any and all Bids, to waive any and all informalities and the right to disregard all nonconforming, non-responsive or Conditional Bids.

## INSTRUCTIONS TO BIDDERS

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## ARTICLE 1 – DEFINED TERMS

**1.01** Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

## ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

**2.01** Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.

**2.02** 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.

**2.03** Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

## ARTICLE 3 – QUALIFICATIONS OF BIDDERS

**3.01** To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within [5] days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information **as may be called for below (or in the Supplementary Instructions)**:

- A. Evidence of Bidder's authority to do business in the state where the Project is located.
- B. Bidder's state or other contractor license number, if applicable.
- C. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."

**3.02** A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

**3.03** No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

**3.04** Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

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

### **4.01** *Site and Other Areas*

- A. 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, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

#### 4.02 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 relating to existing surface or 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. Owner will make copies of reports and drawings referenced above available to any Bidder on request. 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.
  - 4. Geotechnical Baseline Report: **The Bidding Documents do not contain a Geotechnical Baseline Report (GBR).**
- 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 subsurface or physical 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.

#### 4.03 Site Visit and Testing by Bidders

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. 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.

- D. 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.
- E. 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.

#### **4.04**    *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.

#### **4.05**    *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

### **ARTICLE 5 – BIDDER'S REPRESENTATIONS**

#### **5.01**    It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference 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, and performance of the Work;
- D. carefully study 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. 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 required, 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 furnishing 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**

- 6.01** 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**

- 7.01** All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02** Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

#### **ARTICLE 8 – BID SECURITY**

- 8.01** A Bid must be accompanied by Bid security made payable to Owner in an amount of [ 5% ] percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, 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.

- 8.02** The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03** The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04** Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

## **ARTICLE 9 – CONTRACT TIMES**

- 9.01** The number of days within which, or the dates by which, Milestones are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

## **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.01** 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**

- 11.01** The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids **in the case of a proposed substitute and 5 days prior in the case of a proposed "or-equal"**. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner. **Substitutes and "or-equal" materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.04 and 7.05 of the General Conditions after the Effective Date of the Contract.**
- 11.02** All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.
- 11.03** **If an award is made, Contractor shall be allowed to submit proposed substitutes and "or-equals" in accordance with General Conditions.**



## **ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

**If required by the bid documents,** the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for those portions of the Work for which such identification is required.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.01** If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.
- 12.02** **Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.**
- 12.03** **The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06A.**

## **ARTICLE 13 – PREPARATION OF BID**

- 13.01** The Bid Form is included with the Bidding Documents.
  - A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
  - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."
- 13.02** A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 13.03** 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.
- 13.04** A Bid by an individual shall show the Bidder's name and official address.
- 13.05** 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.

- 13.06** All names shall be printed in ink below the signatures.
- 13.07** The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.08** Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.09** 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.

#### **ARTICLE 14 – BASIS OF BID**

##### **14.01 Unit Price *with Lump Sum Items and Alternates***

- A. Bidders shall submit a Bid on a unit price basis for each item **of which some of the items are on a lump sum basis** of Work listed in the unit price section of the Bid Forms **for the General Construction Contract TM-2021-G, and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Forms. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.**
- 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. **Bid Alternate Pricing is to be provided for use in the contract should alternate or additional work be required, and will not be used for Contract Bid Award.**
- 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.

#### **ARTICLE 15 – SUBMITTAL OF BID**

- 15.01** With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02** A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security 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 package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to **Town of Moriah, 38 Park Place, Port Henry, NY 12974.**

- 15.03** 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 AND WITHDRAWAL OF BID**

- 16.01** 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.
- 16.02** If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03** If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

#### **ARTICLE 17 – OPENING OF BIDS**

- 17.01** Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

#### **ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 18.01** 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 security prior to the end of this period.

#### **ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 19.01** Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02** If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03** Evaluation of Bids
- A. 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.
  - B. **In comparison of Bids, the Contract Bid Award will be based on the sum of the Base-Bid items listed on the Bid Forms (i.e., the sum of the product of unit price multiplied by the**

**quantity for each bid item), Not Bid Alternate Costs. Bid Alternates if any are provided for use in the Contract should alternate or additional work be required or requested by the Owner.**

- 19.04** In evaluating whether a Bidder is responsible, Owner will consider the qualifications of 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.
- 19.05** 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.

## **ARTICLE 20 – BONDS AND INSURANCE**

- 20.01** Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

## **ARTICLE 21 – SIGNING OF AGREEMENT**

- 21.01** When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

## **ARTICLE 22 – SALES AND USE TAXES**

- 22.01** Owner is exempt from [8.0%] state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. [\_\_\_\_\_]). Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

## **ARTICLE 23 – FEDERAL REQUIREMENTS**

- 23.01** Federal requirements at Article 19 of the Supplementary Conditions apply to this Contract.

## **ARTICLE 24 – ATTACHMENTS TO THE BID**

- 24.01** The following documents are submitted with and made a condition of this Bid in coordination with ARTICLE 7 – ATTACHMENTS TO BID OF the Bid Form:
- A. Required Bid security;
  - B. List of Proposed Subcontractors;
  - C. List of Proposed Suppliers;

- D. List of Project References;
- E. 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;
- F. Contractor's License No.: [REDACTED] [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- G. Required Bidder Qualification Statement with supporting data;
- H. Corporate Resolution
- I. Non-Collusion Form
- J. Certification of Non-Segregated Facilities
- K. Certification of Prime Contractor Regarding Equal Employment Opportunity
- L. Contractors Certification from Debarred Contractors List
- M. Affidavit – Worker's Compensation
- N. Community Development Block Grant Requirements, as shown in Appendix A of the Agreement Between Owner and Contractor.

1. Exhibit 4-1

- a. Equal Employment Opportunity
- b. Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 276c)
- c. Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7)
- d. Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330)
- e. Patent Rights to Inventions Made Under a Contract or Agreement
- f. Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended
- g. Section 3 12 U.S.C. 1701u of The Housing and Community Development Act of 1968, as amended
- h. All applicable items as detailed in Exhibit 4-1
- i. Anti-Job Pirating 24CFR 570.482

Exhibit 4-2: Section 3 Rider

Contractor must comply with and must ensure that the following language (attached as stated above in Appendix A of the Agreement Between Owner and Contractor.

- j. Section 3 Clause (24 CFR 135.38)
  - k. All applicable items as detailed in Exhibit 4-2
2. Exhibit 6-2: Federal Labor and Civil Rights Requirements
- a. Wage Determination and Employee Classification
  - b. Work Hours, Overtime, and Safety Standards
  - c. Deductions
  - d. Contractor Reporting Requirements

- e. **Job Site Notices**
  - f. **Monitoring and Sanctions**
  - g. **Contractor Affirmative Action**
  - h. **All applicable items as detailed in Exhibit 6-2.**
- 3. **Office of Economic Opportunity and Partnership Development – Good Faith Efforts Guide**
  - 4. **Bid Solicitation Log for MBE/WBE Participation**
  - 5. **MWBE Utilization Plan**
  - 6. **Request for Waiver Form**

## **ARTICLE 25 – LIST OF DRAWINGS**

**25.01** The following is the list of Contract Drawings, which are bound separately, and which, in conjunction with these specifications, comprise the Contract Documents.

<b>Drawing Number</b>	<b>Drawing Name</b>
C-0	COVER
C-1	INDEX, LEGEND AND NOTES
C-2	EXISTING CONDITIONS PLAN
C-3	DEMOLITION PLAN
C-4	1 <sup>ST</sup> LANE PLAN & PROFILE
C-5	2 <sup>ND</sup> LANE PLAN & PROFILE
C-6	SITE REHABILITATION PLAN
C-7	BID ALTERNATE #1
C-8	WATER DETAILS
C-9	WATER DETAILS
C-10	SANITARY SEWER DETAILS
C-11	GENERAL DETAILS
C-12	GENERAL DETAILS

# **INFORMATION AVAILABLE TO BIDDERS**

**INFORMATION PLACED IN THIS SECTION IS NOT A PART OF THE CONTRACT DOCUMENTS.**

## **SUBSURFACE DATA**

1. A subsurface investigation was completed at the project site by Atlantic Testing Laboratories and the results along with the letter report are attached as information available to bidders. Please note these are **not a part of the Contract Documents**.

## **RECORD PLANS**

1. No record plans are included.



# ATLANTIC TESTING LABORATORIES

**WBE certified company**

January 19, 2021

**Canton**  
6431 U.S. Highway 11  
P.O. Box 29  
Canton, NY 13617  
315-386-4578 (T)  
atlantictesting.com

Cedarwood Engineering Services, PLLC  
3903 Main Street  
Warrensburg, New York 12885

Telephone: 518-623-5500

Attn: Mr. Jonathan Soukup, PE

Re: Subsurface Investigation Services  
Water and Sewer Main Replacement Phase II  
Moriah, Essex County, New York  
ATL No. CD4997D-01-01-21

Ladies and Gentleman:

At the request of Mr. Jonathan Soukup, PE, representing Cedarwood Engineering Services, PLLC (Cedarwood), and in accordance with our proposal (ATL No. CD998-1258-06-20 dated June 5, 2020), Atlantic Testing Laboratories, Limited (ATL) performed a Subsurface Investigation for the referenced project. The field investigation was performed on December 11, 2020.

The boring locations were selected and staked by representatives of Cedarwood. A **Boring Location Plan** is included in **Attachment A**.

Four (4) pavement cores and soil borings were advanced utilizing a 6-inch diameter thin-wall coring machine and a split spoon sampler to depths ranging from 8 to 8.4 feet below ground surface. Soil sampling and standard penetration testing was performed utilizing a 2-inch outside diameter split spoon sampler in accordance with ASTM D 1586. Soil sampling was generally performed continuously throughout each borehole.

The 2-inch split spoon samplers do not recover material larger than 1 $\frac{3}{8}$ -inch in nominal dimension. Therefore, the recovered samples may not be representative of the entire soil matrix. The visual soil classifications contained in the subsurface investigation logs were performed in the laboratory and are presented on the **Subsurface Investigation Logs** included in **Attachment B**. A **Photographic Log of Pavement Cores** is included in **Attachment C**.

Select soil samples were tested in the laboratory in general accordance with AWWA Specification C105/A21.5-99 Appendix A. The **Corrosive Analysis of Soil Report** is included in **Attachment D**.

The boreholes were backfilled with on-site material. It is important that the backfilled borings be monitored for settlement or subsidence. This will be the responsibility of

Albany ♦ Binghamton ♦ Elmira ♦ Plattsburgh ♦ Poughkeepsie ♦ Rochester ♦ Syracuse ♦ Utica ♦ Watertown



Cedarwood and/or their client. ATL assumes no liability for loss or damage resulting from borehole settlement.

The soil samples obtained during this investigation will be retained for a period of 6 months and subsequently discarded, unless otherwise instructed.

Please contact our office if you have any questions or if we may be of further service. We look forward to our continued association to obtain a successful completion of the project.

Sincerely,  
*ATLANTIC TESTING LABORATORIES, Limited*



Aaron D. Woods, IE  
Senior Project Manager

ADW/AJS/adw

Enclosures

*ATTACHMENT A*  
*BORING LOCATION PLAN*



1  
G-1 **EXISTING SITE PLAN**  
SCALE: 1" = 125'

**NOTES:**

1. THIS DRAWING HAS BEEN GENERATED FROM INFORMATION PROVIDED BY THE TOWN AND AVAILABLE DOCUMENTATION FOR THE PURPOSES OF GENERATING A PROPOSAL TO THE TOWN FOR ENGINEERING SERVICES.
2. SANITARY SEWER AND WATER MAINS ARE SHOWN IN APPROXIMATE LOCATIONS.
3. WATER SERVICES, VALVES AND SANITARY SEWER LATERALS ARE NOT SHOWN ON THE MAP FOR CLARITY.

**WATER & SEWER MAIN  
REPLACEMENT PHASE II**

**TOWN OF MORIAH**

**G-1**

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SERVICES PLLC ALL RIGHTS RESERVED

MORIAH

ESSEX COUNTY

NEW YORK

**CEDARWOOD**  
ENGINEERING SERVICES PLLC

3903 Main St, Warrensburg, NY 12885. (P) 518.623.5500  
8-12 Dietz St, Suite 302, Oneonta, NY 13820.  
(P) 607.441.3246

*ATTACHMENT B*  
*SUBSURFACE INVESTIGATION LOGS*

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Cedarwood Engineering Services, PLLC  
 Project: Subsurface Investigation  
Water and Sewer Main Replacement Phase II  
Moriah, New York

Report No.: CD4997D-01-01-21  
 Boring Location: See Boring Location Plan

Start Date: 12/11/2020 Finish Date: 12/11/2020

Boring No.: B-1 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: \_\_\_\_\_ Boring Advance By:  
6" Thin Wall Core, 3.75" Casing

Groundwater Observations			
Date	Time	Depth	Casing

DEPTH	METHOD OF ADVANCE	SAMPLE NO.	DEPTH OF SAMPLE		SAMPLE TYPE	BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL  f - fine m - medium c - coarse  and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Recovery (Inches)
			From	To					
1	C	1	0.4	1.4	SS	19 8	0.4	5" ASPHALT	10
2	A	2	1.4	3.4	SS	4 3 3 2		Dark Brown mf GRAVEL; and cmf SAND; trace SILT (moist, non-plastic)	6
3	N							Dark Brown mf GRAVEL; and cmf SAND; trace SILT (wet, non-plastic)	
4	G	3	3.4	5.4	SS	3 4 3 3		Brown c+mf GRAVEL; some cmf SAND; trace SILT (wet, non-plastic)	6
5							5.4		
6		4	5.4	7.4	SS	6 4 5 4		Brown c-mf SAND; little SILT; trace f GRAVEL (wet, non-plastic)	10
7									
8		5	7.4	8.4	SS	4 2	8.4	NO RECOVERY	0
9								Boring terminated at 8.4 feet.	
10									
11								Notes:	
12								1. Borehole backfilled with on-site soils.	
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Jeffrey Donovan, Hayden Bice  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL CD4997 CEDARWOOD ENGINEERING SERVICES, PLLC - MORIAH.GPJ ATL4-08.GDT 1/15/21

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Cedarwood Engineering Services, PLLC  
 Project: Subsurface Investigation  
Water and Sewer Main Replacement Phase II  
Moriah, New York

Report No.: CD4997D-01-01-21  
 Boring Location: See Boring Location Plan

Start Date: 12/11/2020 Finish Date: 12/11/2020

Boring No.: B-2 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: \_\_\_\_\_ Boring Advance By:  
6" Thin Wall Core, 3.75" Casing

Groundwater Observations			
Date	Time	Depth	Casing

DEPTH	METHOD OF ADVANCE	SAMPLE NO.	DEPTH OF SAMPLE		SAMPLE TYPE	BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL  f - fine m - medium c - coarse  and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Recovery (Inches)
			From	To					
1	C	1	0.5	1.5	SS	24 16	0.5	6" ASPHALT	12
2	A	2	1.5	3.5	SS	4 3 6 7	1.5	Brown cmf GRAVEL; little cmf SAND; little CLAY; trace SILT (moist, slightly plastic)	6
3	N							Brown CLAY; trace SILT; trace f SAND (moist, plastic)	
4	G	3	3.5	5.5	SS	7 11 12 14		Brown CLAY; little SILT; trace mf SAND (moist, plastic)	24
5									
6		4	5.5	7.5	SS	12 12 13 14		Similar Soil (moist, plastic)	18
7									
8		5	7.5	8.0	SS	11	8.0	Similar Soil (moist, plastic) (poor recovery)	3
9								Boring terminated at 8.0 feet.	
10									
11								Notes:	
12								1. Borehole backfilled with on-site soils.	
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Jeffrey Donovan, Hayden Bice  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL CD4997 CEDARWOOD ENGINEERING SERVICES, PLLC - MORIAH.GPJ ATL4-08.GDT 1/15/21

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Cedarwood Engineering Services, PLLC  
 Project: Subsurface Investigation  
Water and Sewer Main Replacement Phase II  
Moriah, New York

Report No.: CD4997D-01-01-21  
 Boring Location: See Boring Location Plan

Start Date: 12/11/2020 Finish Date: 12/11/2020

Boring No.: B-3 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_  
 Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: \_\_\_\_\_ Boring Advance By:  
6" Thin Wall Core, 3.75" Casing

Groundwater Observations  
 Date Time Depth Casing  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DEPTH	METHOD OF ADVANCE	SAMPLE NO.	DEPTH OF SAMPLE		SAMPLE TYPE	BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL  f - fine m - medium c - coarse  and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Recovery (Inches)
			From	To					
1	C	1	0.3	1.3	SS	24 11	0.3	3" ASPHALT	12
2	A	2	1.3	3.3	SS	4 4 3 8	1.3	Dark Brown mf GRAVEL; and cmf SAND; trace SILT (moist, non-plastic)	18
3	N						3.3	Brown c-mf SAND; little mf GRAVEL; little SILT; trace CLAY (moist, very slightly plastic) (ROCK Fragments)	14
4	G	3	3.3	5.3	SS	9 12 11 14		Brown SILT; little mf GRAVEL; little CLAY; little cmf SAND (moist, slightly plastic)	16
5							5.3	Brown cmf+ SAND; some mf- GRAVEL; little SILT (moist, non-plastic)	6
6		4	5.3	7.3	SS	13 12 9 16	7.3	Brown SILT; some cmf SAND; little mf GRAVEL; trace CLAY (moist, very slightly plastic)	
7							8.3	Boring terminated at 8.3 feet.	
8		5	7.3	8.3	SS	14 2		Notes: 1. Borehole backfilled with on-site soils.	
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Jeffrey Donovan, Hayden Bice  
 Inspector: \_\_\_\_\_

ATL-LOG1 LL CD4997 CEDARWOOD ENGINEERING SERVICES, PLLC - MORIAH.GPJ ATL4-08.GDT 1/15/21

# ATLANTIC TESTING LABORATORIES, Limited

## Subsurface Investigation

Client: Cedarwood Engineering Services, PLLC  
 Project: Subsurface Investigation  
Water and Sewer Main Replacement Phase II  
Moriah, New York

Report No.: CD4997D-01-01-21  
 Boring Location: See Boring Location Plan

Start Date: 12/11/2020 Finish Date: 12/11/2020

Boring No.: B-4 Sheet 1 of 1

Coordinates  
 Latitude \_\_\_\_\_  
 Longitude \_\_\_\_\_

Sampler Hammer  
 Weight: 140 lbs.  
 Fall: 30 in.  
 Hammer Type: Automatic

Ground Elev.: \_\_\_\_\_ Boring Advance By:  
6" Thin Wall Core, 3.75" Casing

Groundwater Observations			
Date	Time	Depth	Casing

DEPTH	METHOD OF ADVANCE	SAMPLE NO.	DEPTH OF SAMPLE		SAMPLE TYPE	BLOWS ON SAMPLER PER 6" 2" O.D. SAMPLER	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL  f - fine m - medium c - coarse  and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Recovery (Inches)
			From	To					
1	C	1	0.4	1.4	SS	42 21	0.4	4" ASPHALT	6
2	A	2	1.4	3.4	SS	5 5 8 4	1.4	Dark Brown mf GRAVEL; some cmf SAND; trace SILT (moist, non-plastic)	5
3	N						3.4	Brown SILT; little mf GRAVEL; little cmf SAND; little CLAY (moist, slightly plastic)	9
4	G	3	3.4	5.4	SS	7 7 8 12		Brown c+mf GRAVEL; little CLAY; little SILT; little cmf SAND (moist, slightly plastic) (ROCK Fragments)	13
5		4	5.4	7.4	SS	12 17 18 18	5.4	Brown SILT; some CLAY; little mf GRAVEL; little cmf SAND (moist, moderately plastic) (ROCK Fragments)	4
6							7.4	Brown cmf- GRAVEL; little SILT; little CLAY; little cmf SAND (moist, slightly plastic)	
7		5	7.4	8.4	SS	14 3	8.4	Boring terminated at 8.4 feet.	
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

SS Split Spoon Sample  
 NX Rock Core  
 SH Undisturbed Sample (Shelby Tube)  
 Estimated Groundwater

Drillers: Jeffrey Donovan, Hayden Bice  
 Inspector: \_\_\_\_\_



ATL-LOG1 LL CD4997 CEDARWOOD ENGINEERING SERVICES, PLLC - MORIAH.GPJ ATL4-08.GDT 1/15/21





*ATTACHMENT C*

*PHOTOGRAPHIC LOG OF PAVEMENT CORES*

ATLANTIC TESTING LABORATORIES, LIMITED  
Water and Sewer Main Replacement Phase II  
Moriah, Essex County, New York  
ATL Report No. CD4997D-01-01-21  
Cedarwood Engineering Services, PLLC  
**PAVEMENT CORE PHOTOGRAPHIC LOG**

Boring No.	Photograph
B-1	 <p>CD 4997 B-1 <u>2.00"</u> Top <u>3.00"</u> Binder/Base <u>5.00"</u> Total Recovery Length</p>
B-2	 <p>CD 4997 B-2 <u>1.75"</u> Top <u>3.50"</u> Binder/Base <u>5.25"</u> Total Recovery Length</p>

ATLANTIC TESTING LABORATORIES, LIMITED  
Water and Sewer Main Replacement Phase II  
Moriah, Essex County, New York  
ATL Report No. CD4997D-01-01-21  
Cedarwood Engineering Services, PLLC  
**PAVEMENT CORE PHOTOGRAPHIC LOG**

Boring No.	Photograph
B-3	 <p>CD 4997 B-3 <u>2.00"</u> Top <u>1.00"</u> Binder/Base <u>3.00"</u> Total Recovery Length</p>
B-4	 <p>CD 4997 B-4 <u>0.75"</u> Top <u>2.75"</u> Binder/Base <u>3.50"</u> Total Recovery Length</p>

*ATTACHMENT D*

*CORROSIVE ANALYSIS OF SOIL RESULTS*



# ATLANTIC TESTING LABORATORIES

WBE certified company

**CORROSIVITY ANALYSIS OF SOIL**  
AWWA Specification C105/A21.5-99 Appendix A

Page 1 of 2

**PROJECT INFORMATION**

**Client:** Cedarwood Engineering

**Project:** Water and Sewer Main Replacement Phase II  
Moriah, New York

**ATL Report No.:** CD4997E-01-01-21

**Report Date:** January 19, 2021

**Date Received:** January 18, 2021

**Tabulation of Corrosive Analysis of Soil Results**

Boring No.	Sample No.	Sample Depth (ft)	Resistivity ( $\Omega$ cm)	Points	pH	Points	Redox Potential (mV)	Points	Sulfides	Points	Moisure Points	Total Points**
B-1	S-4	5.4-7.4	1935	5	7.2	0	-3	5	Negative	0	1	11
B-2	S-4	5.5-7.5	464	10	8.3	0	-55	5	Negative	0	2	17
B-3	S-4	5.3-7.3	9030	0	7.7	0	-31	5	Negative	0	1	6
B-4	S-4	5.4-7.4	1419	10	8.2	0	-51	5	Negative	0	2	17

**REMARKS**

1. Points are based on AWWA Specification C105/A21.5-10 Appendix A, Polyethylene Encasement for Ductile-Iron Pipe Systems, see attached table.
2. \*\* Ten points indicate that soil is corrosive to ductile-iron pipe and protection is recommended.

Reviewed By: Judge A. Ames

Date: 01/19/21

## AWWA Specifications C105/A21.5-10 - Polyethylene Encasement for Ductile-Iron Pipe Systems

Table A.1 Soil-test Evaluation

Soil Characteristics Based on Samples Taken Down to Pipe Depth	Points*
Resistivity - ohm-cm (based on water saturated soil box)	
< 1,500	10
≥1,500 - 1,800	8
>1,800 - 2,100	5
>2,100 - 2,500	2
>2,500 - 3,000	1
>3,000	0
pH: 0 - 2	5
2 - 4	3
4 - 6.5	0
6.5 - 7.5	0†
7.5 - 8.5	0
>8.5	3
Redox Potential:	
> +100 mV	0
+50 to +100 mV	3.5
0 to +50 mV	4
Negative	5
Sulfides:	
Positive	3.5
Trace	2
Negative	0
Moisture:	
Poor drainage, continuously wet	2
Fair drainage, generally moist	1
Good drainage, generally dry	0

Ten points indicate that soil is corrosive to ductile-iron pipe and protection is recommended.

† If sulfides are present and low or negative redox potential results are obtained, add three points for this range.

**BID FORM**

**Town of Moriah  
Essex County, New York  
Water and Sewer Main Replacement – Phase II  
Contract No. TM-2021-G**

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ARTICLE 5 – Basis of Bid .....	3
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ARTICLE 8 – Defined Terms .....	7
ARTICLE 9 – Bid Submittal .....	8



## ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

***Town of Moriah  
38 park Place  
Port Henry, NY 12974***

1.02 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

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

## ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents 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 receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

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 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.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

##### **4.01 Bidder certifies that:**

- A. 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;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "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;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "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
  - 4. "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

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

**For all Work, at the prices stated in Contractor's Bid, attached immediately following Article 9**

- **Construction Contract – TM-2021-G**
  - **Sum of the unit price & lump sum items in the listed quantities at the specified unit of measure for the following Base Bid Sheets attached for the TM-2021-G Contract:**  
**Base Bid Items**
  - **Note: Contract Bid Award is based on the sum of the Base-Bid items listed on the sheets entitled as shown above (i.e., the sum of the product of unit price multiplied by the quantity for each bid item), Not Bid Alternate Costs. Bid Alternate Pricing is to be provided for use in the contract should alternate or additional work be required.**
  - **Bidder acknowledges that (1) each Bid Unit Price and Lump Sum includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.**

**Total of Base Bid Unit Price = Total Bid Price** \$ \_\_\_\_\_  
**(For the Bases of Award of Construction Contract – TM-2021-G)**

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## Water and Sewer Main Replacement Phase II

## Base Bid Sheet

Item No.	Description	Unit	Estimated Quantity	Unit Price	Bid Price
1	Mobilization, demobilization, bonds & insurance	LS	N/A		\$
2	Maintenance & protection of traffic	LS	N/A		\$
3	Erosion & Sediment Control	LS	N/A		\$
4	Utility clearance/support during construction	LS	N/A		\$
5	Site work & site restoration	LS	N/A		\$
6	Water main & appurtenances installation - 8"	LF	60	\$	\$
7	Water main & appurtenances installation - 6"	LF	20	\$	\$
8	Water main & appurtenances installation - 4"	LF	1200	\$	\$
9	Water main removal including cut & capping existing main	LF	11	\$	\$
10	Valve box removal & disposal	EA	1	\$	\$
11	Buried gate valve Installation - 8"	EA	4	\$	\$
12	Buried gate valve installation - 4"	EA	4	\$	\$
13	Water service line installation - same side	EA	9	\$	\$
14	Water service line installation - opposite side	EA	7	\$	\$
15	Water curb box removal	EA	5	\$	\$
16	Water main connections to existing mains	EA	4	\$	\$
17	Flushing hydrant installation	EA	2	\$	\$
18	Air release valve assembly installation	EA	1	\$	\$
19	Sewer main installation - 8"	LF	840	\$	\$
20	Existing sewer main removal & disposal	LF	900	\$	\$
21	Sewer manhole installation	EA	9	\$	\$
22	Sewer manhole installation - drop manhole	EA	2	\$	\$
23	Existing sewer manhole removal & disposal	EA	4	\$	\$
24	Sewer lateral replacement - same side	EA	8	\$	\$
25	Sewer lateral replacement - far side	EA	9	\$	\$
26	Sewer bypass pumping	LS	N/A		\$
27	Sidewalk demolition & replacement	SQ. FT.	380	\$	\$
28	Asphalt demolition & replacement	TN	600	\$	\$
29	Preparation of As-Built Drawings	LS	N/A		\$
30	Construction Allowance	LS	N/A		\$35,000.00
			Base Bid Subtotal		\$

Base Bid Total (In Words): \_\_\_\_\_

Bid Submitted By (Company): \_\_\_\_\_ Date Submitted: \_\_\_\_\_

Town of Moriah, N.Y.  
Water and Sewer Main Replacement Phase II

Contract No. TM-2021-G  
Bid Alternate Sheet

Item No.	Description	Unit	Estimated Quantity	Unit Price	Bid Price
1A	Sidewalk replacement	SQ. FT.	2956	\$	\$
2A	Catch basin replacement	EA	2	\$	\$
3A	Stormwater main replacement	LF	21	\$	\$
Bid Alternate Subtotal				\$	

Bid Alternate Total (In Words): \_\_\_\_\_

Bid Alt. Submitted By (Company): \_\_\_\_\_ Date Submitted: \_\_\_\_\_

## **ARTICLE 6 – TIME OF COMPLETION**

- 6.01 Bidder agrees that the Work will be substantially complete and will be 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.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

## **ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
  - B. List of Proposed Subcontractors;
  - C. List of Proposed Suppliers;
  - D. List of Project References;
  - E. 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;
  - F. Contractor's License No.: XXXXXXXXXX [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
  - G. Required Bidder Qualification Statement with supporting data;
  - H. **Corporate Resolution**
  - I. **Non-Collusion Form**
  - J. **Certification of Non-Segregated Facilities**
  - K. **Certification of Prime Contractor Regarding Equal Employment Opportunity**
  - L. **Contractors Certification from Debarred Contractors List**
  - M. **Affidavit – Worker's Compensation**
  - N. **Community Development Block Grant Requirements, as shown in Appendix A of the Agreement Between Owner and Contractor.**
    - 1. **Exhibit 4-1**
      - a. **Equal Employment Opportunity**
      - b. **Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 276c)**
      - c. **Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7)**
      - d. **Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330)**
      - e. **Patent Rights to Inventions Made Under a Contract or Agreement**
      - f. **Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended**
      - g. **Section 312 U.S.C. 1701u of The Housing and Community Development Act of 1968, as amended**
      - h. **All applicable items as detailed in Exhibit 4-1**

- i. **Anti-Job Pirating 24CFR 570.482**

**Exhibit 4-2: Section 3 Rider**

**Contractor must comply with and must ensure that the following language (attached as stated above in Appendix A of the Agreement Between Owner and Contractor.**

- j. **Section 3 Clause (24 CFR 135.38)**
  - k. **All applicable items as detailed in Exhibit 4-2**
- 2. **Exhibit 6-2: Federal Labor and Civil Rights Requirements**
    - a. **Wage Determination and Employee Classification**
    - b. **Work Hours, Overtime, and Safety Standards**
    - c. **Deductions**
    - d. **Contractor Reporting Requirements**
    - e. **Job Site Notices**
    - f. **Monitoring and Sanctions**
    - g. **Contractor Affirmative Action**
    - h. **All applicable items as detailed in Exhibit 6-2.**
  - 3. **Office of Economic Opportunity and Partnership Development – Good Faith Efforts Guide**
  - 4. **Bid Solicitation Log for MBE/WBE Participation**
  - 5. **MWBE Utilization Plan**
  - 6. **Request for Waiver Form**

**ARTICLE 8 – DEFINED TERMS**

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## ARTICLE 9 – 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)*

*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*



**CORPORATE RESOLUTION**

RESOLVED that \_\_\_\_\_  
(Name of Corporation)

be authorized to sign and submit the Bid, or Proposal, of this Corporation for the following project:

\_\_\_\_\_  
(Title of Project)

and to include in such Bid Proposal the Certificate as to non-collusion required by Section 103-d of the General Municipal Law as the act and deed of such corporation, and for any inaccuracies of misstatements in such certifies this Corporate Bidder shall be liable under the penalties of perjury.

The foregoing is a true and correct copy of the Resolution adopted by \_\_\_\_\_  
\_\_\_\_\_ Corporation at a meeting of its Board of Directors held on  
the \_\_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_\_, and  
is still in force and effective on this \_\_\_\_\_ Day of \_\_\_\_\_,  
20\_\_\_\_\_.

\_\_\_\_\_  
**SECRETARY**  
**(Signature)**

**(SEAL OF CORPORATION)**

**NON-COLLUSION AFFIDAVIT OF BIDDER**

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_ being first duly  
(name of company signator)  
sworn, deposes and says that:

He/she is

\_\_\_\_\_  
(title)

of

\_\_\_\_\_, the Bidder  
that has submitted the attached Bid:

He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

Such Bid is genuine and is not a collusive or sham Bid;

Neither the said Bidder nor any of its officers, partners, Owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed Contract; and the price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, Owners, employees, or parties in interest, including this affiant.  
Signed:

\_\_\_\_\_  
(name; print and sign)

\_\_\_\_\_  
(title)

\_\_\_\_\_  
(date)

Subscribed and sworn to before me

this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
(title)

My Commission Expires \_\_\_\_\_

**FORM OF  
CERTIFICATION OF NONSEGREGATED FACILITIES**

This Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of his certification will be a violation of the Equal Opportunity clause in any Contract resulting from acceptance of this Bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clock, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, or national origin, because of habit, local custom or otherwise. The Bidder agrees that (except where he had obtained identical certification from proposed Subcontractors for specific time periods) he will obtain identical certifications from proposed Subcontractors prior to the award of Subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

**Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. Paragraph 1001.**

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

Company: \_\_\_\_\_

By: \_\_\_\_\_ Title: \_\_\_\_\_  
(signature of representative)

Official Address:

\_\_\_\_\_  
\_\_\_\_\_



**EEOC Statement**

of the

Division of Housing and Community Renewal,  
New York State Housing Finance Agency,  
State of New York Mortgage Agency,  
New York State Affordable Housing Corporation,  
State of New York Municipal Bond Bank Agency,  
Tobacco Settlement Financing Corporation,  
Housing Trust Fund Corporation  
(individually, "Agency" and collectively, "Agencies")

It is the goal of the Agencies to ensure compliance with the federal Equal Employment Opportunity Act of 1972, as amended. Respondents with fifteen (15) or more employees responding to this solicitation, must submit a statement disclosing whether the Respondent is currently operating under or negotiating, or has at some time in the last five (5) years operated under or negotiated, a conciliation agreement with the Equal Employment Opportunity Commission ("EEOC"); has been, at some time in the last five (5) years, or is currently the subject of a civil action brought against it by the EEOC; has been, at some time in the last five (5) years, or is currently the subject of an action brought against it by the EEOC for permanent, temporary or preliminary relief; has operated, at some time in the last five (5) years, or is currently operating under an order of a court to take affirmative action as a result of a civil action brought against it by EEOC.

Please answer the above question either in the affirmative or negative.

\_\_\_\_\_ Respond YES or NO.

If YES, provide explanation:

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\_\_\_\_\_  
Respondent's Signature

\_\_\_\_\_  
Date of Respondent's Signature

\_\_\_\_\_  
Print Name of Respondent

# MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES – EQUAL EMPLOYMENT OPPORTUNITY POLICY STATEMENT

## M/WBE AND EEO POLICY STATEMENT

I, \_\_\_\_\_, the (awardee/contractor)\_\_\_\_\_ agree to adopt the following policies with respect to the project being developed or services rendered for (name agency/ies or project location)\_\_\_\_\_

### **MWBE**

This organization will and will cause its contractors and subcontractors to take good faith actions to achieve the M/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

- (1) Actively and affirmatively solicit bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to M/WBE contractor associations.
- (2) Request a list of State-certified M/WBEs from Agency(ies) and solicit bids from them directly.
- (3) Ensure that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective M/WBEs.
- (4) Where feasible, divide the work into smaller portions to enhanced participations by M/WBEs and encourage the formation of joint venture and other partnerships among M/WBE contractors to enhance their participation.
- (5) Document and maintain records of bid solicitation, including those to M/WBEs and the results thereof. Contractor will also maintain records of actions that its subcontractors have taken toward meeting M/WBE contract participation goals.
- (6) Ensure that progress payments to M/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives developed to encourage M/WBE participation.

### **EEO**

(a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts.

(b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of the contracting agency, this organization shall request each employment agency, labor union, or authorized representative for a statement that it will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.

(d) Contractor shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. Contractor and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

Agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_\_

By \_\_\_\_\_

Print: \_\_\_\_\_ Title: \_\_\_\_\_

\_\_\_\_\_ is designated as the Minority Business Enterprise Liaison

He/she is responsible for administering the Minority and Women-Owned Business Enterprises-Equal Employment Opportunity (M/WBE-EEO) program.

**M/WBE Contract Goals**

30% Minority and Women's Business Enterprise Participation

15% Minority Business Enterprise Participation

15% Women's Business Enterprise Participation

**EEO Contract Goals**

      % Minority Labor Force Participation

      % Female Labor Force Participation

**CONTRACTORS CERTIFICATION  
FROM DEBARRED CONTRACTORS LIST**

TO BE COMPLETED BY CONTRACTOR AND ATTACHED TO BID PROPOSAL FORM:

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

\_\_\_\_\_  
hereby

(Company Representative; print name)

certifies that the above listed company is not included on the Consolidated List of debarred, suspended and ineligible contractors and grantees for this purpose and the Comptroller General's Consolidated List of persons or firms currently debarred for violations of various public contracts incorporating labor standards provisions.

\_\_\_\_\_  
(Company Representative; sign name)

\_\_\_\_\_  
(Date signed)



## BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond Number:

Date:

Penal sum

\$

(Words)

(Figures)

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

**BIDDER**

**SURETY**

(Seal)

(Seal)

Bidder'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

*Note: Addresses are to be used for giving any required notice.*

*Provide execution by any additional parties, such as joint venturers, if necessary.*

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
  - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2 All Bids are rejected by Owner, or
  - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

## QUALIFICATIONS STATEMENT

**THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT  
PERMITTED BY LAWS AND REGULATIONS**

**1. SUBMITTED BY:**

Official Name of Firm:

\_\_\_\_\_

Address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2. SUBMITTED TO:**

\_\_\_\_\_

**3. SUBMITTED FOR:**

\_\_\_\_\_

Owner:

\_\_\_\_\_

Project Name:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**TYPE OF WORK:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**4. CONTRACTOR'S CONTACT INFORMATION**

Contact Person:

\_\_\_\_\_

Title:

\_\_\_\_\_

Phone:

\_\_\_\_\_

Email:

\_\_\_\_\_

**5. AFFILIATED COMPANIES:**

Name:

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Address:

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**6. TYPE OF ORGANIZATION:**

☐ SOLE PROPRIETORSHIP

Name of Owner:

---

Doing Business As:

---

Date of Organization:

---

☐ PARTNERSHIP

Date of Organization:

---

Type of Partnership:

---

Name of General Partner(s):

---

---

---

☐ CORPORATION

State of Organization:

---

Date of Organization:

---

Executive Officers:

- President:

---

- Vice President(s):

---

---

---

- Treasurer:

---

- Secretary:

---

☐ LIMITED LIABILITY COMPANY

State of Organization:

\_\_\_\_\_

Date of Organization:

\_\_\_\_\_

Members:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

☐ JOINT VENTURE

State of Organization:

\_\_\_\_\_

Date of Organization:

\_\_\_\_\_

Form of Organization:

\_\_\_\_\_

Joint Venture Managing Partner

- Name:

\_\_\_\_\_

- Address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Joint Venture Managing Partner

- Name:

\_\_\_\_\_

- Address:

\_\_\_\_\_

\_\_\_\_\_

Joint Venture Managing Partner

- Name:

\_\_\_\_\_

- Address:

\_\_\_\_\_

\_\_\_\_\_

**7. LICENSING**

EJCDC® C-451, Qualifications Statement.

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and American Society of Civil Engineers. All rights reserved.

Jurisdiction: \_\_\_\_\_  
Type of License: \_\_\_\_\_  
License Number: \_\_\_\_\_  
Jurisdiction: \_\_\_\_\_  
Type of License: \_\_\_\_\_  
License Number: \_\_\_\_\_

**8. CERTIFICATIONS**

**CERTIFIED BY:**

Disadvantage Business Enterprise: \_\_\_\_\_  
Minority Business Enterprise: \_\_\_\_\_  
Woman Owned Enterprise: \_\_\_\_\_  
Small Business Enterprise: \_\_\_\_\_  
Other ( \_\_\_\_\_ ): \_\_\_\_\_

**9. BONDING INFORMATION**

Bonding Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Bonding Agent: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Aggregate Bonding Capacity: \_\_\_\_\_  
Available Bonding Capacity as of date of this submittal: \_\_\_\_\_

**10. FINANCIAL INFORMATION**

Financial Institution: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Account Manager: \_\_\_\_\_

Phone: \_\_\_\_\_

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE  
LAST 3 YEARS

## 11. CONSTRUCTION EXPERIENCE:

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

## 12. SAFETY PROGRAM:

Name of Contractor's Safety Officer: \_\_\_\_\_

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

Total number of man-hours worked for the last 5 Years:



YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____

### 13. EQUIPMENT:

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HERewith, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

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

NOTARY ATTEST:

SUBSCRIBED AND SWORN TO BEFORE ME

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_

NOTARY PUBLIC - STATE OF \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.

## SCHEDULE A

### CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

## SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

## SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

## SCHEDULE C - LIST OF MAJOR EQUIPMENT AVAILABLE

[illegible]

## AFFIDAVIT - WORKER'S COMPENSATION

State of \_\_\_\_\_

SS:

County of \_\_\_\_\_

\_\_\_\_\_

of \_\_\_\_\_

being duly sworn, deposes and says that he now carries or that he has applied for a Worker's Compensation Policy to cover the operations, as set forth in the preceding contract, and to comply with the provisions thereof.

Signed: \_\_\_\_\_

Subscribed and sworn to before me

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

\_\_\_\_\_

Notary Public

**CERTIFICATION Of Anti-Harassment Policy and  
Mandatory Annual Sexual Harassment Training**

This Bidder certifies that its company has developed and maintains an Anti-Harassment and Mandatory Annual Sexual Harassment Training as per the legislation signed on April 12, 2018, by New York Governor Andrew Cuomo. The law budget legislation that includes significant anti-sexual harassment measures that (1) require mandatory sexual harassment training and written anti-harassment policies; (2) expand sexual harassment protections to non-employees; (3) prohibit certain non-disclosure provisions in settlement agreements; (4) prohibit mandatory arbitration of sexual harassment claims; and (5) require bidders on state contracts to certify compliance with policy and training requirements. Beginning October 9, 2018, employers will be required to distribute a written anti-harassment policy and provide annual sexual harassment training to all employees. The New York State Department of Labor and New York State Division of Human Rights will develop a training program and a model sexual harassment policy for employers to use. An employer may develop its own policy and training program as long as they meet all of the requirements of the new law. Policies must include a complaint form for use by employees. Training must include an explanation of sexual harassment; examples of prohibited harassment; supervisor responsibilities; state and federal anti-harassment laws, including the remedies provided by each; an explanation of employees' rights and the forums in which complaints can be made.

Every employer in the State of New York is required to adopt a sexual harassment prevention policy pursuant to Section 201-g of the Labor Law. An employer that does not adopt the model policy must ensure that the policy that they adopt meets or exceeds the minimum standards.

**Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. Paragraph 1001.**

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

Company: \_\_\_\_\_

By: \_\_\_\_\_ Title: \_\_\_\_\_  
(signature of representative)

Official Address:

\_\_\_\_\_  
\_\_\_\_\_



## NOTICE OF AWARD

---

Date of Issuance:

Owner:

Owner's Contract No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Bidder:

Bidder's Address:

### TO BIDDER:

You are notified that Owner has accepted your Bid dated [ ] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is: \$ [ ] [note if subject to unit prices, or cost-plus]

[ ] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. [revise if multiple copies accompany the Notice of Award]

☐ a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner [ ] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security [e.g., performance and payment bonds] and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

---

Owner:

Authorized Signature

By:

Title:

Copy: Engineer

THIS AGREEMENT is by and between the Town of Moriah, NY (“Owner”) and  
 (“Contractor”).

## ARTICLE 1 – WORK

- EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price).  
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and American Society of Civil Engineers. All rights reserved. Page 1 of 11

## ARTICLE 2 – THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:
- A. **The proposed project is located in the hamlet of Port Henry in the Town of Moriah and consists of water main replacement, water service line replacement, sanitary sewer main replacement, sanitary sewer manhole installation and replacement, sewer lateral replacement, asphalt pavement restoration and sidewalk replacement for the areas of 1<sup>st</sup> and 2<sup>nd</sup> Lane.**

## ARTICLE 3 – ENGINEER

- 3.01 The Project has been designed by Cedarwood Engineering Services, PLLC.
- 3.02 The Owner has retained Cedarwood Engineering Services, PLLC (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

## ARTICLE 4 – CONTRACT TIMES

- 4.01 *Time of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Dates*
- A. The Work will be substantially completed on or before **October 31, 2021**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **November 30, 2021**.
- 4.03 *Liquidated Damages*
- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. Substantial Completion: Contractor shall pay Owner **\$500.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
  2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$500.00** for each day that expires after such time until the Work is completed and ready for final payment.
  3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

---

## **ARTICLE 5 – CONTRACT PRICE**

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):
- B. For all agreed upon Additive work at Lump Sum Price Work included in the contract TM-2021-G:

**BASE BID ITEMS: (SEE ATTACHED SHEET)**

## Water and Sewer Main Replacement Phase II

## Base Bid Sheet

Item No.	Description	Unit	Estimated Quantity	Unit Price	Bid Price
1	Mobilization, demobilization, bonds & insurance	LS	N/A		\$
2	Maintenance & protection of traffic	LS	N/A		\$
3	Erosion & Sediment Control	LS	N/A		\$
4	Utility clearance/support during construction	LS	N/A		\$
5	Site work & site restoration	LS	N/A		\$
6	Water main & appurtenances installation - 8"	LF	60	\$	\$
7	Water main & appurtenances installation - 6"	LF	20	\$	\$
8	Water main & appurtenances installation - 4"	LF	1200	\$	\$
9	Water main removal including cut & capping existing main	LF	11	\$	\$
10	Valve box removal & disposal	EA	1	\$	\$
11	Buried gate valve Installation - 8"	EA	4	\$	\$
12	Buried gate valve installation - 4"	EA	4	\$	\$
13	Water service line installation - same side	EA	9	\$	\$
14	Water service line installation - opposite side	EA	7	\$	\$
15	Water curb box removal	EA	5	\$	\$
16	Water main connections to existing mains	EA	4	\$	\$
17	Flushing hydrant installation	EA	2	\$	\$
18	Air release valve assembly installation	EA	1	\$	\$
19	Sewer main installation - 8"	LF	840	\$	\$
20	Existing sewer main removal & disposal	LF	900	\$	\$
21	Sewer manhole installation	EA	9	\$	\$
22	Sewer manhole installation - drop manhole	EA	2	\$	\$
23	Existing sewer manhole removal & disposal	EA	4	\$	\$
24	Sewer lateral replacement - same side	EA	8	\$	\$
25	Sewer lateral replacement - far side	EA	9	\$	\$
26	Sewer bypass pumping	LS	N/A		\$
27	Sidewalk demolition & replacement	SQ. FT.	380	\$	\$
28	Asphalt demolition & replacement	TN	600	\$	\$
29	Preparation of As-Built Drawings	LS	N/A		\$
30	Construction Allowance	LS	N/A		\$35,000.00
			Base Bid Subtotal		\$

Base Bid Total (In Words): \_\_\_\_\_

Bid Submitted By (Company): \_\_\_\_\_ Date Submitted: \_\_\_\_\_

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment), including chosen alternatives (list chosen alternatives below) \$                      \*See note in C.1 below).

\*Note: Contract Bid Award is based on the sum of the Base-Bid items listed on the sheet above (i.e., the sum of the product of unit price multiplied by the quantity for each bid item), NOT Bid Alternate Costs. Bid Alternate Pricing, is to be provided for use in the contract should alternate or additional work be required. ***Bid alternates will only be utilized during construction with written Owner and Engineer approvals as required.***

Town of Moriah, N.Y.  
Water and Sewer Main Replacement Phase II

Contract No. TM-2021-G  
Bid Alternate Sheet

Item No.	Description	Unit	Estimated Quantity	Unit Price	Bid Price
1A	Sidewalk replacement	SQ. FT.	2956	\$	\$
2A	Catch basin replacement	EA	2	\$	\$
3A	Stormwater main replacement	LF	21	\$	\$
Bid Alternate Subtotal				\$	

Bid Alternate Total (In Words): \_\_\_\_\_

Bid Alt. Submitted By (Company): \_\_\_\_\_ Date Submitted: \_\_\_\_\_

- D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

## ARTICLE 6 – PAYMENT PROCEDURES

### 6.01 *Submittal and Processing of Payments*

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

### 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment ~~on or about the \_\_\_\_\_ day of each month in accordance with the deadline date schedule that will be developed at the pre-construction meeting~~ during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
    - a. **95** percent of Work completed (with the balance being retainage); and
    - b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion **of the entire construction to be provided under the Contract Documents**, Owner shall pay an amount sufficient to increase total payments to Contractor to **100** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

### 6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price and retainage as recommended by Engineer as provided in said Paragraph 15.06.

## ARTICLE 7 – INTEREST

- 7.01 All moneys not paid when due as provided in Article 15 of the General Conditions shall bear interest at the statutory rate of New York State.



## ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
  - D. Contractor 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.
  - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports identified in the Contract 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 Contractor; and (3) Contractor’s safety precautions and programs.
  - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
  - G. Contractor 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 Contract Documents.
  - H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
  - I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
  - J. Contractor’s entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

## ARTICLE 9 – CONTRACT DOCUMENTS

### 9.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement **including Appendix A** (pages 1 to ■■■, inclusive).
  - 2. Performance bond (pages ■■■ to ■■■, inclusive).

3. Payment bond (pages [ ] to [ ], inclusive).
4. Other bonds.
  - a. [ ] (pages [ ] to [ ], inclusive).
5. General Conditions (pages [ ] to [ ], inclusive).
6. Supplementary Conditions (pages [ ] to [ ], inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. Drawings (not attached but incorporated by reference) consisting of [ ] sheets with each sheet bearing the following general title: [ ] **[or]** the Drawings listed on the attached sheet index.
9. Addenda (numbers [ ] to [ ], inclusive).
10. Exhibits to this Agreement (enumerated as follows):
  - a. Contractor's Bid (pages [ ] to [ ], inclusive).
11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
  - a. Notice to Proceed.
  - b. Work Change Directives.
  - c. Change Orders.
  - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

## **ARTICLE 10 – MISCELLANEOUS**

### **10.01 Terms**

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### **10.02 Assignment of Contract**

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

#### 10.03 *Successors and Assigns*

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

#### 10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

#### 10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
  - 1. "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 or in the Contract execution;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "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
  - 4. "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.

#### 10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

#### **B. COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM REQUIREMENTS**

- 1. **THIS CONTRACT IS IN ACCORDANCE WITH THE NYS HOUSING TRUST FUND CORPORATE OFFICE OF COMMUNITY RENEWAL CDBG PROGRAM REQUIREMENTS (EXHIBIT 4-1 – CONTRACT PROVISIONS, EXHIBIT 4-2 – SECTION 3 RIDER, AND EXHIBIT 6-2 – FEDERAL LABOR AND CIVIL RIGHTS REQUIREMENTS, OFFICE OF ECONOMIC OPPORTUNITY AND PARTNERSHIP DEVELOPMENT – GOOD FAITH EFFORTS GUIDE, BID SOLICITATION LOG FOR MBE/WBE PARTICIPATION, M/WBE UTILIZATION PLAN,**

**REQUEST FOR WAIVER FORM). THESE DOCUMENTS ARE INCLUDED AS APPENDIX A AND SHALL BE INCLUDED IN ANY RESULTANT CONTRACTS.**

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on  (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

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

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

Title: \_\_\_\_\_

Title: \_\_\_\_\_

*(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

License No.: \_\_\_\_\_  
*(where applicable)*

*(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

# APPENDIX A

# **OCR PROVISIONS FOR CDBG GRANT**

**Due to the use of Community Development Block Grant funding, it is the responsibility of the Contractor and any proposed subcontractors utilized for this project to comply with the following Contract Provisions as contained within this section of the Contract Documents.**

## **Contract Provisions from Exhibit 4-1: Contract Provisions**

1. **Equal Employment Opportunity** - All construction contracts awarded in excess of \$10,000 shall contain a provision requiring compliance with E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
2. **Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 276c)** - All contracts and subgrants in excess of \$2000 for construction or repair shall include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 CFR part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. All suspected or reported violations shall be reported to the Federal awarding agency.
3. **Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7)** - When required by Federal grant program legislation, all construction contracts awarded by Recipients and subrecipients of more than \$2000 shall include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor regulations (29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction"). Under this Act, contractors shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, contractors shall be required to pay wages not less than once a week. The Recipient shall place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation and the award of a contract shall be conditioned upon the acceptance of the wage determination. All suspected or reported violations shall be reported to the Federal awarding agency.
4. **Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330)** - Where applicable, all construction contracts awarded in excess of \$100,000. Contracts that involve the employment of mechanics or laborers shall include a provision for compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330), as supplemented by Department of Labor regulations (29 CFR part 5). Under Section 102 of the Act, each contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 1 ½ times

the basic rate of pay for all hours worked in excess of 40 hours in the work week. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous on federal and federally financed and assisted construction projects. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

5. **Patent Rights to Inventions Made Under a Contract or Agreement** - Contract agreements for the performance of experimental, developmental, or research work shall provide for the patent rights of the Federal Government and the Recipient in any resulting invention in accordance with 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.
6. **Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended** - Contracts and subgrants of amounts in excess of \$100,000 shall contain a provision that requires compliance with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.). Violations shall be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
7. **Section 312 U.S.C. 1701u of The Housing and Community Development Act of 1968, as amended** - All contracts subject to Section 3 shall include the clause set forth at 24 CFR 135.38 as provided in the Section 3 Rider.
8. **Additional Contract Provisions** - The following provisions shall also be included in all contracts.
  - a. Contracts in excess of the small purchase threshold shall contain contractual provisions or conditions that allow for administrative, contractual, or legal remedies in instances by which a contractor violates or breaches the contract terms, and provides for such remedial actions as may be appropriate.
  - b. All contracts in excess of \$10,000 shall contain suitable provisions for termination by the Recipient, including the manner by which such termination shall be effected and the basis for settlement.
  - c. Except as otherwise required by statute, an award that requires the contracting (or subcontracting) for construction or facility improvements shall provide for the Recipient to follow its own requirements relating to bid guarantees, performance bonds, and payment bonds unless the construction contract or subcontract exceeds \$100,000. For those contracts or subcontracts exceeding \$100,000, the OCR may accept the bonding policy and requirements of the Recipient, provided the OCR has made a determination that the Federal Government's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:
    - i. A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder shall, upon acceptance

- of this bid, execute such contractual documents as may be required within the time specified.
- ii. A performance bond on the part of the contractor for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor’s obligations under such contract.
  - iii. A payment bond on the part of the contractor for 100 percent of the contract price. A “payment bond” is one executed in connection with a contract to assure payment as required by statute of all persons supplying labor and material in the execution of the work provided for in the contract.
  - iv. Where bonds are required in the situations described herein, the bonds shall be obtained from companies holding certificates of authority as acceptable sureties pursuant to 31 CFR part 223, “Surety Companies Doing Business with the United States.”
- d. All negotiated contracts awarded by Recipients or subrecipients shall include a provision to the effect that the Recipient or subrecipient, the OCR, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers and records of the contractor which are directly pertinent to a specific program for the purpose of making audits, examinations, excerpts and transcriptions.
  - e. All contracts shall contain a provision indemnifying the Housing Trust Fund Corporation, its agents and employees, from and against any and all claims, actions, damages, losses, expenses and costs of every nature and, including reasonable attorney’s fees, incurred by or assessed or imposed against the Housing Trust Fund Corporation, to the fullest extent permitted by law, arising out of the project being funded with NYS CDBG funds.
  - f. All contracts shall contain a provision acknowledging that all parties shall be bound by, and comply with all applicable Federal, State, and local laws and regulations, including but not limited to 2 CFR Part 200 Appendix II (Contract Provisions for non-Federal Entity Contracts Under Federal Awards) and 24 CFR Parts 570.
9. **Anti- Job Pirating 24CFR 570.482** - All Economic Development, Small Business, and Microenterprise contracts shall contain a provision acknowledging that Community Development Block Grant Funds will not be used to assist directly the relocation of any industrial or commercial plant, facility, or operation, from one area to another area, if the relocation is likely to result in a significant loss of employment in the labor market area (LMA) from which the relocation occurs. For additional information, see the HUD CDBG Memorandum on Job Pirating Activities (<https://www.hudexchange.info/resource/2219/cdbg-memorandum-job-pirating-activities/>) and 24 CFR 570.482(f).



### **Items from Exhibit 4-2: Section 3 Rider:**

Contractor must comply with and must ensure that the following language is included in all applicable subcontracts for work related to this Contract (the term “Contractor” as used herein shall also be deemed to mean “Subcontractor”):

1. Section 3 Clause (24 CFR 135.38)
  - a. The work to be performed under this Agreement is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that Employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
  - b. The parties to this Agreement agree to comply with HUD’s regulations in 24 CFR Part 135, which implement Section 3. As evidenced by their execution of this Agreement, the parties to this Agreement certify that they are under no contractual or other impediments that would prevent them from complying with the Part 135 regulations.
  - c. The Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understand, if any, a notice advising the labor organization or workers’ representative of the Contractor’s commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
  - d. The Contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the Subcontractor is in violation of the regulations in 24 DFR Part 135. The Contractor will not subcontract with any Subcontractor where the Contractor has notice knowledge that the Subcontractor has been found in violation of the regulations in 24 CFR Part 135.
  - e. The Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the Contractor is selected but before the Agreement is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor’s obligations under 24 CFR Part 135.
  - f. Noncompliance with HUD’s regulations in 24 CFR Part 135 may result in sanctions, termination of this Agreement for default, and debarment or suspension from future HUD assisted contracts.

- g. With respect to work performed in connection with Section 3 covered Indian Housing Assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this Agreement. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this Agreement that are subject to the provisions of Section 3 and Section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).
2. Contractor shall maintain such records, and complete and submit forms as may be amended from time to time, as required by the NYS Office of Community Renewal (“OCR”) and/or HUD including but not limited to the Section 3 New Hires Report and the Section 3 Business Certification Package. Such forms shall be submitted in accordance with the directions contained therein and at such other times as the OCR and/or HUD may direct.

**Federal Labor and Civil Rights Requirements from Exhibit 6-2:**

**A. WAGE DETERMINATION AND EMPLOYEE CLASSIFICATION**

**Davis-Bacon Act is applicable to all construction contracts awarded by Recipients in excess of \$2,000. The rehabilitation of seven or fewer residential units under one contract is exempt from this requirement.**

1. Laborers, mechanics, apprentices, and trainees must receive no less than the prevailing wages, plus fringe benefits paid for similar work in the locality.
  - a. Workers are covered by the Davis-Bacon Act while working at the site, transporting materials to and from the site and manufacturing or furnishing articles, supplies, or equipment on-site.
  - b. Apprentices or trainees may be paid less than journeyman wages if they are enrolled in an apprenticeship or training program approved by the U.S. Department of Labor (or State Apprentice Council recognized by the Department of Labor’s Employment and Training Administration).
2. If the contractor needs laborers or mechanics whose classifications do not appear on the wage determination, Recipient’s designated Labor Standards Officer must make a request for an appropriate classification to the U.S. Department of Labor.
3. Employees or supervisors working at other than their assigned classifications for 20 percent or more of their time must be paid and shown on the payrolls for each classification or, paid for all hours at the higher wage scale.
4. If the wage determination lists fringe benefits, the contractor must either provide them or pay the hourly equivalent in cash, in addition to the predetermined basic wage.
5. Claims and disputes including resolutions must be reported immediately to your OCR Community/Economic Developer and to the U.S Department of Housing

and Urban Development (HUD), Labor Relations Office. HUD may be called upon by the State to investigate and settle claims and disputes, or may enter of their own volition if the need arises.

6. Laborers and mechanics must be paid no less than once per week.

**B. WORK HOURS, OVERTIME, AND SAFETY STANDARDS Contract**

**Work Hours and Safety Standards Act, as amended, is applicable to all contracts awarded by local Recipients in excess of \$2,000 for construction projects employing mechanics or laborers.**

1. Forty hours is the standard work week.
2. One and one-half times the basic hourly rate of pay, exclusive of fringe benefit payments, must be paid for all hours over forty in a work week.
3. No worker shall be required to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to health and safety.

**C. DEDUCTIONS**

**Copeland “Anti-Kickback” Act is applicable to any federally assisted contract subject to Davis-Bacon standards.**

1. Full wages earned must be paid.
2. Permissible deductions include medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, unemployment benefits, life insurance, or accident insurance, vacation or holiday pay, and defraying costs of apprenticeship or similar programs.

**D. CONTRACTOR REPORTING REQUIREMENTS**

**In conjunction with the previously described labor and civil rights requirements the contractor is required to periodically submit several forms to the Recipient’s designated Labor Standards Officer. The prime contractor is fully responsible for providing all reports required from subcontractors.**

1. Each contractor (prime and sub) must submit (through the prime contractor) Certified Payroll Forms (WH-347) for each week of work from the time the project begins through completion. If the contractor prefers to use a form other than WH-347, it must contain identical information. Weekly payrolls should be numbered sequentially and be submitted to the Recipient no later than seven days following the end of the pay period.

Contractors are urged to use the U.S. Department of Labor (DOL), Payroll Form WH-347. Contractors may also use and furnish computerized weekly payrolls in lieu of the standard Payroll Form WH-347, if the basic information contained on the WH-347 is provided and the contractor includes signed certification for each payroll by using the “Statement of Compliance” Form WH-348. The text of the “weekly statement with respect to the payment of wages,” which is required by regulations of the U.S. Secretary of Labor, appears on the reverse side of this form.

Weekly Payroll Report Forms, WH-347 and WH-348 not only contain samples of these forms but examples and instructions for the contractor to follow for completing and filing them on the project. For example, the Recipient should be aware that weekly payroll reports are also required from subcontractors identified

as “working owners.” A “sole-proprietor” who performs work on the project, must still submit weekly payrolls showing himself or herself as “owner,” the work classification and the daily and total hours worked.

The payroll forms may be ordered from the Superintendent of Documents, Government Printing Office, Washington, D.C. 80402 or may be obtained from <http://www.dol.gov/whd/forms/wh347.pdf>. Contractors may also make copies of these forms and use them if they wish.

2. A completed Statement of Compliance with Labor Standards and Prevailing Wage Requirements must be submitted with each Certified Payroll Form. Certified payrolls must be submitted for each week that work is done on the project. Final payrolls shall be identified accordingly. If no work is performed on the project during a given period, on the next performance payroll, state: “No work performed from pay period ending (date) through (date) .” The Statement of Compliance appears on the back of form WH-347 or as form WH-348 if WH-347 is not used.
3. For compliance with the New York State Labor Law, all contractors and sub-contractors will submit to the Recipient within 30 days after issuance of its first payroll, and every thirty days thereafter, a transcript of the original payroll record.
4. The first week after work on the project begins the Recipient’s designated Labor Standards Officer should be supplied with the names of anyone (other than owner or officer) who is authorized to sign payrolls for each contractor (prime and sub).
5. The prime contractor should supply the Recipient’s designated Labor Standards Officer with the names of all subcontractors working on the project prior to the preconstruction conference. Each subcontractor may then be informed of the conference. The names of any new subcontractors must be supplied immediately after they begin work on the project.
6. In accordance with E.O. 11246 each contractor (prime and sub) engaged in work totaling \$10,000 or more is required to submit a Minority Contract Reporting Form, as well as any documentation regarding affirmative action efforts to the local Recipient (Exhibit 5-I-8 is a sample Contract Reporting Form).
7. Working Subcontractors – Contractual relationships between contractors and alleged subcontractors (who perform mechanic’s work), which are formed for the purpose of evading the application of prevailing wage requirements, are expressly prohibited and may provide a basis for debarment. Where there is any doubt as to the bona-fide nature of a self-employed subcontractor who has no other employees, the following must be checked:
  - a. Does the subcontractor have a registered trade name and is there a telephone listing under that name?
  - b. Does the subcontractor have a license?
  - c. Does the subcontractor have liability insurance or a subcontractor’s bond?
  - d. Does the subcontractor have a Federal Tax Identification Number?

Any of these criteria in conjunction with a signed contract containing HUD Federal Labor Standards Provisions from each such subcontractor should be sufficient to establish that he or she is a bona-fide subcontractor. Such a subcontractor

will submit payrolls indicating only that he/she is the owner, the hours worked and the classification. The phrase “self-employed owner” shall be written under the name, address, and Social Security Number. Non-bona fide, self-employed subcontractors must be carried as employees on the payroll of the contractor who engaged him/her and must be paid the prevailing wage rate for the classification of work performed.

Semi-annual reporting is also required for labor standard enforcement. The Recipient is required to report on the form provided in Exhibit 5-4 information regarding any/all contracts subject to Davis-Bacon, any/all reports of labor issues including; the filing of any complaints with the HUD Labor Relations Office, or the Department of Labor by employer and project name. Wage restitution and/or liquidated damaged data must be collected be reported on this form.

#### **E. JOB SITE NOTICES**

**The prime contractor is required to post the following notices in a manner that is conspicuous to all workers engaged in the construction project:**

1. Notice to Employees Working on Federal or Federally Financed Construction Projects (WH 1321);

Direct links to the English and Spanish versions of this new poster are:

(WH-1321) Davis-Bacon Poster (English):

<https://www.dol.gov/whd/regs/compliance/posters/fedprojc.pdf>

(WH-1321) Davis- Bacon Poster (En Español):

<https://www.dol.gov/whd/regs/compliance/posters/davispan.pdf>

2. Wage determination or a statement of all wage rates and supplements as specified in the contract. The statement of wage rates must be labeled “Prevailing Rate of Wages”;
3. Equal Employment Opportunity poster;
4. Job Safety and Health Protection poster.

#### **F. MONITORING AND SANCTIONS**

**The Recipient’s designated Labor Standards Officer is responsible for monitoring the construction project to assure compliance with all relevant labor and civil rights requirements.**

1. On-site inspections must be conducted by the Recipient’s Labor Standards Officer to ensure that required notices are posted.
2. Weekly payroll reports of the prime contractor and all subcontractors must be examined by the Recipient’s Labor Standards Officer to ensure compliance with labor standards.
3. At least once per month the Recipient’s Labor Standards Officer must conduct interviews with construction employees of the prime contractor and subcontractors. The interviews should be scheduled early into the first month of construction to assure initial compliance with labor standards, and on shorter projects, conducted midway towards completion. A representative of each classification of mechanic and laborer, and at least 10 percent of the work force should be interviewed.

4. Violations of the Davis-Bacon and related acts may result in restitution of wages to employees, suspension of the project payment, contract termination, and/or suspension or debarment of the contractor or subcontractor.
5. Violation of the Contract Work Hours and Safety Standards Act makes contractors liable for unpaid wages and for liquidated damages to the federal government in the sum of \$10.00 per worker per day for each violation. Intentional violations are a federal misdemeanor, punishable for each and every offense by a fine of not more than \$1,000 or by imprisonment for not more than 6 months, or both.
6. Violations of the Copeland Act could be the basis for contract termination and could result in criminal prosecution by the federal government.

#### **G. CONTRACTOR AFFIRMATIVE ACTION**

**Executive Order 11246, as amended by Executive Order 11375, requires nondiscrimination in employment under federally assisted contracts and requires affirmative action to ensure equality of opportunity in all aspects of employment.**

The prime contractor and all subcontractors must ensure that employees and applicants for employment are not discriminated against because of race, color, religion, sex, or national origin.

**Disadvantaged Business Enterprises: Executive Order 12432 establishes the development of Disadvantaged Business Enterprises (DBEs) as a national priority.**

1. The Recipient should supply a list of area DBE's that the prime contractor can use for contacting such businesses.
2. In cases where subcontracts are still available, the prime contractor must make and document a good faith effort to contact qualified DBE's.

**Section 3 of the Housing and Urban Development Act of 1968 provides that to the extent feasible, opportunities for training and employment must be given to lower-income residents of NYS CDBG assisted project areas, and that contracts for work in connection with such projects be awarded to business concerns which are located in, or are owned in substantial part, by "project area" residents.**

The Recipient should inform the contractor of this requirement. The "project area" is defined as the county in which the project takes place.

**HUD Administrative Requirements for Grants, 24 CFR part 85.36, establishes procurement standards to be followed in federal assistance programs.**

Whenever possible, small, minority and women-owned businesses should be solicited as potential sources of supplies, construction and services.

**Attachments to these provisions:**

- Exhibit 6-4: Contractor's Receipt of Required Program Materials
- Exhibit 6-5: Project Sign Specifications
- Exhibit 6-10: Links to Applicable State and Federal Regulations
- Exhibit 6-11: Links to Outside Agency Forms
- MWBE Documentation:
  - Good Faith Efforts Guide
  - Bid Solicitation Log for MBE/WBE Participation
  - M/WBE Utilization Plan
  - Request for Waiver Form

**CHAPTER 6**  
**CONSTRUCTION REQUIREMENTS**

**EXHIBIT 6-4**

**CONTRACTOR'S RECEIPT OF REQUIRED PROGRAM MATERIALS**

(Local Government) \_\_\_\_\_

(Project) \_\_\_\_\_

Preconstruction Meeting

(Date) \_\_\_\_\_

On (date) \_\_\_\_\_, we, the undersigned, attended the preconstruction meeting for the (local government's) \_\_\_\_\_(project)\_\_\_\_\_. At the meeting, we acknowledge receiving the following information:

1. Federal Labor Standards
  - Wage Determination and Employee Classification
  - Work Hours, Overtime and Safety Standards
2. Contractor Reporting Requirements
  - Contractor's Guide to Davis-Bacon Requirements and Certified Payroll Reports
  - Certified Payroll Forms
  - Payroll Information
3. Compliance with Civil Rights Regulations
4. Job Site Notices
  - Notice to Employees
  - Equal Employment Opportunity
  - Job Safety and Health Protection
  - Current Davis-Bacon Wage Determination, Decision #  
\_\_\_\_\_
5. Other

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date



## **EXHIBIT 6-5**

### **PROJECT SIGN SPECIFICATIONS**

The sign design layout must follow the specifications available on the HCR website, <https://hcr.ny.gov/hcr-sign-specifications>.

Please contact your OCR Community Developer for further guidance.

## EXHIBIT 6-10

### LINKS TO APPLICABLE STATE AND FEDERAL REGULATIONS

#### **Labor Standards:**

Federal Labor Standards Provisions (HUD 4010 Form):

<https://www.hud.gov/sites/documents/4010.PDF>

New York State Labor Standards:

<https://labor.ny.gov/workerprotection/publicwork/PWGenLawRegs.shtm>

Semi Annual Labor Standard Report to be submitted by Housing Agency (HUD 4710)

[https://www.hud.gov/program\\_offices/davis\\_bacon\\_and\\_labor\\_standards/olrform](https://www.hud.gov/program_offices/davis_bacon_and_labor_standards/olrform)

#### **Conflict of Interest:**

Conflict of Interest Regulations (24CFR570.611)

[http://edocket.access.gpo.gov/cfr\\_2010/aprqrtr/pdf/24cfr570.611.pdf](http://edocket.access.gpo.gov/cfr_2010/aprqrtr/pdf/24cfr570.611.pdf)

#### **Displacement, Relocation and Acquisition:**

Uniform Relocation Act (40CFR Part 24):

<https://www.law.cornell.edu/cfr/text/49/part-24>

Real Estate Acquisition and Relocation Policy and Guidance (HUD Handbook 1378):

[https://www.hud.gov/program\\_offices/administration/hudclips/handbooks/cpd/13780](https://www.hud.gov/program_offices/administration/hudclips/handbooks/cpd/13780)

#### **Lead Based Paint:**

Lead Based Paint Disclosure Rule:

[https://www.hud.gov/sites/documents/DOC\\_25483.PDF](https://www.hud.gov/sites/documents/DOC_25483.PDF)

Lead Safe Housing Rule:

[https://www.hud.gov/sites/documents/DOC\\_12311.PDF](https://www.hud.gov/sites/documents/DOC_12311.PDF)

Renovation Repair and Painting Rule:

<https://www.govinfo.gov/content/pkg/FR-2008-04-22/pdf/E8-8141.pdf>

HUD Lead Based Paint Field Guide:

[https://www.hud.gov/sites/documents/DOC\\_11878.PDF](https://www.hud.gov/sites/documents/DOC_11878.PDF)

#### **Property Management:**

Property Management and Acquisition (24CFR570.505)

<http://www.gpo.gov/fdsys/pkg/CFR-2010-title24-vol3/pdf/CFR-2010-title24-vol3-sec570-505.pdf>

**Civil Rights:**

Section 3 Regulations:

<https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=8eb3688ebc1cf9df1e132f2152971777&rgn=div5&view=text&node=24:1.2.1.2.10&idno=24>

**Equal Opportunity Requirements:**

Title VI of the Civil Rights Act of 1964

[www.justice.gov/crt/grants\\_statutes/titlevi.txt](http://www.justice.gov/crt/grants_statutes/titlevi.txt)

Section 109 of Title I of the Housing and Community Development Act

<https://www.hud.gov/programdescription/sec109>

Minority and Women's Business Enterprises Requirements 2 CFR 200.321

<https://www.law.cornell.edu/cfr/text/2/200.321>

Executive Order 11246

<https://www.dol.gov/ofccp/regs/statutes/eo11246.htm>

**Fair Housing Requirements:**

Fair Housing Act

<https://www.justice.gov/crt/fair-housing-act-2>

**Accessibility and Section 504 Requirements:**

Section 504 of the Rehabilitation Act of 1979

<https://www.dol.gov/oasam/programs/crc/sec504.htm>

Title II of the American's with Disabilities Act of 1990

[https://www.ada.gov/regs2010/titleII\\_2010/titleII\\_2010\\_regulations.htm](https://www.ada.gov/regs2010/titleII_2010/titleII_2010_regulations.htm)

Architectural Barriers Act of 1968

<http://www.access-board.gov/the-board/laws/architectural-barriers-act-aba>

Executive Order 11063

<https://www.law.cornell.edu/cfr/text/24/part-107>

**Limited English Proficiency Requirements**

Executive Order 13166

<https://www.lep.gov/13166/eo13166.html>

## EXHIBIT 6-11

### LINKS TO OUTSIDE AGENCY FORMS

#### Labor Standards

Request for Additional Classification and Wages (HUD 4230A):

[https://www.hud.gov/program\\_offices/davis\\_bacon\\_and\\_labor\\_standards/olrform](https://www.hud.gov/program_offices/davis_bacon_and_labor_standards/olrform)

Record of Employee Interview (HUD 11):

[https://www.hud.gov/program\\_offices/davis\\_bacon\\_and\\_labor\\_standards/olrform](https://www.hud.gov/program_offices/davis_bacon_and_labor_standards/olrform)

Payroll Forms (WH347): <http://www.dol.gov/whd/forms/wh347.pdf> and Form Instructions:

<https://www.dol.gov/whd/forms/wh347instr.htm>

Davis-Bacon Poster:

<http://www.dol.gov/whd/regs/compliance/posters/fedprojc.pdf>

Equal Employment Opportunity Poster and Required Supplement:

<http://www1.eeoc.gov/employers/poster.cfm>

Occupational Health and Safety Administration Job Safety and Health Poster:

<https://www.osha.gov/Publications/poster.html>

#### Displacement, Relocation and Acquisition

“When a Public Agency Acquires Your Property” brochure:

<https://www.hudexchange.info/programs/relocation/publications/>

#### Lead Based Paint

“Protect Your Family from Lead in Your Home” brochure:

<http://www.epa.gov/lead/pubs/leadpdfs.pdf>

**“EPA Renovate Right”** pamphlet

<http://www2.epa.gov/lead/lead-safe-certified-guide-renovate-right>

Sample Lead Based Paint Disclosure Form for Sale of Housing:

[https://www.hud.gov/sites/documents/DOC\\_12343.PDF](https://www.hud.gov/sites/documents/DOC_12343.PDF)

Sample Lead Based Paint Disclosure Form for Rental of Housing:

<https://www.ncagr.gov/property/documents/LeadBasedPaintDisclosure-Rental.pdf>

#### Civil Rights

##### Section 3

Section3 Brochure:

[https://www.hud.gov/program\\_offices/fair\\_housing\\_equal\\_opp/section3/section3brochure](https://www.hud.gov/program_offices/fair_housing_equal_opp/section3/section3brochure)

## Fair Housing

Fair Housing Brochure:

[https://www.hud.gov/program\\_offices/fair\\_housing\\_equal\\_opp/marketing](https://www.hud.gov/program_offices/fair_housing_equal_opp/marketing)

Fair Housing Poster:

[https://www.hud.gov/program\\_offices/fair\\_housing\\_equal\\_opp/marketing](https://www.hud.gov/program_offices/fair_housing_equal_opp/marketing)

AFFH Guidebook

<https://www.hudexchange.info/resources/documents/AFFH-Rule-Guidebook.pdf>

Fair Housing Assessment Tools

<https://www.hudexchange.info/programs/affh/resources/#assessment-tools>

## Accessibility and Section 504

ADA Guide for Small Towns

<http://www.ada.gov/smtown.htm>

ADA Title II Technical Assistance Manual:

<http://www.ada.gov/taman2.html>

ADA Coordinator, Notice & Grievance Procedure: Administrative Requirements Under Title II of the ADA:

<http://www.ada.gov/pcatoolkit/chap2toolkit.htm>

## Limited English Proficiency

Language Assistance and Self Assessment Planning Tool

<https://www.lep.gov/resources/selfassesstool.pdf>



ANDREW M. CUOMO  
Governor

# Homes and Community Renewal

JAMES S. RUBIN  
Commissioner/CEO

## Office of Economic Opportunity and Partnership Development

Website: [www.nyshcr.org](http://www.nyshcr.org)

### Good Faith Efforts Guide

The Awardees or Contractor's compliance with the New York State Homes & Community Renewal minority and women-owned business enterprises (M/WBE) policy will be evaluated based upon the use of "good faith efforts" to achieve maximum participation results. Each awardee or contractor's efforts will be rated by applying the references in the guide and taking into account the following:

- Size of the contract
- Location of the project
- Capability and availability of M/WBE

### Specific Recommendations:

- Utilized New York State Directory of Certified M/WBE firms as resource document
- Incorporated as part of all subcontracts, provisions of the General Conditions in the contract which relate to, Equal Employment Opportunity (EEO), and Minority and Women-Owned Business Enterprises
- Utilized frequent and timely advertisements in newspapers and periodicals catering to M/WBEs for recruitment purposes
- Established contacts and working relationships within M/WBE firms
- Sent solicitations and complete follow-ups, in a timely fashion, to M/WBEs
- Provided certified M/WBEs adequate time to review plans/specs and to respond to solicitations
- Notified the Office of Economic Opportunity and Partnership Development of problems preventing M/WBE participation and requested assistance
- Submitted a complete, acceptable Utilization Plan in accordance with the applicable requirements to meet goals for participation of certified minority and women-owned business enterprise established in the State contract
- Documented and maintained records of all "good faith effort" to address project's goals

### Bid Solicitation Log for MBE/WBE Participation

[illegible]

\*M/WBE Status - Indicate if subcontractor is Minority (M), Women (W) or Dual (D) Certified

**\*\*ITB - Indicate Date Invitation to Bid was faxed to subcontractor**

## M/WBE UTILIZATION PLAN

**INSTRUCTIONS:** This form must be submitted with any bid, proposal, or proposed negotiated contract or within a reasonable time thereafter, but prior to contract award. This Utilization Plan must contain a detailed description of the supplies and/or services to be provided by each certified Minority and Women-owned Business Enterprise (M/WBE) under the contract. Attach additional sheets if necessary.

**Offeror's Name:**

**Federal Identification Number:**

**Address:**

**Solicitation Number:**

**City, State, Zip Code:**

**Telephone Number:**

**Region/Location of Work:**

**M/WBE Goals in the Contract:** MBE    %    WBE    %

1. Certified M/WBE Subcontractors/Suppliers Name, Address, Email Address, Telephone No.	2. Classification	3. Federal ID No.	4. Detailed Description of Work (Attach additional sheets, if necessary)	5. Dollar Value of Subcontracts / Supplies/Services and intended performance dates of each component of the contract.
A.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
B.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			

**6. IF UNABLE TO FULLY MEET THE MBE AND WBE GOALS SET FORTH IN THE CONTRACT, OFFEROR MUST SUBMIT A REQUEST FOR WAIVER FORM (PROC-5).**

<p><b>PREPARED and APPROVED BY:</b></p> <p><b>NAME AND TITLE OF PREPARER (Print or Type):</b></p> <p><b>Signature:</b> _____  <b>Authorized Signature</b></p> <p><b>DATE:</b></p> <p><b>TELEPHONE NO:</b></p> <p><b>EMAIL ADDRESS:</b></p> <p><b>SUBMISSION OF THIS FORM CONSTITUTES THE OFFEROR'S ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE M/WBE REQUIREMENTS SET FORTH UNDER NYS EXECUTIVE LAW, ARTICLE 15-A, 5 NYCRR PART 143, AND THE ABOVE REFERENCED SOLICITATION. FAILURE TO SUBMIT COMPLETE AND ACCURATE INFORMATION MAY RESULT IN A FINDING OF NONCOMPLIANCE AND POSSIBLE TERMINATION OF YOUR CONTRACT.</b></p>	<p style="text-align: center;"><b>FOR AGENCY USE ONLY</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"><b>REVIEWED BY:</b></td> <td style="width: 30%; padding: 5px;"><b>DATE:</b></td> </tr> </table> <p><b>UTILIZATION PLAN APPROVED:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO    <b>Date:</b></p> <p><b>Contract No:</b></p> <p><b>Contract Award Date:</b></p> <p><b>Estimated Date of Completion:</b></p> <p><b>Amount Obligated Under the Contract:</b></p> <p><b>NOTICE OF DEFICIENCY ISSUED:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO  <b>Date:</b> _____</p> <p><b>NOTICE OF ACCEPTANCE ISSUED:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO  <b>Date:</b> _____</p>	<b>REVIEWED BY:</b>	<b>DATE:</b>
<b>REVIEWED BY:</b>	<b>DATE:</b>		





# REQUEST FOR WAIVER FORM

<b>INSTRUCTIONS: SEE PAGE 2 OF THIS ATTACHMENT FOR REQUIREMENTS AND DOCUMENT SUBMISSION INSTRUCTIONS.</b>		
<b>Offeror/Contractor Name:</b>	<b>Federal Identification No.:</b>	
<b>Address:</b>	<b>Solicitation/Contract No.:</b>	
<b>City, State, Zip Code:</b>	<b>M/WBE Goals: MBE      %      WBE      %</b>	
By submitting this form and the required information, the offeror/contractor certifies that every Good Faith Effort has been taken to promote M/WBE participation pursuant to the M/WBE requirements set forth under the contract.		
<b>Contractor is requesting a:</b>  1. <input type="checkbox"/> <b>MBE Waiver</b> – A waiver of the MBE Goal for this procurement is requested. <input type="checkbox"/> <b>Total</b> <input type="checkbox"/> <b>Partial</b>  2. <input type="checkbox"/> <b>WBE Waiver</b> – A waiver of the WBE Goal for this procurement is requested. <input type="checkbox"/> <b>Total</b> <input type="checkbox"/> <b>Partial</b>  3. <input type="checkbox"/> <b>Waiver Pending ESD Certification</b> – (Check here if subcontractors or suppliers of Contractor are not certified M/WBE, but an application for certification has been filed with Empire State Development.)      Date of such filing with Empire State Development: _____		
<b>PREPARED BY (Signature):</b>	<b>Date:</b>	
SUBMISSION OF THIS FORM CONSTITUTES THE OFFEROR/CONTRACTOR'S ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE M/WBE REQUIREMENTS SET FORTH UNDER NYS EXECUTIVE LAW, ARTICLE 15-A AND 5 NYCRR PART 143. FAILURE TO SUBMIT COMPLETE AND ACCURATE INFORMATION MAY RESULT IN A FINDING OF NONCOMPLIANCE AND/OR TERMINATION OF THE CONTRACT.		
<b>Name and Title of Preparer (Printed or Typed):</b>	<b>Telephone Number:</b>	<b>Email Address:</b>
<b>Submit with the bid or proposal or if submitting after award, submit to the MWBE Program Unit:</b>  New York State Homes & Community Renewal Office of Economic Opportunity and Partnership Development 641 Lexington Ave, 5 <sup>th</sup> Floor New York, NY 10022  Email to: Econ.Opportunity@nyshcr.org	***** <b>FOR AGENCY USE ONLY</b> *****	
	<b>REVIEWED BY:</b>	<b>DATE:</b>
	<b>Waiver Granted:</b> <input type="checkbox"/> <b>YES</b> <b>MBE:</b> <input type="checkbox"/> <b>WBE:</b> <input type="checkbox"/> <input type="checkbox"/> <b>Total Waiver</b> <input type="checkbox"/> <b>Partial Waiver</b> <input type="checkbox"/> <b>ESD Certification Waiver</b> <input type="checkbox"/> <b>*Conditional</b> <input type="checkbox"/> <b>Notice of Deficiency Issued</b> _____ <b>*Comments:</b>	

## REQUIREMENTS AND DOCUMENT SUBMISSION INSTRUCTIONS

**When completing the Request for Waiver Form please check all boxes that apply. To be considered, the Request for Waiver Form must be accompanied by documentation for items 1 – 11, as listed below. If box # 3 has been checked above, please see item 11. Copies of the following information and all relevant supporting documentation must be submitted along with the request:**

1. A statement setting forth your basis for requesting a partial or total waiver.
2. The names of general circulation, trade association, and M/WBE-oriented publications in which you solicited certified M/WBEs for the purposes of complying with your participation goals.
3. A list identifying the date(s) that all solicitations for certified M/WBE participation were published in any of the above publications.
4. A list of all certified M/WBEs appearing in the NYS Directory of Certified Firms that were solicited for purposes of complying with your certified M/WBE participation levels.
5. Copies of notices, dates of contact, letters, and other correspondence as proof that solicitations were made in writing and copies of such solicitations, or a sample copy of the solicitation if an identical solicitation was made to all certified M/WBEs.
6. Provide copies of responses made by certified M/WBEs to your solicitations.
7. Provide a description of any contract documents, plans, or specifications made available to certified M/WBEs for purposes of soliciting their bids and the date and manner in which these documents were made available.
8. Provide documentation of any negotiations between you, the Offeror/Contractor, and the M/WBEs undertaken for purposes of complying with the certified M/WBE participation goals.
9. Provide any other information you deem relevant which may help us in evaluating your request for a waiver.
10. Provide the name, title, address, telephone number, and email address of offeror/contractor's representative authorized to discuss and negotiate this waiver request.
11. Copy of notice of application receipt issued by Empire State Development (ESD).

### Note:

Unless a Total Waiver has been granted, Offeror/Contractor will be required to submit all reports and documents pursuant to the provisions set forth in the Contract, as deemed appropriate by the contracting entity, to determine M/WBE compliance.

## 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

\_\_\_\_\_  
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 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:

## 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

\_\_\_\_\_  
*(seal)*

Contractor's Name and Corporate Seal

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

Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_

Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
*(seal)*

Surety's Name and Corporate Seal

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

Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_

Signature

\_\_\_\_\_  
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:

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

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



Endorsed 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. §§5101 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.I 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 for whom the Owner is responsible 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 11.04.C.2.a and 11.04.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 additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

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

## **SUPPLEMENTARY CONDITIONS**

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

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

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

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## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### *SC-1.01 Defined Terms*

**SC 1.01.A.8** Add the following language at the end of last sentence of Paragraph 1.01.A.8:

The Change Order form to be used on this Project is EJCDC C-941. Agency approval is required before Change Orders are effective.

**SC 1.01.A.48** Add the following language at the end of the last sentence of Paragraph 1.01.A.48:

A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.

**SC 1.01.A.49** Add the following new Paragraph after Paragraph 1.01.A.48:

**Abnormal Weather Conditions** – Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

**SC 1.01.A.50** Add the following new Paragraph after Paragraph 1.01.A.49:

**Agency** – The Project is financed in whole or in part by the Community Development Block Grant (CDBG) Program. The Office of Community Renewal administers the CDBG program for the State of New York; therefore, the Agency for these documents is the Office of Community Renewal.

## ARTICLE 2 – PRELIMINARY MATTERS

### *SC-2.01 Delivery of Bonds and Evidence of Insurance*

**SC-2.01** Delete Paragraphs 2.01 B. and C. in their entirety and insert the following in their place:

- B. Evidence of Contractor's Insurance:** When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- C. Evidence of Owner's Insurance:** After receipt from Contractor of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner under Article 6 (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

## SC-2.02 Copies of Documents

**SC-2.02.A.** Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor [two] copies of the Contract Documents (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF).

~~SC 2.06.B (Non-mandatory) Guidance Note: If the parties do not intend to develop electronic or digital transmittal protocols, then Paragraph 2.06B of the General Conditions may be deleted. Use the following Supplementary Condition in such case:~~

~~SC 2.06.B Delete Paragraph 2.06B and replace it with the term [Deleted].~~

~~SC 2.06.B Add the following language to the end of 2.06.B:~~

~~Special requirements for electronic data apply to this Project. See attached Exhibit entitled "Electronic Communications Protocol Addendum," Consensus DOCS form 200.2.~~

**SC 4.01.A** Amend the last sentence of Paragraph 4.01.A by striking out the following words:

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.

**SC 4.05.C.2** Amend Paragraph 4.05.C.2 by striking out the following text: "abnormal weather conditions;" and inserting the following text:

Abnormal Weather Conditions;

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

### SC-5.03 Subsurface and Physical Conditions

**SC-5.03** Add the following new paragraphs immediately after Paragraph 5.03.B:

C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:

1. Provide within Information Available to Bidders (not a part of Contract Documents).

D. The following drawings of physical conditions relating to existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities) are known to Owner:

a. None of the contents of such drawings is Technical Data on whose accuracy Contractor may rely.

~~E. Contractor may examine copies of reports and drawings identified in SC 5.03.C and SC 5.03.D that were not included with the Bidding Documents at \_\_\_\_\_ [insert location] during regular business hours, or may request copies from Engineer.~~

SC-5.06 *Hazardous Environmental Conditions*

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

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

**ARTICLE 6 – BONDS AND INSURANCE**

SC-6.02 *Insurance—General Provisions*

**SC-6.02** Add the following paragraph immediately after Paragraph 6.02.B:

- 1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC-6.03 *Contractor's Liability Insurance*

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

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:	<u>Statutory</u>
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Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
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Jones Act coverage, if applicable:

Bodily injury by accident, each accident	\$ <u>N/A</u>
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Bodily injury by disease, aggregate	\$ <u>N/A</u>
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Employer's Liability:

Bodily injury, each accident	\$ <u>1,000,000</u>
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Bodily injury by disease, each employee	\$ <u>1,000,000</u>
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Bodily injury/disease aggregate	\$ <u>1,000,000</u>
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For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:

\$	<u>N/A</u>
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Foreign voluntary worker compensation	<u>Statutory</u>
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EJCDC® C-800, Guide to the Preparation of Supplementary Conditions.

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

General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</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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Combined Single Limit of	\$ <u>1,000,000</u>
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**4. Excess or Umbrella Liability:**

Per Occurrence	\$ <u>5,000,000</u>
General Aggregate	\$ <u>5,000,000</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

**6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following:**

**1. Town of Moriah  
Mr. Tom Scozzafava  
Town Supervisor**

38 Park Place  
Port Henry, NY 12974

2. Mr. Jonathan Soukup  
Cedarwood Engineering Services, PLLC  
3903 Main Street  
Warrensburg, NY 12885

7. Contractor's Professional Liability:

Each Claim	\$ <u>2,000,000</u>
Annual Aggregate	\$ <u>2,000,000</u>

*SC-6.05 Property Insurance*

SC-6.05.A. Add the following to the list of items in Paragraph 6.05.A, as numbered items:

14. include for the benefit of Owner loss of profits and soft cost coverage including, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, plus attorneys fees and engineering or other consultants' fees, if not otherwise covered;
17. include by express endorsement coverage of damage to Contractor's equipment.

**ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES**

*SC-7.02 Labor; Working Hours*

SC-7.02.B. Add the following new subparagraphs immediately after Paragraph 7.02.B:

1. Regular working hours will be 7 AM to 5 PM.
2. Owner's legal holidays are :
  - New Year's Day
  - Martin Luther King, Jr. Day
  - Presidents' Day
  - Memorial Day
  - Independence Day
  - Labor Day
  - Columbus Day
  - Veterans Day
  - Thanksgiving Day
  - Christmas Day
  - Floating Holiday

~~SC 7.02.B. Amend the first and second sentences of Paragraph 7.02.B to state "...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."~~

**SC-7.04.A Amend the third sentence of Paragraph 7.04A by striking out the following words:**

Unless the specification or description contains or is followed by words reading that no like, equivalent, or 'or-equal' item is permitted

**SC-7.04.A.1 Amend the last sentence of Paragraph a.3 by striking out "and;" and adding a period at the end of Paragraph a.3.**

**SC-7.04.A.1 Delete paragraph 7.04.A.1.a.4 in its entirety and insert the following in its place:**

[Deleted]

**SC 7.06.A Amend Paragraph 7.06.A by adding the following text to the end of the Paragraph:**

The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner

**SC 7.06.B Delete paragraph 7.06.B in its entirety and insert the following in its place:**

[Deleted]

**SC 7.06.E Amend the second sentence of Paragraph 7.06.E by striking out "Owner may also require Contractor to retain specific replacements; provided, however, that".**

#### *SC-7.09 Taxes*

**SC 7.09 Add a new paragraph immediately after Paragraph 7.09.A:**

**B. Owner is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties thereof on all materials to be incorporated into the Work.**

- 1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.**
- 2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.**

### **ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION**

#### *SC-10.03 Project Representative*

**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. General: 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. RPR shall**



generally communicate with Owner only with the knowledge of and under the direction of Engineer.

2. **Schedules:** Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. **Conferences and Meetings:** Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
4. **Liaison:**
  - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
  - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
  - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. **Interpretation of Contract Documents:** Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. **Shop Drawings and Samples:**
  - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
  - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
  - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. **Modifications:** Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. **Review of Work and Rejection of Defective Work:**
  - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed

Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

**9. Inspections, Tests, and System Start-ups:**

- a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

**10. Records:**

- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

**11. Reports:**

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

**12. Payment Requests:** Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. **Certificates, Operation and Maintenance Manuals:** During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
14. **Completion:**
  - a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
  - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
  - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

**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.

**SC 11.07.C** Add the following new Paragraph after Paragraph 11.07.B:

All Contract Change Orders must be concurred in by Agency before they are effective.

**ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

**SC 13.02.C** Delete Paragraph 13.02.C in its entirety and insert the following in its place:

**[Deleted]**

**SC-13.03**    *Unit Price Work*

**SC 13.03.E** Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E.** The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
- 1.** if the extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
  - 2.** if there is no corresponding adjustment with respect to any other item of Work; and
  - 3.** if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price.

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

- SC 15.01.B** Amend the second sentence of Paragraph 15.01.B.1 by striking out the following text: “a bill of sale, invoice, or other.”
- SC 15.01.B.3** Add the following language at the end of paragraph 15.01.B.3:
- No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.
- SC15.01.B.4** Add the following new Paragraph after Paragraph 15.01.B.3:
- The Application for Payment form to be used on this Project is EJCDC C-620. The Agency must approve all Applications for Payment before payment is made.
- SC 15.01.D.1** Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:
- The Application for Payment with Engineer’s recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty (20) days after Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.
- SC 15.02.A** Amend Paragraph 15.02.A by striking out the following text: “no later than seven days after the time of payment by Owner” and insert “no later than the time of payment by Owner.”

### *SC-15.03 Substantial Completion*

**SC 15.03.B** Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

**ARTICLE 18**      Miscellaneous

**SC-18.09**      Add the following new paragraph after Paragraph 18.08:

**Tribal Sovereignty.** No provision of this Agreement will be construed by any of the signatories as abridging or debilitating any sovereign powers of the {insert name of Tribe} Tribe; affecting the trust-beneficiary relationship between the Secretary of the Interior, Tribe, and Indian landowner(s); or interfering with the government-to-government relationship between the United States and the Tribe.

**ARTICLE 19**      **ADD ARTICLE 19 TITLED “FEDERAL REQUIREMENTS”**

**SC 19.01**      Add the following language as Paragraph 19.01 with the title “Agency Not a Party”:

A.      This Contract is expected to be funded in part with funds provided by Agency. Neither Agency, nor any of its departments, entities, or employees is a party to this Contract.

**SC 19.02**      Add the following language after Article 19.02.B with the title “Contract Approval”:

A.      Concurrence by Agency in the award of the Contract is required before the Contract is effective.

**SC 19.03**      Add the following language after Article 19.02.B with the title “Conflict of Interest & Gratuities”:

A.      Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner’s officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer, or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest or other interest or a tangible personal benefit from the Contractor. Owner’s officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from Contractor or subcontractors.

**SC 19.04**      Add the following language after Article 19.03.A with the title “Gratuities”:

A.      If Owner finds after a notice and hearing that Contractor, or any of Contractor’s agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.

B.      In the event this Contract is terminated as provided in paragraph 19.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary

damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

~~SC 19.05 Add the following language after Article 19.04.B with the title “Audit and Access to Records”:~~

~~A. Owner, Agency, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor which are pertinent to the Agreement, for the purpose of making audits, examinations, excerpts, and transcriptions. Engineer shall maintain all required records for three years after final payment is made and all other pending matters are closed.~~

SC 19.05 Add the following language after Article 19.05.A with the title “Small, Minority and Women’s Businesses”:

A. Contracting with small and minority businesses, women’s business enterprises, and labor surplus area firms. If Contractor intends to let any subcontracts for a portion of the work, Contractor must take all necessary affirmative steps to assure that minority businesses, women’s business enterprises, and labor surplus area firms are used when possible. Affirmative steps must include:

- (1) Placing qualified small and minority businesses and women’s business enterprises on solicitation lists;
- (2) Assuring that small and minority businesses, and women’s business enterprises are solicited whenever they are potential sources;
- (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women’s business enterprises;
- (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women’s business enterprises; and
- (5) Using the service and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

SC 19.06 Add the following after Article 19.06.A with the title “Anti-Kickback”:

A. Contractor shall comply with the Copeland Anti-Kickback Act (40 U.S.C 3145) as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that Contractor or subcontractor must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. Owner shall report all suspected or reported violations to Agency.

SC 19.07 Add the following after Article 19.07.A with the title “Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended”:

A. Contractor to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

**SC 19.08 Add the following after Article 19.09 with the title "Equal Employment Opportunity":**

A. The Contract is considered a federally assisted construction contract. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p.339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

**SC-19.10 Add the following after Article 19.11.A with the title "Environmental Requirements":**

When constructing a Project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:

A. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.

B. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100-year floodplain areas (Standard Flood Hazard Area) delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, e.g., alluvial soils on NRCS Soil Survey Maps.

C. Historic Preservation – Any excavation by Contractor that uncovers a historical or archaeological artifact or human remains shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO) and appropriate Nation.

D. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

E. Mitigation Measures – The following environmental mitigation measures are required on this Project: none.

~~B. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active~~



~~obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.~~

~~C. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.~~

SC 19.11 Add the following after Article 19. with the title "Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708)":

A. Where applicable, for contracts awarded by Owner in excess of \$100,000 that involve the employment of mechanics or laborers, the Contractor must comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, the Contractor must compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

SC 19.12 Add the following after Article 19. With the title "Debarment and Suspension (Executive Orders 12549 and 12689)":

A. A contract award (see 2 CFR 180.220) must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

SC 19.13 Add the following after Article 19. with the title "*Procurement of recovered materials*":

**A. The Contractor must comply with 2 CFR Part 200.322, "Procurement of recovered materials."**

**ARTICLE 20    ADD ARTICLE 20 TITLED "PROVISION FOR PUBLIC WORKS UNDER NEW YORK STATE LAW"**

**SC 20.01            Add the following language as Paragraph 20.01:**

During the performance of the Contract, the CONTRACTOR agrees as follows:

- (a) That in the hiring of employees for the performance of work under this Contract or any subcontract hereunder, no CONTRACTOR, Subcontractor, nor any person acting on behalf of such CONTRACTOR or Subcontractor, shall by reason of age, race, creed, color, disability, sex, national origin, or marital status discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;
- (b) That no CONTRACTOR, SUBCONTRACTOR, nor any person on his behalf, shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Contract on account of age, race, creed, color, disability, sex, national origin, or marital status;
- (c) That there may be deducted from the amount payable to the CONTRACTOR by the state or municipality under this Contract, a penalty of \$50.00 for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the Contract;
- (d) That this Contract may be canceled or terminated by the state or municipality, and all moneys due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this section of the Contract; and
- (e) That contracts of \$250,000.00 or more require every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. Training shall occur prior to performing any work on the project.
- (f) The aforesaid provisions of this section covering every Contract for or on behalf of the state or municipality for the manufacture, sale or distribution of materials, equipment, or supplies shall be limited to operations performed within the territorial limits of the State of New York.

**ARTICLE 21    ADD ARTICLE 21 TITLED "SUBMISSION OF CERTIFIED PAYROLLS"**

**SC 21.01            Add the following language as Paragraph 21.01:**

CONTRACTOR shall in accordance with New York Labor Law Section 220(3)(a) submit to the OWNER within thirty days after issuance of its first payroll on the project and each and every thirty days thereafter until the conclusion of the project, a transcript of the original payroll record, as provided under New York Labor Law Section 220(3)(a), subscribed and affirmed as true under penalty of perjury. Failure to do so shall be a material breach of this contract.

For contracts over \$250,000, CONTRACTOR and sub-contractors shall, in accordance with New York Labor Law Section 220-H, attach a copy of proof of completion of the OSHA10 course to the first certified payroll submitted to the contracting agency and on

each succeeding payroll where any new or additional employee is first listed. Proof of completion may include but is not limited to:

- (a) Copies of bona fide course completion card;
- (b) Training roster, attendance record of other documentation from the certified trainer pending the issuance of the card.
- (c) Other valid proof.

Certification by the employer attesting that all employees have completed such course is not sufficient proof that the course has been completed.

## **ARTICLE 22      ADD ARTICLE 21 TITLED “CONFLICTS WITH NEW YORK STATE LAW”**

### **SC 22.01          Add the following language as Paragraph 22.01:**

Should any provision of the General or Supplemental Conditions contained herein conflict with New York State law, New York State law shall control.

## **ARTICLE 23      ADD ARTICLE 23 TITLED “NEW YORK STATE CERTIFICATION OF APPRENTICESHIP”**

### **SC 23.01          Add the following language as Paragraph 23.01:**

For Contracts over \$200,000, and in accordance with New York Labor Law §816-b, CONTRACTOR shall enter into apprenticeship agreements appropriate for the type and scope of the work to be performed that have been registered with, and approved by, the Commissioner of Labor of the State of New York. Upon request, CONTRACTOR shall provide, within 10 days, a copy of the apprenticeship agreements to the OWNER. All subcontractors to the prime contract with a contract amount over \$200,000 shall comply with the New York Labor Law 816-b and will be required to submit the “Certification of Apprenticeship Programs”.

*Suppliers are exempt from this requirement.*

## **ARTICLE 24      ADD ARTICLE 24 TITLED “DIRECT CLAIMS”**

### **SC 24.01          Add the following language as Paragraph 24.01:**

CONTRACTOR shall make no direct claim against ENGINEER or its consultants for costs or damages arising out of, resulting from or in connection with any alleged act, error, or omission by ENGINEER. Provided that this limitation shall not prohibit the Contractor from making such claims against the party with whom it has contracted nor prevent such party from making claims against the ENGINEER, except as otherwise limited in their agreements.

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**NOTICE TO PROCEED**

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Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer:	Engineer's Project No.:
Project:	Contract Name:
	Effective Date of Contract:

---

**TO CONTRACTOR:**

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [\_\_\_\_\_, 20\_\_\_\_]. *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is \_\_\_\_\_, and the date of readiness for final payment is \_\_\_\_\_] **or** [the number of days to achieve Substantial Completion is \_\_\_\_\_, and the number of days to achieve readiness for final payment is \_\_\_\_\_].

Before starting any Work at the Site, Contractor must comply with the following:  
*[Note any access limitations, security procedures, or other restrictions]*

---

Owner:

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

## Contractor's Application for Payment No. \_\_\_\_\_

Application Period:		Application Date:
To (Owner):	From (Contractor):	Via (Engineer):
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

### Application For Payment Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY		
CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE..... \$ \_\_\_\_\_

2. Net change by Change Orders..... \$ \_\_\_\_\_

3. Current Contract Price (Line 1 ± 2)..... \$ \_\_\_\_\_

4. TOTAL COMPLETED AND STORED TO DATE  
(Column F total on Progress Estimates)..... \$ \_\_\_\_\_

5. RETAINAGE:

a. X \_\_\_\_\_ Work Completed..... \$ \_\_\_\_\_

b. X \_\_\_\_\_ Stored Material..... \$ \_\_\_\_\_

c. Total Retainage (Line 5.a + Line 5.b)..... \$ \_\_\_\_\_

6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c)..... \$ \_\_\_\_\_

7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)..... \$ \_\_\_\_\_

8. AMOUNT DUE THIS APPLICATION..... \$ \_\_\_\_\_

9. BALANCE TO FINISH, PLUS RETAINAGE  
(Column G total on Progress Estimates + Line 5.c above)..... \$ \_\_\_\_\_

### Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

### Contractor Signature

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

Payment of: \$ \_\_\_\_\_  
(Line 8 or other - attach explanation of the other amount)

is recommended by: \_\_\_\_\_  
(Engineer) (Date)

Payment of: \$ \_\_\_\_\_  
(Line 8 or other - attach explanation of the other amount)

is approved by: \_\_\_\_\_  
(Owner) (Date)

Approved by: \_\_\_\_\_  
Funding or Financing Entity (if applicable) (Date)

### Progress Estimate - Lump Sum Work

## Contractor's Application

For (Contract):						Application Number:		
Application Period:						Application Date:		
			Work Completed		E	F		G
A		B	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (F / B)	Balance to Finish (B - F)
Specification Section No.	Description	Scheduled Value (\$)	From Previous Application (C+D)	This Period				
	Totals							

### Progress Estimate - Unit Price Work

## Contractor's Application

[illegible]

## Stored Material Summary

## Contractor's Application

[illegible]



Change Order No. \_\_\_\_\_

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Title: \_\_\_\_\_

## CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer:	Engineer's Project No.:
Project:	Contract Name:

**This [preliminary] [final] Certificate of Substantial Completion applies to:**

☐ All Work ☐ The following specified portions of the Work:

### Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities: ☐ None  
☐ As follows

Amendments to Contractor's responsibilities: ☐ None  
☐ As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

# Project Sign – Master Specification

All projects receiving funding from New York State Homes and Community Renewal shall post a Project Sign at the project construction site(s). Sign graphics shall be in accordance with the Project Sign template posted on the NYS HCR website at: <https://hcr.ny.gov/hcr-sign-specifications>.

All signs shall meet the following master specification:

1. Include the following text in this order in the middle white band:
  - a. Project name
  - b. Expected completion date: (please include these words followed by date)
  - c. Developer name (not borrowing entity)
2. The Project Sign shall be fabricated by a professional sign manufacturer, per the following specifications:
  - a. Four feet by eight feet medium density overlay exterior grade plywood with grade B surface veneers (MDO B-B EXT-APA).
    - i. Exterior grade printed signs, such as closed cell PVC foamboard, mounted on APA exterior grade sheets are acceptable.
  - b. Lettering and striping shall be uniform with sharp, neat profiles.
  - c. Size of text and logos to be proportional to that shown on the sign template.
  - d. Font: Arial & Arial Bold
  - e. Sign colors: see adjoining sign graphic template file.
  - f. Include the logos for Fair Housing and Equal Opportunity as indicated on the sign template. Sign colors: see adjoining sign graphic template file.
  - g. Projects with dwelling units that are Accessible or Adaptable to applicable building code or other Accessibility standards for mobility impaired individuals shall include the [universal symbol of access](#).
3. A proof of the sign should be sent to your HCR project manager before fabrication and installation.
4. Sign Installation:
  - a. Install sign within one week from commencement of work at the site.
  - b. Submit a photograph of the installed sign to your HCR project manager.
  - c. Install sign in accordance with all laws and codes having jurisdiction.
  - d. Erect sign in a prominent location, secure from vandalism.
  - e. Provide individual signs at non-contiguous scattered site projects.
  - f. Maintain each sign plumb, level and in good condition for the duration of construction.
  - g. Maintain each project sign at the property for 60 days after completion of the construction or initial occupancy, whichever duration is longer.

# Project Sign Specifications

## Project name

Expected completion date: Month, Day Year or Month Year or Season Year

Developer name (not borrowing entity)

Include *Expected completion date*:  
words on sign.



## Sample Name of Project

Expected completion date: Month Year

Sample Development Company Name

Pantone: 7680 c  
(Purple)

Pantone: 2925 c  
(Blue)



The mission of NYS Homes and Community Renewal is to build, preserve, and protect affordable housing and increase homeownership throughout New York State.



Andrew M. Cuomo, Governor

RuthAnne Visnauskas, Commissioner/CEO

## See full Master Sign Written Specifications

Typeface: Arial & Arial Bold

Pantone: 7680 c (Purple)

Pantone: 2925 c (Blue)



Andrew M. Cuomo, Governor

Roberta Reardon, Commissioner

Town of Moriah

Jenny Connelly, Contract Administrator  
3903 Main Street  
Warrensburg NY 12853

Schedule Year 2020 through 2021  
Date Requested 12/07/2020  
PRC# 2020012114

Location 1st La., 2nd La., College St.  
Project ID#  
Project Type water main and water service line replacement, sanitary sewer main and manhole replacement, and pavement restoration

### PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Wage Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2020 through June 2021. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website [www.labor.ny.gov](http://www.labor.ny.gov). Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

#### NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: \_\_\_\_\_ Date Cancelled: \_\_\_\_\_

Name & Title of Representative: \_\_\_\_\_

Phone: (518) 457-5589 Fax: (518) 485-1870  
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240



# **General Provisions of Laws Covering Workers on Article 8 Public Work Contracts**

## **Introduction**

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

## **Responsibilities of the Department of Jurisdiction**

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission; a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion [online](#).

## **Hours**

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

There are very few exceptions to this rule. Complete information regarding these exceptions is available on the ["Request for a dispensation to work overtime" form \(PW30\)](#) and ["4 Day / 10 Hour Work Schedule" form \(PW 30.1\)](#).

## **Wages and Supplements**

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website [www.labor.ny.gov](http://www.labor.ny.gov).

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is REQUIRED to provide complete copies to all prime contractors who in turn MUST, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website [www.labor.ny.gov](http://www.labor.ny.gov).

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website [www.labor.ny.gov](http://www.labor.ny.gov).

## **Payrolls and Payroll Records**

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. As per Article 6 of the Labor law, contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid

or provided, and Daily and weekly number of hours worked in each classification.

The filing of payrolls to the Department of Jurisdiction is a condition of payment. Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, but are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed \$100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8 . Section 220-a).

### **Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties**

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

### **Withholding of Payments**

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

### **Summary of Notice Posting Requirements**

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.



The "Public Work Project" notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers' compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

## **Apprentices**

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeymen in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyman's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

## **Interest and Penalties**

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

## **Debarment**

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

## **Criminal Sanctions**

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

## **Discrimination**

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220-e(b) ).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of \$50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c) ).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d) ).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

### **Workers' Compensation**

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

### **Unemployment Insurance**

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.



Andrew M. Cuomo, Governor

Roberta Reardon, Commissioner

Town of Moriah

Jenny Connelly, Contract Administrator  
3903 Main Street  
Warrensburg NY 12853

Schedule Year 2020 through 2021  
Date Requested 12/07/2020  
PRC# 2020012114

Location 1st La., 2nd La., College St.  
Project ID#  
Project Type water main and water service line replacement, sanitary sewer main and manhole replacement, and pavement restoration

### Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

### Contractor Information

All information must be supplied

Federal Employer Identification Number: _____		
Name: _____		
Address: _____ _____		
City: _____	State: _____	Zip: _____
Amount of Contract: \$ _____	Contract Type:	
Approximate Starting Date: ____/____/____	<input type="checkbox"/> (01) General Construction	
Approximate Completion Date: ____/____/____	<input type="checkbox"/> (02) Heating/Ventilation	
	<input type="checkbox"/> (03) Electrical	
	<input type="checkbox"/> (04) Plumbing	
	<input type="checkbox"/> (05) Other : _____	

Phone: (518) 457-5589 Fax: (518) 485-1870  
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240



## **Social Security Numbers on Certified Payrolls:**

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concern regarding inclusion of this information on payrolls if another identifier will suffice.

For these reasons, the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor. This change does not affect the Department's ability to request and receive the entire social security number from employers during its public work/ prevailing wage investigations.

## **Construction Industry Fair Play Act: Required Posting for Labor Law Article 25-B § 861-d**

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, [www.labor.ny.gov](http://www.labor.ny.gov). <https://labor.ny.gov/formsdocs/ui/1A999.pdf>

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: [dol.misclassified@labor.ny.gov](mailto:dol.misclassified@labor.ny.gov).

## **Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)**

### **Effective June 23, 2020**

This provision is an addition to the existing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage and supplement rate* for their particular job classification *on each pay stub*\*. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her job classification. The required notification will be provided with each wage schedule, may be downloaded from our website [www.labor.ny.gov](http://www.labor.ny.gov) or be made available upon request by contacting the Bureau of Public Work at 518-457-5589. \*In the event the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

(12.20)

**To all State Departments, Agency Heads and Public Benefit Corporations  
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND**

## **Budget Policy & Reporting Manual**

# **B-610**

### **Public Work Enforcement Fund**

*effective date December 7, 2005*

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#### **1. Purpose and Scope:**

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

#### **2. Background and Statutory References:**

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

#### **3. Procedures and Agency Responsibilities:**

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

**To all State Departments, Agency Heads and Public Benefit Corporations**  
**IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND**

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor  
Administrative Finance Bureau-PWEF Unit  
Building 12, Room 464  
State Office Campus  
Albany, NY 12240

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.







Required Notice under Article 25-B of the Labor Law

**Attention All Employees, Contractors and Subcontractors:  
You are Covered by the Construction Industry Fair Play Act**

**The law says that you are an employee unless:**

- You are free from direction and control in performing your job, **and**
- You perform work that is not part of the usual work done by the business that hired you, **and**
- You have an independently established business.

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

**It is against the law for an employer to misclassify employees as independent contractors or pay employees off the books.**

**Employee Rights:** If you are an employee, you are entitled to state and federal worker protections. These include:

- Unemployment Insurance benefits, if you are unemployed through no fault of your own, able to work, and otherwise qualified,
- Workers' compensation benefits for on-the-job injuries,
- Payment for wages earned, minimum wage, and overtime (under certain conditions),
- Prevailing wages on public work projects,
- The provisions of the National Labor Relations Act, and
- A safe work environment.

It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

**Independent Contractors:** If you are an independent contractor, **you must pay all taxes and Unemployment Insurance contributions required by New York State and Federal Law.**

**Penalties** for paying workers off the books or improperly treating employees as independent contractors:

- **Civil Penalty**  
First offense: Up to \$2,500 per employee  
Subsequent offense(s): Up to \$5,000 per employee
- **Criminal Penalty**  
First offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine and debarment from performing public work for up to one year.  
Subsequent offense(s): Misdemeanor - up to 60 days in jail or up to a \$50,000 fine and debarment from performing public work for up to 5 years.

**If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at (866) 435-1499 or send an email to [dol.misclassified@labor.ny.gov](mailto:dol.misclassified@labor.ny.gov). All complaints of fraud and violations are taken seriously. You can remain anonymous.**

**Employer Name:**

IA 999 (09/16)



# Attention Employees

## THIS IS A: **PUBLIC WORK PROJECT**

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Chapter 629 of  
the Labor Laws  
of 2007:

**These wages are set by law and must be posted  
at the work site. They can also be found at:**  
[www.labor.ny.gov](http://www.labor.ny.gov)

If you feel that you have not received proper wages or benefits,  
please call our nearest office.\*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5156		

\* For New York City government agency construction projects, please  
contact the Office of the NYC Comptroller at (212) 669-4443, or  
[www.comptroller.nyc.gov](http://www.comptroller.nyc.gov) – click on Bureau of Labor Law.

Contractor Name: \_\_\_\_\_

Project Location: \_\_\_\_\_



## Requirements for OSHA 10 Compliance

Article 8 §220-h requires that when the advertised specifications, for every contract for public work, is \$250,000.00 or more the contract must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training "prior to the performing any work on the project."

### The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (*Note: Completion cards do not have an expiration date.*)
- Training roster, attendance record or other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

\*\*A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-457-5589.

## WICKS

Public work projects are subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work, when the total project's threshold is \$3 million in Bronx, Kings, New York, Queens and, Richmond counties; \$1.5 million in Nassau, Suffolk and Westchester counties; and \$500,000 in all other counties.

For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or the use of a Project Labor Agreement (PLA), and must be open to public inspection.

Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.

Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

Contractors must pay subcontractors within a 7 days period.

(07.19)

## Introduction to the Prevailing Rate Schedule

### Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

#### Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

#### Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

#### Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

#### Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

#### Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

#### Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website ([www.labor.ny.gov](http://www.labor.ny.gov)) for current wage rate information.

#### Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor  
Bureau of Public Work  
State Office Campus, Bldg. 12  
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

## Essex County General Construction

### Boilermaker

03/01/2021

**JOB DESCRIPTION** Boilermaker

**DISTRICT** 1

#### ENTIRE COUNTIES

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

#### WAGES

Per hour

07/01/2020

Boilermaker

\$ 38.59

#### SUPPLEMENTAL BENEFITS

Per hour

07/01/2020

Journeyman

\$ 24.81

+ 1.24\*

\* This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

#### OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

#### REGISTERED APPRENTICES

Wages per hour

( 1/2 ) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour

07/01/2020

1st	2nd	3rd	4th	5th	6th	7th	8th
18.60	18.60	19.50	20.37	21.26	22.15	23.04	23.92
+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*	+1.24*

\* This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

1-197

### Carpenter - Building

03/01/2021

**JOB DESCRIPTION** Carpenter - Building

**DISTRICT** 2

#### ENTIRE COUNTIES

Clinton, Essex, Franklin

#### WAGES

Per hour:

07/01/2020

Carpenter	\$ 27.57
Floor Coverer	27.57
Carpet Layer	27.57
Dry-Wall	27.57
Diver-Wet Day	61.25
Diver-Dry Day	28.57
Diver Tender	28.57

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- Pile Drivers/Dock Builders shall receive \$0.25 per hour over the journeyman's rate of pay when performing piling/dock building work.



- Certified welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work
- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):
  - 0' to 80' no additional fee
  - 81' to 100' additional \$.50 per foot
  - 101' to 150' additional \$0.75 per foot
  - 151' and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):
  - 0' to 50' no additional fee
  - 51' to 100' additional \$.75 per foot
  - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

### **SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 21.49

### **OVERTIME PAY**

See (B, E, \*E2, Q) on OVERTIME PAGE

\* Note - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

### **HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

### **REGISTERED APPRENTICES**

ALL APPRENTICES indentured prior to 01/01/2016

Wages per hour (One year terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour:

\$ 11.71	\$ 11.71	\$ 14.31	\$ 14.31
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CARPENTER APPRENTICES indentured after 01/01/2016

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th	5th
50%	60%	65%	70%	80%

Supplemental Benefits per hour:

\$ 11.71	\$ 11.71	\$ 14.31	\$ 14.31	\$ 14.31
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PILEDRIIVER/DOCK BUILDER APPRENTICES indentured after 01/01/2016

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
50%*	60%*	70%*	80%*

\*Pile Driver/Dock Builder apprentices shall receive an additional \$0.25 per hour worked when performing piledriving/dock building work.

Supplemental Benefits per hour:

\$ 11.71	\$ 11.71	\$ 14.31	\$ 14.31
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LINOLEUM, RESILIENT TILE, AND CARPET LAYER APPRENTICES indentured after 01/01/2016

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour:

\$ 11.71	\$ 11.71	\$ 14.31	\$ 14.31
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ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- Certified welders shall receive \$1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work
- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus \$1.50 per hour.

2-291B-Cli

**Carpenter - Building / Heavy&Highway**

**03/01/2021**

**JOB DESCRIPTION** Carpenter - Building / Heavy&Highway

**DISTRICT 2**

**ENTIRE COUNTIES**

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

**PARTIAL COUNTIES**

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing west to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

**WAGES**

Wages per hour:	07/01/2020	07/01/2021
		Additional
Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface	\$ 31.48	\$ 1.15

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 23.65

**OVERTIME PAY**

See (B, E, Q, X) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5) on HOLIDAY PAGE  
Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

**REGISTERED APPRENTICES**

Wages per hour:

One year terms at the following percentage of Journeyman's wage:

1st	2nd	3rd	4th
55%	60%	70%	80%

Supplemental Benefits per hour:

1st year term	\$ 11.80
2nd year term	11.80
3rd year term	14.45
4th year term	14.45

2-42AtSS

**Carpenter - Heavy&Highway**

**03/01/2021**

**JOB DESCRIPTION** Carpenter - Heavy&Highway

**DISTRICT 2**

**ENTIRE COUNTIES**

Albany, Clinton, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour	07/01/2020	07/01/2021
		Additional
Carpenter	\$ 33.82	\$ 1.40

Piledriver	33.82	1.40
Diver-Wet Day	58.82	1.40
Diver-Dry Day	34.82	1.40
Diver-Tender	34.82	1.40

**NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):**

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.
- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.

**ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:**

- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- All crew members aboard a submersible shall receive the Diver-Wet Day rate.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):
  - 0' to 50' no additional fee
  - 51'to 100' additional \$.50 per foot
  - 101'to 150' additional \$.75 per foot
  - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):
  - 0' to 50' no additional fee
  - 51' to 100' additional \$.75 per foot
  - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 23.10

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday. Employee must work scheduled work day before and after the Holiday.

**REGISTERED APPRENTICES**

ALL APPRENTICES indentured prior to 01/01/2016

Wages per hour (One year terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
55%	60%	70%	80%

Supplemental Benefits per hour:

\$ 11.67	\$ 11.67	\$ 14.27	\$ 14.27
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CAPRENTER APPRENTICES indentured after 01/01/2016

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th	5th
55%	60%	65%	70%	80%

Supplemental Benefits per hour:

\$ 11.67	\$ 11.67	\$ 14.27	\$ 14.27	\$ 14.27
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PILEDRIIVER/DOCKBUILDER APPRENTICES indentured after 01/01/2016

Wages per hour (1300 hour terms at the following percentage of journeyman's base wage):

1st	2nd	3rd	4th
55%	60%	70%	80%

Supplemental Benefits per hour:

\$ 11.67	\$ 11.67	\$ 14.27	\$ 14.27
----------	----------	----------	----------

**NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:**

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.
- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.

2-291HH-Alb

**Electrician**

**03/01/2021**

**JOB DESCRIPTION** Electrician

**DISTRICT 6**

**ENTIRE COUNTIES**

Clinton, Essex, Franklin, Jefferson, Lewis, St. Lawrence

**WAGES**

Per hour:	07/01/2020	04/01/2021 Additional	04/01/2022 Additional
Electrician	\$ 36.00	\$ 1.60	\$ 1.65
Teledata	36.00		
Welder	38.00		

NOTE: Additional premiums for the following work listed:

- Additional \$1.50 per hour for work performed underground such as tunnels and mine shafts. Excludes manholes and walkway tunnels between buildings.
- Additional \$1.50 per hour for working 35 feet or more on scaffolds, ladders, towers, steeples, structural steel, or mechanical lifts over 65 feet.

Shift Work: The following rates will apply on all Contracting Agency mandated shifts worked between the hours listed below. The employer may be permitted to adjust the starting hours of the shift by up to two (2) hours if required by the agency. If a shift begins outside of the stated shift hours, the rate paid would be determined by what shift the majority of the hours were worked.

1st shift:	8:00 AM to 4:30 PM regular wage rate
2nd shift:	4:30 PM to 1:00 AM regular wage rate plus 17.3%
3rd shift:	12:30 AM to 9:00 AM regular wage rate plus 31.4%

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour:  
\$ 21.23  
\*plus 5.75% of  
gross wage.

\* NOTE: THE 5.75% IS BASED ON THE HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME RATE.

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

WAGES per hour: Hourly terms at the following percentage of Journeyman's wage.

	1-1000 45%	to 2000 50%	to 3500 55%	to 5000 60%	to 6500 70%	to 8000 80%
Electrician	\$16.20	\$18.00	\$19.80	\$21.60	\$25.20	\$28.80
Tunnel	\$17.70	\$19.50	\$21.30	\$23.10	\$26.70	\$30.30

SUPPLEMENTAL BENEFITS per hour:

	07/01/2020
Appr 1st & 2nd term	\$ 10.27 * plus 5.75% of gross wage
Appr All other terms	\$ 21.23 * plus 5.75% of

gross wage

\* NOTE: THE 5.75% IS BASED ON THE HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME RATE.

6-910

**Elevator Constructor**

**03/01/2021**

**JOB DESCRIPTION** Elevator Constructor

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**PARTIAL COUNTIES**

Madison: Madison Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida  
Oneida: Entire county except the towns of: Camden, Florence, and Vienna.

**WAGES**

Per hour

07/01/2020

01/01/2021

Mechanic

\$ 47.51

\$49.10

Helper

70% of Mechanic  
Wage Rate

70% of Mechanic  
Wage Rate

Four (4), ten (10) hour days may be worked for New Construction and Modernization Work at straight time during a week, Monday thru Thursday or Tuesday thru Friday.

\*\*\*Four (4), ten (10) hour days are not permitted for Contract Work/Repair Work

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour

07/01/2020

01/01/2021

Journeyman/Helper

\$ 34.765\*

\$ 35.825\*

(\*)Plus 6% of hourly rate, if less than 5 years of service. Plus 8% of hourly rate, if more than 5 years of service.

**OVERTIME PAY**

See (D, O) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

**REGISTERED APPRENTICES**

Wages per hour:

0-6 mo*	6-12 mo	2nd yr	3rd yr	4th yr
50%	55 %	65 %	70 %	80 %

(\*)Plus 6% of the hourly rate, no additional supplemental benefits.

Supplemental Benefits - per hour worked:

Same as Journeyman/Helper

1-35

**Glazier**

**03/01/2021**

**JOB DESCRIPTION** Glazier

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour

	07/01/2020	5/01/2021 Additional
Glazier Base Wage	\$ 30.75	\$ 1.75
	+ additional \$2.20 per hour for all hours worked	
High Work Base Wage*	32.65	
	+ additional \$3.55 per hour for all hours worked	

(\*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.  
NOTE - In order to use the 4 Day/10 Hour Work schedule, as your normal schedule, you must submit an Employer Registration for Use of 4 Day/10 Hour Work Schedule, form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

#### SUPPLEMENTAL BENEFITS

Per hour

Journeyman	\$ 20.21
Journeyman	
High Work	25.51

#### OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

Premium is applied to the respective base wage only.

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT WORK OR SINGLE IRREGULAR SHIFTS STARTING BETWEEN THE HOURS LISTED BELOW:

4:00pm to 6:30am:	ADDITIONAL 12.5% TO APPLICABLE WAGE RATE AND SUPPLEMENTAL BENEFIT**
-------------------	--

\*\*SHIFT RATE STOPS AFTER 6:30AM

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

#### REGISTERED APPRENTICES

Wages per hour

Apprentice Glazier One Year and 1500 hr. terms at the following percentage of Journeymans base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$2.20 per hour for all hours worked for all terms			

Apprentice Glazier Hi-Work One Year and 1500 hr. terms at the following percentage of Journeymans Hi-Work base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$3.55 per hour for all hours worked for all terms			

Supplemental Benefits per hour worked

Apprentice	
1st term	\$ 16.54
2nd-4th term	20.21
Apprentice High Work	
1st term	19.49
2nd-4th term	25.51

1-201

#### Insulator - Heat & Frost

03/01/2021

**JOB DESCRIPTION** Insulator - Heat & Frost  
**ENTIRE COUNTIES**

**DISTRICT 1**

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

### WAGES

Wages per hour 07/01/2020

Asbestos Worker*	\$ 36.36
Insulator*	36.36
Firestopping Worker*	30.91

(\*)On Mechanical Systems only.

On government mandated shift work additional 12% of wage for all shifts starting after 3:30 P.M.

### SUPPLEMENTAL BENEFITS

Per hour

Journey person \$ 22.78

### OVERTIME PAY

See (\*B1, \*\*Q) on OVERTIME PAGE

\*B1=Double time begins after 10 hours on Saturday

\*\*Q=Triple time on Labor Day if worked.

### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

### REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journey person's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices \$ 22.78

1-40

### Ironworker

03/01/2021

**JOB DESCRIPTION** Ironworker

**DISTRICT 1**

### ENTIRE COUNTIES

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

### PARTIAL COUNTIES

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Perth, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otego, Oneonta, Laurens, Millford, Maryland and Worcester.

### WAGES

Wages 07/01/2020  
Per hour

Ornamental	\$ 32.10
Reinforcing	32.10
Rodman	32.10
Structural & Precast	32.10
Mover/Rigger	32.10
Fence Erector	32.10
Stone Derrickman	32.10
Sheeter	32.35
Curtain Wall Installer	32.10
Metal Window Installer	32.10

### SUPPLEMENTAL BENEFITS

Per hour

JOURNEYPerson \$ 29.51

## OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

## REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

	07/01/2020
1st year	\$ 16.50
2nd year	18.50
3rd year	20.50
4th year	22.50
Supplemental Benefits per hour worked	
1st year	\$ 11.50
2nd year	22.92
3rd year	24.54
4th year	26.18

1-12

## Laborer - Building

03/01/2021

**JOB DESCRIPTION** Laborer - Building

**DISTRICT 7**

## ENTIRE COUNTIES

Clinton, Essex, Warren

## WAGES

GROUP A: All Laborers (except as noted)

GROUP B: Asbestos & Hazardous Waste Work.

GROUP C: Solar/Wind projects\*

Per hour:	07/01/2020	07/01/2021 Additional	07/01/2022 Additional	07/01/2023 Additional
Group A	\$ 24.73	\$ 1.10	\$ 1.15	\$ 1.25
Group B	26.23	1.10	1.15	1.25
Group C	25.23	1.10	1.15	1.25

\* Applies when performing delivery handling and site readiness for all solar panel and wind turbine projects, whether on land or water.

**IMPORTANT NOTE:** Wage and supplement rates for the operation of forklift and skid steer may be found under the classification "Operating Engineer".

## SUPPLEMENTAL BENEFITS

Per hour:

Journeymen \$ 23.09

## OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

## REGISTERED APPRENTICES

WAGES per hour:

Terms are at the following percentage of Group Rate A.

0-1,000 Hrs	1,001-2,000 Hrs	2,001-3,000 Hrs	3,001-4,000 Hrs
60%	70%	80%	90%

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journeyman

7-1822ew



**Laborer - Heavy&Highway**

**03/01/2021**

**JOB DESCRIPTION** Laborer - Heavy&Highway

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Warren

**WAGES**

GROUP A: Drill Helper, Flagmen, Outboard and Hand Boats.

GROUP B: BASIC RATE: Bull Float (where used for strike off only), Chain Saw, Concrete Aggregate Bin, Concrete Bootman, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of All Steel Mesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Water Pump Operator (1-1/2" and Single Diaphragm) Nozzle (Asphalt, Guniting, Seeding, and Sand Blasting), Laborers on Chain Link Fence Erection, Rock Splitter & Power Unit, Pusher Type Concrete Saw and All Other Gas, Electric, Oil, and Air Tool Operators, Wrecking Laborer.

GROUP C: Drilling Equipment - only where a separate air compressor unit supplies power, Acetylene Torch Operators, Asphalt Raker, Powder Man, Tail or Screw Operator on Asphalt Paver.

GROUP D: Blasters, Form Setters, Stone or Granite Curb Setters.

GROUP E: Hazardous Waste Removal Work when designated by State/Federal as hazardous waste site and regulations require employees wear required personal protection.

Per hour:	07/01/2020	07/01/2021
		Additional
GROUP A	\$ 26.67	\$ 1.60
GROUP B	26.87	1.60
GROUP C	27.07	1.60
GROUP D	27.27	1.60
GROUP E	29.37	1.60

NOTE: A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional \$2.50 per hour.

IMPORTANT NOTE: Wage and supplement rates for the operation of forklift and skid steer may be found under the classification "Operating Engineer".

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 25.85

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on Sunday, it will be celebrated on Monday. In the event that men work on this Sunday holiday, they shall be paid double time. In the event that men work on Monday, they shall be compensated at double time plus the holiday pay. Accordingly, the Monday following the Sunday is treated as the holiday.

**REGISTERED APPRENTICES**

WAGES: 1000 hour terms at the following percentage of Journeyman's GROUP B wage.

1st	2nd	3rd	4th
60%	70%	80%	90%

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journeyman

7-1822/2h

**Laborer - Tunnel**

**03/01/2021**

**JOB DESCRIPTION** Laborer - Tunnel

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Warren

**WAGES**

There shall be a twelve (12) month carryover from the bid date of the posted proposal wage and fringe benefit rates. However, if the project documents contain multiyear wage rate schedules, the Employer shall be obligated to pay the wage rates therein as they become effective.

**GROUP A: General Laborer**

**GROUP B:** Change Houseman, Miners and all Machine Men, Safety Miner, all Shaft-work, Caisson work, Drilling, Blow Pipe, all Air Tools, Tugger, Scaling, Nipper, Guniting pot to nozzle, Bit Grinder, Signal Man (top and bottom), Concrete Men, Shield driven tunnels, mixed face and soft ground, liner plate tunnels in free air.

**GROUP C:** Hazardous/Waste Work. Work site required to be designated by State/Federal as hazardous waste site and relevant regulations require employees to use personal protection.

Per hour:	07/01/2020	07/01/2021 Additional
GROUP A	\$ 29.85	\$ 1.60
GROUP B	30.05	1.60
GROUP C	32.35	1.60

NOTE: A single irregular work shift shall be paid an additional \$2.50 per hour.

**IMPORTANT NOTE:** Wage and supplement rates for the operation of forklift and skid steer may be found under the classification "Operating Engineer".

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 25.85

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on Saturday, it will be celebrated on Friday. If a holiday falls on Sunday, it will be celebrated on Monday. In the event that men work on this Sunday holiday, they shall be paid double time. In the event that men work on Monday, they shall be compensated at double time plus the holiday pay. Accordingly, the Monday following the Sunday is treated as the holiday.

**REGISTERED APPRENTICES**

WAGES per hour:

Terms are at the following percentage of GROUP B rate.

0-1000 Hrs	1001-2000 Hrs	2001-3000 Hrs	3001-4000 Hrs
60%	70%	80%	90%

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journeyman

7-1822T

**Lineman Electrician**

**03/01/2021**

**JOB DESCRIPTION** Lineman Electrician

**DISTRICT 6**

**ENTIRE COUNTIES**

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

**WAGES**

Per hour:

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (Ref #14.01.01)

07/01/2020

Lineman, Technician \$ 53.50

Crane, Crawler Backhoe	53.50
Welder, Cable Splicer	53.50
Digging Mach. Operator	48.15
Tractor Trailer Driver	45.48
Groundman, Truck Driver	42.80
Equipment Mechanic	42.80
Flagman	32.10

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

Lineman, Technician	\$ 53.50
Crane, Crawler Backhoe	53.50
Cable Splicer	58.85
Certified Welder - Pipe Type Cable	56.18
Digging Mach. Operator	48.15
Tractor Trailer Driver	45.48
Groundman, Truck Driver	42.80
Equipment Mechanic	42.80
Flagman	32.10

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

Lineman, Tech, Welder	\$ 54.82
Crane, Crawler Backhoe	54.82
Cable Splicer	60.30
Certified Welder - Pipe Type Cable	57.56
Digging Mach. Operator	49.34
Tractor Trailer Driver	46.60
Groundman, Truck Driver	43.86
Equipment Mechanic	43.86
Flagman	32.89

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

Lineman, Tech, Welder	\$ 56.01
Crane, Crawler Backhoe	56.01
Cable Splicer	56.01
Digging Mach. Operator	50.41
Tractor Trailer Driver	47.61
Groundman, Truck Driver	44.81
Equipment Mechanic	44.81
Flagman	33.61

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM to 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3RD SHIFT	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

### SUPPLEMENTAL BENEFITS

Per hour worked (also required on non-worked holidays):

The following SUPPLEMENTAL BENEFITS apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

Journeyman \$ 24.90  
\*plus 6.75% of  
hourly wage

\*The 6.75% is based on the hourly wage paid, straight time rate or premium rate.

### OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. \*Note\* Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

### HOLIDAY

Paid See ( 5, 6, 8, 13, 25 ) on HOLIDAY PAGE plus Governor of NYS Election Day.  
Overtime See ( 5, 6, 8, 13, 25 ) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

### REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyman Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyman

6-1249a

### Lineman Electrician - Teledata

03/01/2021

### JOB DESCRIPTION Lineman Electrician - Teledata

### DISTRICT 6

#### ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

#### WAGES

Per hour:

For outside work, stopping at first point of attachment (demarcation).

	07/01/2020	01/01/2021
Cable Splicer	\$ 33.77	\$ 34.78
Installer, Repairman	\$ 32.05	\$ 33.01
Teledata Lineman	\$ 32.05	\$ 33.01
Tech., Equip. Operator	\$ 32.05	\$ 33.01
Groundman	\$ 16.99	\$ 17.50

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED:

1ST SHIFT	REGULAR RATE
2ND SHIFT	REGULAR RATE PLUS 10%
3RD SHIFT	REGULAR RATE PLUS 15%

## SUPPLEMENTAL BENEFITS

Per hour:

Journeyman

\$ 5.06  
\*plus 3% of  
wage paid

\$ 5.06  
\*plus 3% of  
wage paid

\*The 3% is based on the hourly wage paid, straight time rate or premium rate.

## OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked.

Contractor is still responsible to pay the hourly benefit amount for each hour worked.

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

## Lineman Electrician - Traffic Signal, Lighting

03/01/2021

**JOB DESCRIPTION** Lineman Electrician - Traffic Signal, Lighting

**DISTRICT 6**

## ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

## WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/Groundman Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/groundman truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

(Ref #14.01.01)

Per hour: 07/01/2020

Lineman, Technician	\$ 46.20
Crane, Crawler Backhoe	46.20
Certified Welder	48.51
Digging Machine	41.58
Tractor Trailer Driver	39.27
Groundman, Truck Driver	36.96
Equipment Mechanic	36.96
Flagman	27.72

Above rates are applicable for installation, testing, operation, maintenance and repair on all Traffic Control (Signal) and Illumination (Lighting) projects, Traffic Monitoring Systems, and Road Weather Information Systems. Includes digging of holes for poles, anchors, footer foundations for electrical equipment; assembly of all electrical materials or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM	REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM	REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM	REGULAR RATE PLUS 31.4%

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

### SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman \$ 24.90  
\*plus 6.75% of  
hourly wage

\*The 6.75% is based on the hourly wage paid, straight time rate or premium rate.  
Supplements paid at STRAIGHT TIME rate for holidays.

### OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. \*Note\* Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked.  
Contractor is still responsible to pay the hourly benefit amount for each hour worked.

### HOLIDAY

Paid: See ( 5, 6, 8, 13, 25 ) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime: See ( 5, 6, 8, 13, 25 ) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

### REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms.

	07/01/2020
1st term	\$ 27.72
2nd term	30.03
3rd term	32.34
4th term	34.65
5th term	36.96
6th term	39.27
7th term	41.58

SUPPLEMENTAL BENEFITS per hour: Same as Journeyman

6-1249a-LT

### Lineman Electrician - Tree Trimmer

03/01/2021

**JOB DESCRIPTION** Lineman Electrician - Tree Trimmer

**DISTRICT** 6

### ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

### WAGES

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

Per hour:	07/01/2020	01/03/21	01/02/22	01/01/23
Tree Trimmer	\$ 26.56	\$ 27.36	\$ 28.25	\$ 29.59
Equipment Operator	23.49	24.19	24.98	26.17
Equipment Mechanic	23.49	24.19	24.98	26.17
Truck Driver	19.56	20.15	20.80	21.79
Groundman	16.11	16.59	17.13	17.94
Flag person	11.80	12.50*	12.50	12.94

\*RATE GOES INTO EFFECT 12/31/2020

### SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

Journeyman \$ 9.98 \$ 9.98 \$ 10.23 \$ 10.48  
\*plus 3% of \*plus 3% of \*plus 3% of \*plus 3% of

hourly wage

hourly wage

hourly wage

hourly wage

\* The 3% is based on the hourly wage paid, straight time rate or premium rate.

#### OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked.

Contractor is still responsible to pay the hourly benefit amount for each hour worked.

#### HOLIDAY

Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday.

All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

### Mason - Building

03/01/2021

#### JOB DESCRIPTION Mason - Building

DISTRICT 12

#### ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

#### WAGES

Per hour 07/01/2020

Tile/Marble/Terrazzo

Setter \$ 36.06

Finisher 28.16

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

#### SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter \$ 20.78

Journeyman Finisher 17.93

#### OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

#### REGISTERED APPRENTICES

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

Setter:

1st term 0-500 hrs 60%

2nd term 501-1500 hrs 70%

3rd term 1501-2500 hrs 80%

4th term 2501-3500 hrs 85%

5th term 3501-4500 hrs 90%

6th term 4501-6000 hrs 95%

Finisher:

1st term 0-500 hrs 70%

2nd term 501-1500 hrs 80%

3rd term 1501-2500 hrs 90%

4th term 2501-3700 hrs 95%

Supplemental Benefits per hour worked

07/01/2020

Setter:

1st term 0-500 hrs	\$ 12.23
2nd term 501-1500 hrs	12.23
3rd term 1501-2500 hrs	16.51
4th term 2501-3500 hrs	16.51
5th term 3501-4500 hrs	18.64
6th term 4501-6000 hrs	20.78

Finisher:

1st term 0-500 hrs	\$ 11.58
2nd term 501-1500 hrs	11.58
3rd term 1501-2500 hrs	14.76
4th term 2501-3700 hrs	14.76

12-2TS.1

**Mason - Building**

**03/01/2021**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 12

**ENTIRE COUNTIES**

Clinton, Essex, Franklin

**PARTIAL COUNTIES**

Warren: Only the Townships of Chester, Hague, Horicon and Johnsburg.

**WAGES**

Per hour 07/01/2020

Bricklayer	\$ 33.50
Cement Finisher	33.50
Plasterer/Fireproofers*	33.50
Pointer/Caulker/Cleaner	33.50
Stone Mason	33.50
Acid Brick	34.00

(\*)Fireproofers on Structural only.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman	\$ 20.41
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**OVERTIME PAY**

See (B, E, E2, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

**REGISTERED APPRENTICES**

Wages per hour

750 hr terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0-500 Hours	\$ 12.46
All others	\$ 20.41

12-2b.8

**Mason - Heavy&Highway**

**03/01/2021**

**JOB DESCRIPTION** Mason - Heavy&Highway

**DISTRICT** 12



## ENTIRE COUNTIES

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

## PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on.

## WAGES

Per hour

07/01/2020

Mason &  
Bricklayer

\$38.95

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

## SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman

\$ 20.79

## OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

## REGISTERED APPRENTICES

Wages per hour

750 HR TERMS at the following percent of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

\$ 20.79

12-2hh.1

## Millwright

03/01/2021

**JOB DESCRIPTION** Millwright

**DISTRICT** 2

## ENTIRE COUNTIES

Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, Oneida, Onondaga, Oswego, St. Lawrence, Warren, Washington

## WAGES

Per hour:

07/01/2020

Building  
Heavy & Highway

\$ 29.25  
31.25

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

- Certified Welders shall receive \$1.75 per hour in addition to the current Millwrights rate provided he/she is directed to perform certified welding.
- For Building work if a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.50 premium per hour for Building work.
- For Heavy & Highway work if the work is performed at a State or Federally designated hazardous waste site where employees are required to wear protective gear, the employees performing the work shall receive an additional \$2.00 per hour over the millwright heavy and highway wage rate for all hours worked on the day protective gear was worn.
- An employee performing the work of a machinist shall receive \$2.00 per hour in addition to the current Millwrights rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.
- When performing work underground at 500 feet and below, the employee shall receive an additional \$1.00.

## SUPPLEMENTAL BENEFITS

Per hour:

Journeyman

\$ 23.89

## OVERTIME PAY

See (B, E, \*E2, Q) on OVERTIME PAGE

\*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

## REGISTERED APPRENTICES

Wages per hour:

(1)year terms at the following percentage of journeymans rate.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour:

Apprentices:

1st term	\$ 11.00
2nd term	20.02
3rd term	21.31
4th term	22.60

2-1163.2

## Operating Engineer - Building

03/01/2021

**JOB DESCRIPTION** Operating Engineer - Building

**DISTRICT** 1

### ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

### PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

### WAGES

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks, whirllies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacuum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, belcrete power pack (belcrete system), seeding, and mulching machines, pumps.

\* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

	07/01/2020	07/01/2021
Class # A1	\$ 45.67	46.71

Class # A	45.18	46.22
Class # B	44.16	45.20
Class # C	41.26	42.30

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.25 per hr for Cranes with Boom length & jib 150ft. and over.

Additional \$2.25 per hr for Cranes with Boom length & jib 200ft. and over.

Additional \$2.50 per hr over B rate for Nuclear Leader work.

Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.

Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

#### SUPPLEMENTAL BENEFITS

Per hour

07/01/2020	07/01/2021
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Journeyman	\$ 28.25	29.40
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#### OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.

Employees who work a Saturday holiday shall be paid double time plus 8 hours of straight time.

#### REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyperson's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

07/01/2020	07/01/2021
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All terms	\$ 23.55	24.70
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1-158 Alb

#### Operating Engineer - Heavy&Highway

03/01/2021

**JOB DESCRIPTION** Operating Engineer - Heavy&Highway

**DISTRICT 1**

#### ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

#### PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

#### WAGES

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, GPS operated Bull Dozer, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Brokk, Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mini Excavator (under 18,000 lbs.), Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Prentice Loader, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder

#### CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), Boiler (used in conjunction with production), Bituminous Heater (self-propelled), Boat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16' and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunit Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinus Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

#### WAGES per hour

	07/01/2020	07/01/2021
Master Mechanic	\$ 47.88	\$ 49.43
Class A*	46.27	47.82
Class B	45.36	46.91
Class C	42.79	44.34

Additional \$2.50 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(\*) Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.
- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.
- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

#### SUPPLEMENTAL BENEFITS

Per hour

Journey person	\$ 28.45	\$ 29.60
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#### OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the Holiday falls on a Saturday employer can choose to celebrate Saturday or give Friday off with pay.

#### REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journey person's wage Class B

1st 60%	2nd 70%	3rd 80%	4th 90%
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Supplemental Benefits per hour worked

	07/01/2020	07/01/2021
All Terms	\$ 23.85	\$ 25.00

1-158H/H Alb

<b>Operating Engineer - Marine Dredging</b>	<b>03/01/2021</b>
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**JOB DESCRIPTION** Operating Engineer - Marine Dredging

**DISTRICT 4**

**ENTIRE COUNTIES**

Albany, Bronx, Cayuga, Chautauqua, Clinton, Columbia, Dutchess, Erie, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Niagara, Orange, Orleans, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

**WAGES**

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour:	07/01/2020	10/01/2020
CLASS A1 Deck Captain, Leverman Mechanical Dredge Operator Licensed Tug Operator 1000HP or more.	\$ 40.31	\$ 41.42
CLASS A2 Crane Operator (360 swing)	35.92	36.91
CLASS B Dozer, Front Loader Operator on Land	To conform to Operating Engineer Prevailing Wage in locality where work is being performed including benefits.	
CLASS B1 Derrick Operator (180 swing) Spider/Spill Barge Operator Operator II, Fill Placer, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer Licensed Boat, Crew Boat Operator	34.86	35.82
CLASS B2 Certified Welder	32.82	33.72
CLASS C1 Drag Barge Operator, Steward, Mate, Assistant Fill Placer	31.92	32.80
CLASS C2 Boat Operator	30.89	31.74
CLASS D Shoreman, Deckhand, Oiler, Rodman, Scowman, Cook, Messman, Porter/Janitor	25.66	26.37

**SUPPLEMENTAL BENEFITS**

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

	07/01/2020	10/01/2020
All Classes A & B	\$11.58 plus 7.5% of straight time wage, Overtime hours	\$11.98 plus 8% of straight time wage, Overtime hours

	add \$ 0.63	add \$ 0.63
All Class C	\$11.28 plus 7.5% of straight time wage, Overtime hours add \$ 0.48	11.68 plus 8% of straight time wage, Overtime hours add \$ 0.48
All Class D	\$10.98 plus 7.5% of straight time wage, Overtime hours add \$ 0.33	11.38 plus 8% of straight time wage, Overtime hours add \$ 0.33

#### OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

### Operating Engineer - Survey Crew

03/01/2021

**JOB DESCRIPTION** Operating Engineer - Survey Crew

**DISTRICT** 12

#### ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

#### PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

#### WAGES

These rates apply to Building, Tunnel and Heavy Highway.

Per hour:

#### SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who operates the surveying instruments.

Rod Person - One who holds the rods and assists the Instrument Person.

07/01/2020

Party Chief	\$ 44.39
Instrument Person	40.78
Rod Person	30.22

Additional \$3.00/hr. for Tunnel Work

Additional \$2.50/hr. for Hazardous Work Site

#### SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 26.30
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#### OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE

#### REGISTERED APPRENTICES

WAGES: 1000 hour terms based on the Percentage of Rod Persons Wage:

07/01/2020

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 18.08
1001-2000	21.10
2001-3000	24.13

12-158-545 D.H.H.

**Operating Engineer - Survey Crew - Consulting Engineer**

**03/01/2021**

**JOB DESCRIPTION** Operating Engineer - Survey Crew - Consulting Engineer

**DISTRICT** 12

**ENTIRE COUNTIES**

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schoenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

**PARTIAL COUNTIES**

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

**WAGES**

These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour:

**SURVEY CLASSIFICATIONS:**

Party Chief - One who directs a survey party.

Instrument Person - One who operates the surveying instruments.

Rod Person - One who holds the rods and assists the Instrument Person.

07/01/2020

Party Chief	\$ 44.39
Instrument Person	40.78
Rod Person	30.22

Additional \$3.00/hr. for Tunnel Work.

Additional \$2.50/hr. for EPA or DEC certified toxic or hazardous waste work.

**SUPPLEMENTAL BENEFITS**

Per hour worked:

Journeyman	\$ 26.30
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**OVERTIME PAY**

See (B, E, P, T) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

WAGES: 1000 hour terms based on percentage of Rod Persons Wage:

07/01/2020

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 18.08
1001-2000	\$ 21.10
2001-3000	\$ 24.13

12-158-545 DCE

**Operating Engineer - Tunnel**

**03/01/2021**

**JOB DESCRIPTION** Operating Engineer - Tunnel

**DISTRICT** 7

**ENTIRE COUNTIES**

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

## PARTIAL COUNTIES

Dutchess: Northern part of Dutchess, to the northern boundary line of the City of Poughkeepie, then due east to Route 115 to Bedell Road, then east along Bedell Road to VanWagner Road, then north along VanWagner Road to Bower Road, then east along Bower Road to Rte. 44 east to Rte. 343, then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains, to the borderline of the State of Connecticut.

Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98 and the entirety of the City of Batavia.

## WAGES

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (automated); Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Concrete Curb Machine (self-propelled slipform); Concrete Pump (8" or over); Dredge; Dual Drum Paver; Excavator; Front End Loader (4 cu. yd & over); Gradall; Head Tower (Sauerman or Equal); Hoist (shaft); Hoist (two or three Drum); Log Chipper/Loader (self-feeder); Maintenance Engineer (shaft and tunnel); any Mechanical Shaft Drill; Mine Hoist; Mining Machine (Mole and similar types); Mucking Machine or Mole; Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Machine; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, they shall be an Oiler); Tripper/Maintenance Engineer (shaft & tunnel); Tractor Drawn Belt-Type Loader; Tug Operator (manned rented equipment excluded); Tunnel Shovel

CLASS B: Automated Central Mix Concrete Plant; Backhoe (topside); Backhoe (track mounted, rubber tired); Backhoe (topside); Bituminous Spreader and Mixer, Blacktop Plant (non-automated); Blast or Rotary Drill (truck or tractor mounted); Boring Machine; Cage Hoist; Central Mix Plant (non-automated); all Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (tractor mounted); Front End Loader (under 4 cu. yd.); Grayco Epoxy Machine; Hoist (One Drum); Hoist (2 or 3 drum topside); Knuckle Boom material handler; Kolman Plant Loader & similar type Loaders (if employer requires another person to clean the screen or to maintain the equipment, they shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maintenance Engineer (topside); Maintenance Grease Man; Mixer (for stabilized base-self propelled); Monorail Machine; Plant Engineer; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Machine; Shovel (topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Welder; Winch; Winch Cat

CLASS C: A Frame Truck; All Terrain Telescoping Material Handler; Ballast Regulator (ride-on); Compressors (4 not to exceed 2,000 c.f.m. combined capacity; or 3 or less with more than 1200 c.f.m. but not to exceed 2,000 c.f.m.); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (4 or any type combination)); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill (well); Electric Pump used in conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; Fork Lift; Grout Pump (over 5 cu. ft.); Gunite Machine; Hammers (hydraulic-self-propelled); Hydra-Spiker (ride-on); Hydra-Blaster (water); Hydro-Blaster; Motorized Form Carrier; Post Hole Digger and Post Driver; Power Sweeper; Roller grade & fill); Scarifer (ride-on); Span-Saw (ride-on); Submersible Electric Pump (when used in lieu of well points); Tamper (ride-on); Tie-Extractor (ride-on), Tie Handler (ride-on), Tie Insertor (ride-on), Tie Spacer (ride-on); Track Liner (ride-on); Tractor with towed accessories; Vibratory Compactor; Vibro Tamp, Well Point

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors (3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (3 or less or any type or combination)); Concrete Saw (self-propelled); Form Tamper; Greaseman; Hydraulic Pump (jacking system); Junior Engineer; Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broom (towed); Power Heaterman (when used for production); Revinius Widener; Shell Winder; Steam Cleaner; Tractor

Per hour:	07/01/2020	07/01/2021	07/01/2022
Master Mechanic	\$ 49.45	\$ 51.00	\$ 52.60
CLASS A	47.04	48.59	50.19
CLASS B	45.82	47.37	48.97
CLASS C	43.03	44.58	46.18
CLASS D	40.02	41.57	43.17

Additional \$5.00 per hour for Hazardous Waste Work on a state or federally designated hazardous waste site where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection. Fringe benefits will be paid at the hourly wage premium.

## CRANES:

Crane 1: All cranes, including self-erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

Crane 1	\$ 51.04	\$ 52.59	\$ 54.19
Crane 2	50.04	51.59	53.19
Crane 3	49.04	50.59	52.19



## SUPPLEMENTAL BENEFITS

Per hour:

\$ 21.90	\$ 22.80	\$ 23.70
+ 8.85*	+ 9.10*	+ 9.35*

\* This portion of benefits subject to same premium rate as shown for overtime wages.

## OVERTIME PAY

See (B, B2, E, Q, X) on OVERTIME PAGE

## HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

If a holiday falls on Sunday, it shall be observed on Monday.

## REGISTERED APPRENTICES

WAGES:(1000) hours terms at the following percentage of Journeyman's Class B wage.

1st term	60%
2nd term	65%
3rd term	70%
4th term	75%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyman

7-158-832TL.

## Painter

03/01/2021

**JOB DESCRIPTION** Painter

**DISTRICT** 1

## ENTIRE COUNTIES

Albany, Essex, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

## WAGES

Per hour

07/01/2020

Painter\Wallcover	\$ 30.49
Drywall Finishers	30.49
Spray Rate	30.49
Structural Steel*	31.49
Lead Abatement	31.49
Lead Abatement on	
Structural Steel	32.49

(\*)Employees working on objects with the use of swing stage, boatswain chair, pick and cables only will be paid at Structural Steel rate.

Bridge Painter

See Bridge Painter rates for the following work:

All Bridges and Tanks

## SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$ 16.95

## OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

THE FOLLOWING ADDITIONAL HOURLY RATE WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT(S) OR SINGULAR IRREGULAR SHIFT WHEN THE SHIFT STARTS BETWEEN THE HOURS LISTED BELOW:

2:30 PM to 6:30 AM PLUS \$1.00 TO APPLICABLE RATE\*\*

\*\*SHIFT RATE STOPS AFTER 6:30AM

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it shall be observed on Monday.

## REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyperson's base wage

1st	2nd	3rd	4th	5th	6th
45%	50%	60%	70%	80%	90%

Supplemental Benefits per hour

All Terms \$ 16.95

1-201-P

**Painter - Bridge & Structural Steel**

**03/01/2021**

**JOB DESCRIPTION** Painter - Bridge & Structural Steel

**DISTRICT** 8

**ENTIRE COUNTIES**

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

**WAGES**

Per Hour:

**STEEL:**

Bridge Painting:	07/01/2020	10/01/2020	10/01/2021
	\$ 50.25	\$ 51.50	\$ 53.00
	+ 7.88*	+ 8.63*	+ 9.63*

ADDITIONAL \$6.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

\* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

**SHIFT WORK:**

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker:	07/01/2020	10/01/2020	10/01/2021
	\$ 10.20	\$ 10.90	\$ 10.90
	+ 29.65*	+ 30.00*	+ 30.60*

\* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

**OVERTIME PAY**

See (B, F, R) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (4, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wage - Per hour:

Apprentices: (1) year terms	07/01/2020	10/01/2020	10/01/2021
1st year	\$ 20.10	\$ 20.60	\$ 21.20
	+ 3.15*	+ 3.45*	+ 3.86*

2nd year	\$ 30.15 + 4.73*	\$ 30.90 + 5.18*	\$ 31.80 + 5.78*
3rd year	\$ 40.20 + 6.30*	\$ 41.20 + 6.90*	\$ 42.40 + 7.71*
Supplemental Benefits - Per hour:			
1st year	\$ .25 + 11.86*	\$ .25 + 12.00*	\$ .25 + 12.24*
2nd year	\$ 10.20 + 17.79*	\$ 10.90 + 18.00*	\$ 10.90 + 18.36*
3rd year	\$ 10.20 + 23.72*	\$ 10.90 + 24.00*	\$ 10.90 + 24.48*

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

## Painter - Line Striping

03/01/2021

### JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

#### ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

#### WAGES

Per hour:

Painter (Striping-Highway):	07/01/2020	07/01/2021	07/01/2022
Striping-Machine Operator*	\$ 30.10	\$ 30.32	\$ 31.53
Linerman Thermoplastic	\$ 36.53	\$ 36.93	\$ 38.34

Note: \* Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

#### SUPPLEMENTAL BENEFITS

Per hour paid:	07/01/2020	07/01/2021	07/01/2022
Journeyworker:			
Striping Machine Operator:	\$ 9.16	\$ 10.03	\$ 10.03
Linerman Thermoplastic:	\$ 9.16	\$ 10.03	\$ 10.03

#### OVERTIME PAY

See (B, B2, E2, F, S) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE  
Overtime: See (5, 20) on HOLIDAY PAGE

#### REGISTERED APPRENTICES

One (1) year terms at the following wage rates:

	07/01/2020	12/31/2020
1st Term:	\$ 12.04	\$ 12.50
2nd Term:	\$ 18.06	\$ 18.19
3rd Term:	\$ 24.08	\$ 24.26

Supplemental Benefits per hour:

1st term:	\$ 9.16	\$ 10.03
2nd Term:	\$ 9.16	\$ 10.03
3rd Term:	\$ 9.16	\$ 10.03

8-1456-LS

**Painter - Metal Polisher**

**03/01/2021**

**JOB DESCRIPTION** Painter - Metal Polisher

**DISTRICT 8**

**ENTIRE COUNTIES**

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

**WAGES**

	07/01/2020
Metal Polisher	\$ 36.33
Metal Polisher*	37.43
Metal Polisher**	40.33

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

**SUPPLEMENTAL BENEFITS**

Per Hour:	07/01/2020
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Journeyworker:

All classification	\$ 9.94
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**OVERTIME PAY**

See (B, E, P, T) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2020
1st year	\$ 16.00
2nd year	17.00
3rd year	18.00
1st year*	\$ 16.39
2nd year*	17.44
3rd year*	18.54
1st year**	\$ 18.50
2nd year**	19.50
3rd year**	20.50

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 6.69
2nd year	6.69
3rd year	6.69

8-8A/28A-MP

**Plumber**

**03/01/2021**

**JOB DESCRIPTION** Plumber

**DISTRICT 1**

## ENTIRE COUNTIES

Essex

## PARTIAL COUNTIES

Franklin: Entire County except for the Village of Hogansburg and the St. Regis Indian Reservation.

Hamilton: The Townships of Long Lake and Indian Lake

## WAGES

Per hour

	07/01/2020	05/01/2021
Plumber &		Additional
Steamfitter	\$ 39.30	\$1.30

## SUPPLEMENTAL BENEFITS

Per hour

Journey person	\$ 20.85
	+10.63*

\* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime and applicable to paid Holidays.

## OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (22) on HOLIDAY PAGE

Overtime: See (5, 6, 23) on HOLIDAY PAGE

Note: For the paid Christmas Holiday the employee must have worked 20 regular working days in the calendar year with contractor to qualify

Note: Whenever a Holiday falls on a Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

## REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journey person's wage

1st yr	50%
2nd yr	60%
3rd yr	70%
4th yr	80%
5th yr	90%

Supplemental Benefits per hour worked

1st yr	\$ 17.93 + 5.32*
2nd yr	18.51 + 6.38*
3rd yr	19.10 + 7.44*
4th yr	19.68 + 8.50*
5th yr	20.27 + 9.57*

\* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

\* This portion per hour paid.

1-773EF-SF

## Roofer

03/01/2021

## JOB DESCRIPTION Roofer

## DISTRICT 1

## ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

## WAGES

Per hour

	07/01/2020	07/01/2021
Roofer/Waterproofer	\$ 32.05	Additional
Asphalt Cold Process	32.55	\$1.50
Fluid Applied Roof	32.55	
Pitch & Asbestos	34.05	

Shift Work:

On government mandated shift work starting after 12:00pm and before 4:00am workers shall be paid \$4.00 additional per hour

## SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$ 20.27

## OVERTIME PAY

See ( B, E, Q ) on OVERTIME PAGE.

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on Sunday, it shall be observed the following Monday.

## REGISTERED APPRENTICES

Wages per hour

Apprentice terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages. For Asphalt Cold Process work and Fluid Applied Roof coating, an additional \$0.50 must be paid in the wages.

1st Term 58%  
1500 hrs.

2nd Term 74%  
1 yr. and 1500 hrs. as 1st term.

3rd Term 90%  
1 yr. and 1500 hrs. as 2nd term.

3rd Term complete at 1 yr and 1050 hrs. as 3rd term

Supplemental Benefits per hour worked

1st Term \$ 18.69  
2nd Term 19.12  
3rd Term 19.60

1-241

## Sheetmetal Worker

03/01/2021

**JOB DESCRIPTION** Sheetmetal Worker

**DISTRICT** 1

## ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

## WAGES

Per hour

	07/01/2020	06/01/2021
Sheetmetal Worker	\$34.02	Additional \$ 1.75

All work requiring HAZWOPER Training additional \$1.00 per hour

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.  
NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

## SUPPLEMENTAL BENEFITS

Per hour

Journeyman \$33.94

## OVERTIME PAY

See ( B,E,E5,Q ) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

## REGISTERED APPRENTICES

Wages per hour

6 Month Terms at the following rate:

1st term	\$18.89
2nd term	\$20.48
3rd term	\$21.28
4th term	\$22.08
5th term	\$20.86
6th term	\$21.90
7th term	\$23.63
8th term	\$25.36
9th term	\$27.09
10th term	\$28.83

Supplemental Benefits per hour

1st term	\$20.91
2nd term	21.55
3rd term	21.84
4th term	22.27
5th term	28.46
6th term	28.89
7th term	29.62
8th term	30.34
9th term	31.06
10th term	31.78

1-83

**Sprinkler Fitter**

**03/01/2021**

**JOB DESCRIPTION** Sprinkler Fitter

**DISTRICT 1**

**ENTIRE COUNTIES**

Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Washington, Wayne, Wyoming, Yates

**WAGES**

Per hour	07/01/2020
Sprinkler	\$ 35.01
Fitter	

**SUPPLEMENTAL BENEFITS**

Per hour

Journey person	\$ 26.62
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**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

**REGISTERED APPRENTICES**

Wages per hour

One Half Year terms at the following percentage of journey person's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 16.94	\$ 18.82	\$ 20.44	\$ 22.31	\$ 24.18	\$ 26.05	\$ 27.92	\$ 29.79	\$ 31.67	\$ 33.54

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.27	\$ 8.27	\$ 18.70	\$ 18.70	\$ 18.95	\$ 18.95	\$ 18.95	\$ 18.95	\$ 18.95	\$ 18.95

1-669

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**Teamster - Building****03/01/2021**

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**JOB DESCRIPTION** Teamster - Building**DISTRICT 7****ENTIRE COUNTIES**

Clinton, Essex, Franklin, Jefferson, St. Lawrence

**PARTIAL COUNTIES**

Lewis: Only the Townships of Croghan, Denmark, Diana, New Bremen, Harrisburg, Montague, Osceola and Pinckney.

Oswego: Only the Towns of Boylston, Redfield, and Sandy Creek.

Warren: Only the Townships of Hague, Horicon, Chester and Johnsburg.

**WAGES**

GROUP #1: Fuel Trucks, Fork Lift\* (Warehouse Area Only), Warehouse\*, Yardman\*, Truck Helper, Pickups, Panel Truck, Flatbody Material Trucks (straight jobs), Single axle Dump Trucks, Dumpsters, Material Checkers/Receivers\*, Greasers, Tiremen, Mechanic Helpers/Parts Chasers, Bus.

GROUP #2: Tandems, Mechanics &amp; Batch Trucks.

GROUP #3: Semi Trailers, Low Boys, Asphalt Distributor Trucks, and Agitator Mixer Truck, Dump Crete Type Vehicles and 3 axle Dump trucks.

GROUP #4: Asbestos Removal, Special earth moving Euclid type or similar off highway equip. (non self load.) Articulated and all-track dump trucks.

\*NOTE - Applies when a temporary warehouse structure is built/utilized specifically for a public work project.

Per hour: 07/01/2020

GROUP #1	\$ 26.50
GROUP #2	27.50
GROUP #3	27.60
GROUP #4	26.76

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 21.16

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

7-687B

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**Teamster - Heavy&Highway****03/01/2021**

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**JOB DESCRIPTION** Teamster - Heavy&Highway**DISTRICT 7****ENTIRE COUNTIES**

Clinton, Essex, Franklin, Jefferson, St. Lawrence

**PARTIAL COUNTIES**

Lewis: Only the Townships of Croghan, Denmark, Diana, New Bremen, Harrisburg, Montague, Osceola and Pinckney.

Oswego: Only the Towns of Boylston, Redfield, and Sandy Creek.

Warren: Only the Townships of Hague, Horicon, Chester and Johnsburg.

**WAGES**

There shall be a twelve (12) month carryover of the negotiated rate in effect at the time of the bid.

GROUP #1: Warehousemen\*, Yardmen\*, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks (straight jobs), Single Axle Dump Trucks, Dumpsters, Material Checkers/Receivers\*, Greasers, Truck Tiremen, Mechanics Helpers/Parts Chasers, Fork Lift\* (Warehouse Area Only), Tandems and Batch Trucks, Mechanics. Semi-Trailers, Low-Boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and Dumpcrete type vehicles, Truck Mechanic, Fuel Truck.

GROUP #2: Specialized Earth Moving Equipment, Euclid type, or similar off-highway where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck. Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

\*NOTE - Applies when a temporary warehouse structure is built/utilized specifically for a public work project.

Per hour: 07/01/2020

GROUP #1	\$ 28.59
GROUP #2	28.81



Additional \$1.50 per hour for hazardous waste removal work on a City, County, State and/or Federal Designated waste site and regulations require employee to use or wear respiratory protection.

### SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 23.39

### OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

### HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on a Sunday, it will be celebrated on Monday.

7-687

## Welder

03/01/2021

### JOB DESCRIPTION Welder

### DISTRICT 1

### ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

### WAGES

Per hour 07/01/2020

Welder: To be paid the same rate of the mechanic performing the work.\*

\*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

### OVERTIME PAY

### HOLIDAY

1-As Per Trade

## Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- ( AA ) Time and one half of the hourly rate after 7 and one half hours per day
- ( A ) Time and one half of the hourly rate after 7 hours per day
- ( B ) Time and one half of the hourly rate after 8 hours per day
- ( B1 ) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.  
Double the hourly rate for all additional hours
- ( B2 ) Time and one half of the hourly rate after 40 hours per week
- ( C ) Double the hourly rate after 7 hours per day
- ( C1 ) Double the hourly rate after 7 and one half hours per day
- ( D ) Double the hourly rate after 8 hours per day
- ( D1 ) Double the hourly rate after 9 hours per day
- ( E ) Time and one half of the hourly rate on Saturday
- ( E1 ) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- ( E2 ) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- ( E3 ) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- ( E4 ) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- ( E5 ) Double time after 8 hours on Saturdays
- ( F ) Time and one half of the hourly rate on Saturday and Sunday
- ( G ) Time and one half of the hourly rate on Saturday and Holidays
- ( H ) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- ( I ) Time and one half of the hourly rate on Sunday
- ( J ) Time and one half of the hourly rate on Sunday and Holidays
- ( K ) Time and one half of the hourly rate on Holidays
- ( L ) Double the hourly rate on Saturday
- ( M ) Double the hourly rate on Saturday and Sunday
- ( N ) Double the hourly rate on Saturday and Holidays
- ( O ) Double the hourly rate on Saturday, Sunday, and Holidays
- ( P ) Double the hourly rate on Sunday
- ( Q ) Double the hourly rate on Sunday and Holidays
- ( R ) Double the hourly rate on Holidays
- ( S ) Two and one half times the hourly rate for Holidays

- ( S1 ) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- ( T ) Triple the hourly rate for Holidays
- ( U ) Four times the hourly rate for Holidays
- ( V ) Including benefits at SAME PREMIUM as shown for overtime
- ( W ) Time and one half for benefits on all overtime hours.
- ( X ) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

## Holiday Codes

### PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

### OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- ( 1 )        None
- ( 2 )        Labor Day
- ( 3 )        Memorial Day and Labor Day
- ( 4 )        Memorial Day and July 4th
- ( 5 )        Memorial Day, July 4th, and Labor Day
- ( 6 )        New Year's, Thanksgiving, and Christmas
- ( 7 )        Lincoln's Birthday, Washington's Birthday, and Veterans Day
- ( 8 )        Good Friday
- ( 9 )        Lincoln's Birthday
- ( 10 )       Washington's Birthday
- ( 11 )       Columbus Day
- ( 12 )       Election Day
- ( 13 )       Presidential Election Day
- ( 14 )       1/2 Day on Presidential Election Day
- ( 15 )       Veterans Day
- ( 16 )       Day after Thanksgiving
- ( 17 )       July 4th
- ( 18 )       1/2 Day before Christmas
- ( 19 )       1/2 Day before New Years
- ( 20 )       Thanksgiving
- ( 21 )       New Year's Day
- ( 22 )       Christmas
- ( 23 )       Day before Christmas
- ( 24 )       Day before New Year's
- ( 25 )       Presidents' Day
- ( 26 )       Martin Luther King, Jr. Day
- ( 27 )       Memorial Day
- ( 28 )       Easter Sunday



New York State Department of Labor - Bureau of Public Work  
State Office Building Campus  
Building 12 - Room 130  
Albany, New York 12240

**REQUEST FOR WAGE AND SUPPLEMENT INFORMATION**

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

**This Form Must Be Typed**

Submitted By:

(Check Only One)

☐

Contracting Agency

☐

Architect or Engineering Firm

☐

Public Work District Office

Date:

**A. Public Work Contract to be let by:** (Enter Data Pertaining to Contracting/Public Agency)

1. Name and complete address ☐ (Check if new or change)

Telephone: ( )

Fax: ( )

E-Mail:

2. NY State Units (see Item 5)

☐ 01 DOT

☐ 02 OGS

☐ 03 Dormitory Authority

☐ 04 State University  
Construction Fund

☐ 05 Mental Hygiene  
Facilities Corp.

☐ 06 OTHER N.Y. STATE UNIT

☐ 07 City

☐ 08 Local School District

☐ 09 Special Local District, i.e.,  
Fire, Sewer, Water District

☐ 10 Village

☐ 11 Town

☐ 12 County

☐ 13 Other Non-N.Y. State  
(Describe)

3. SEND REPLY TO ☐ (check if new or change)  
Name and complete address:

Telephone:( )

Fax: ( )

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR  
THIS PROJECT :

OFFICE USE ONLY

**B. PROJECT PARTICULARS**

5. Project Title \_\_\_\_\_

Description of Work \_\_\_\_\_

Contract Identification Number \_\_\_\_\_

Note: For NYS units, the OSC Contract No. \_\_\_\_\_

6. Location of Project:  
Location on Site \_\_\_\_\_

Route No/Street Address \_\_\_\_\_

Village or City \_\_\_\_\_

Town \_\_\_\_\_

County \_\_\_\_\_

7. Nature of Project - Check One:

- ☐ 1. New Building
- ☐ 2. Addition to Existing Structure
- ☐ 3. Heavy and Highway Construction (New and Repair)
- ☐ 4. New Sewer or Waterline
- ☐ 5. Other New Construction (Explain)
- ☐ 6. Other Reconstruction, Maintenance, Repair or Alteration
- ☐ 7. Demolition
- ☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

- ☐ Construction (Building, Heavy Highway/Sewer/Water)
- ☐ Tunnel
- ☐ Residential
- ☐ Landscape Maintenance
- ☐ Elevator maintenance
- ☐ Exterminators, Fumigators
- ☐ Fire Safety Director, NYC Only
- ☐ Guards, Watchmen
- ☐ Janitors, Porters, Cleaners, Elevator Operators
- ☐ Moving furniture and equipment
- ☐ Trash and refuse removal
- ☐ Window cleaners
- ☐ Other (Describe)

9. Has this project been reviewed for compliance with the Wicks Law involving separate bidding?

YES ☐ NO ☐

10. Name and Title of Requester

Signature





NEW YORK STATE DEPARTMENT OF LABOR  
Bureau of Public Work - Debarment List

**LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE  
AWARDED ANY PUBLIC WORK CONTRACT**

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = New York State Department of Labor; NYC = New York City Comptroller's Office; AG = New York State Attorney General's Office; DA = County District Attorney's Office.

**Debarment Database:** To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, or under NYS Workers' Compensation Law Section 141-b, access the database at this link: <https://applications.labor.ny.gov/EDList/searchPage.do>

**For inquiries where WCB is listed as the "Agency", please call 1-866-546-9322**





**NYSDOL Bureau of Public Work Debarment List 01/13/2021**

**Article 8**

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	NYC	*****9839	A.J.S. PROJECT MANAGEMENT, INC.		149 FIFTH AVENUE NEW YORK NY 10010	12/29/2016	12/29/2021
DOL	DOL	*****4018	ADIRONDACK BUILDING RESTORATION INC.		4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	AG	*****1812	ADVANCED BUILDERS & LAND DEVELOPMENT, INC.		400 OSER AVE #2300HAUPPAUGE NY 11788	09/11/2019	09/11/2024
DOL	DOL	*****1687	ADVANCED SAFETY SPRINKLER INC		261 MILL ROAD P.O BOX 296EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	NYC	*****6775	ADVENTURE MASONRY CORP.		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	NYC		AGOSTINHO TOME		405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
DOL	DOL		AJ TORCHIA		10153 ROBERTS RD SAUQUOIT NY 13456	08/09/2016	08/09/2021
DOL	DOL		AMADEO J TORCHIA	TORCHIA'S HOME IMPROVEMENT	10153 ROBERTS RD SAUQUOIT NY 13456	08/09/2016	08/09/2021
DOL	NYC		AMJAD NAZIR		2366 61ST ST BROOKLYN NY 11204	12/15/2016	12/15/2021
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL		ANITA SALERNO		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	NYC		ANTHONY J SCLAFANI		149 FIFTH AVE NEW YORK NY 10010	12/29/2016	12/29/2021
DOL	DOL		ANTHONY PERGOLA		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10323	01/23/2017	01/23/2022
DOL	DOL		ANTONIO ESTIVEZ		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		ARNOLD A. PAOLINI		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC		ARSHAD MEHMOOD		168-42 88TH AVENUE JAMAICA NY 11432	11/20/2019	11/20/2024
DOL	DOL		ARVINDER ATWAL		65 KENNETH PLACE NEW HYDE PARK NY 11040	07/19/2017	07/19/2022
DOL	NYC	*****6683	ATLAS RESTORATION CORP.		35-12 19TH AVENUE ASTORIA NY 11105	08/02/2017	08/02/2022
DOL	NYC	*****5532	ATWAL MECHANICALS, INC		65 KENNETH PLACE NEW HYDE PARK NY 11040	07/19/2017	07/19/2022
DOL	NYC	*****2591	AVI 212 INC.		260 CROPSEY AVENUE APT 11GBROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC		BALWINDER SINGH		421 HUDSON ST SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	NYC	*****3915	BEACON RESTORATION INC		SUITE B-8 782 PELHAM PARKWAY SOUTHBRONX NY 10462	04/21/2016	04/21/2021
DOL	NYC	*****8416	BEAM CONSTRUCTION, INC.		50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	DOL		BIAGIO CANTISANI			06/12/2018	06/12/2023
DOL	DOL	*****4512	BOB BRUNO EXCAVATING, INC		5 MORNINGSIDE DR AUBURN NY 13021	05/28/2019	05/28/2024
DOL	DOL		BOGDAN MARKOVSKI		370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601	02/11/2019	02/11/2024
DOL	DOL	*****8551	BRANDY'S MASONRY		216 WESTBROOK STREET P O BOX 304SAYRE PA 18840	08/09/2016	08/09/2021
DOL	DOL	*****1449	BRRESTORATION NY INC		140 ARCADIA AVENUE OSWEGO NY 13126	09/12/2016	09/12/2021
DOL	DOL		BRUCE MORSEY		C/O KENT HOLLOW SIDING LL 29A BRIDGE STREETNEW MILFORD CT 06776	01/15/2016	01/15/2021
DOL	DOL		BRUCE P. NASH JR.		5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	DOL	*****0225	C&D LAFACE CONSTRUCTION, INC.		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****8809	C.B.E. CONTRACTING CORPORATION		310 MCGUINESS BLVD GREENPOINT NY 11222	03/07/2017	03/07/2022

**NYSDOL Bureau of Public Work Debarment List     01/13/2021**

**Article 8**

DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	NYC		CALVIN WALTERS		465 EAST THIRD ST MT. VERNON NY 10550	09/09/2019	09/09/2024
DOL	DOL		CANTISANI & ASSOCIATES LTD		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CANTISANI HOLDING LLC			06/12/2018	06/12/2023
DOL	DOL		CARIBBEAN POOLS		C/O DOUGLAS L MALARKEY 64 VICTORIA DRIVEBINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL		CARMEN RACHETTA		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	02/03/2025
DOL	DOL		CARMENA RACHETTA		8531 OSWEGO ROAD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****3812	CARMODY "2" INC			06/12/2018	06/12/2023
DOL	DOL	*****1143	CARMODY BUILDING CORP	CARMODY CONTRACTING AND CARMODY CONTRACTING CORP.	442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY CONCRETE CORPORATION			06/12/2018	06/12/2023
DOL	DOL		CARMODY ENTERPRISES, LTD.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY INC		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****3812	CARMODY INDUSTRIES INC			06/12/2018	06/12/2023
DOL	DOL		CARMODY MAINTENANCE CORPORATION		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY MASONRY CORP		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****8809	CBE CONTRACTING CORP		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	AG		CESAR J. AGUDELO		81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	DOL		CHARLES ZIMMER JR		216 WESTBROOK STREET P O BOX 304SAYRE PA 18840	08/09/2016	08/09/2021
DOL	DOL		CHRISTOPHER J MAINI		19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL		CHRISTOPHER PAPASTEFANOU A/K/A CHRIS PAPASTEFANOU		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL	*****1927	CONSTRUCTION PARTS WAREHOUSE, INC.	CPW	5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	NYC	*****2164	CREATIVE TRUCKING INC		58-83 54TH STREET MASPETH NY 11378	02/26/2016	02/26/2021
DOL	DOL	*****2524	CSI ELECTRICAL & MECHANICAL INC		42-32 235TH ST DOUGLSTON NY 11363	01/14/2019	01/14/2024
DOL	DOL	*****7761	D L MALARKEY CONSTRUCTION		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	*****7888	D L MALARKEY CONSTRUCTION INC		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	*****5629	DAKA PLUMBING AND HEATING LLC		2561 ROUTE 55 POUGHQUAG NY 12570	02/19/2016	02/19/2021
DOL	NYC		DALJIT KAUR BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL		DANICA IVANOSKI		61 WILLETT ST. PASSAIC NJ 07503	10/26/2016	10/26/2021
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL		DAVID MARTINEZ		C/O EMPIRE TILE INC 6 TREMONT COURTHUNTINGTON STATION NY 11746	03/08/2016	03/08/2021
DOL	NYC		DAVID WEINER		14 NEW DROP LANE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024

**NYSDOL Bureau of Public Work Debarment List 01/13/2021**

**Article 8**

DOL	DOL		DEBBIE STURDEVANT		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	AG		DEBRA MARTINEZ		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL		DEDA GAZIVODAN		C/O DAKA PLUMBING AND H 2561 ROUTE 55POUGHQUAG NY 12570	02/19/2016	02/19/2021
DOL	DOL		DELPHI PAINTING & DECORATING CO INC		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL		DENNIS SCHWANDTNER		C/O YES SERVICE AND REPAI 145 LODGE AVEHUNTINGTON STATION NY 11476	08/09/2016	08/09/2021
DOL	DOL		DF CONTRACTORS OF ROCHESTER, INC.		1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	DOL		DF CONTRACTORS, INC.		1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	NYC		DIMITRIOS TSOUMAS		35-12 19TH AVENUE ASTORIA NY 11105	08/02/2017	08/02/2022
DOL	DOL		DOMENICO LAFACE		8531 OSWEGO RD BALDWINSVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****3242	DONALD R. FORSA	DF LAWN SERVICE	1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	DOL		DONALD R. FORSA		1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	NYC	*****7404	DOSANJH CONSTRUCTION CORP		9439 212TH STREET QUEENS VILLAGE NY 11428	02/25/2016	02/25/2021
DOL	DOL		DOUGLAS L MALARKEY	MALARKEY CONSTRUCTI ON	64 VICTORIA DRIVE B INGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	NYC		DUARTE LOPES		66-05 WOODHAVEN BLVD. STE 2REGO PARK NY 11374	04/20/2017	04/20/2022
DOL	DOL	*****5175	EAGLE MECHANICAL AND GENERAL CONSTRUCTION LLC		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL		EAST COAST PAVING		2238 BAKER RD GILLET PA 16923	03/12/2018	03/12/2023
DOL	NYC	*****4269	EAST PORT EXCAVATION & UTILITIES		601 PORTION RD RONKONKOMA NY 11779	11/18/2016	11/18/2021
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL	*****3270	EMPIRE TILE INC		6 TREMONT COURT HUNTINGTON STATION NY 11746	03/08/2016	03/08/2021
DOL	NYC	*****5917	EPOCH ELECTRICAL, INC		97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2024
DOL	DOL	*****7403	F & B PAINTING CONTRACTING INC		2 PARKVIEW AVENUE HARRISON NY 10604	09/26/2016	09/26/2021
DOL	DOL		FAIGY LOWINGER		11 MOUNTAIN RD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL		FRANK BENEDETTO		19 CATLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL		FRANK BENEDETTO		C/O F & B PAINTING CONTRA 2 PARKVIEW AVENUEHARRISON NY 10604	09/26/2016	09/26/2021
DOL	DOL	*****4722	FRANK BENEDETTO AND CHRISTOPHER J MAINI	B & M CONCRETE	19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	NYC		FRANK MAINI		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
DOL	NYC	*****6616	G & G MECHANICAL ENTERPRISES, LLC.		1936 HEMPSTEAD TURNPIKE EAST MEDOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		GABRIEL FRASSETTI			04/10/2019	04/10/2024
DOL	DOL		GALINDA ROTENBERG		C/O GMDV TRANS INC 67-48 182ND STREETFRESH MEADOWS NY 11365	06/24/2016	06/24/2021
DOL	DOL		GEOFF CORLETT		415 FLAGGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DOL		GIGI SCHNECKENBURGER		261 MILL RD EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	DOL		GIOVANNI LAFACE		8531 OSWEGO RD BALDWINSVILLE NY 13027	02/03/2020	01/09/2023

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DOL	NYC	*****3164	GLOBE GATES INC	GLOBAL OVERHEAD DOORS	405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
DOL	DOL	*****5674	GMDV TRANS INC		67-48 182ND STREET FRESH MEADOWS NY 11365	06/24/2016	06/24/2021
DOL	NYC		GREAT ESTATE CONSTRUCTION, INC.		327 STAGG ST BROOKLYN NY 11206	10/10/2017	10/10/2022
DOL	DOL		GREGORY S. OLSON		P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		HANS RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC		HARMEL SINGH		15 CLINTON LANE HICKSVILLE NY 11801	02/25/2016	02/25/2021
DOL	NYC		HAROLD KUEMMEL		58-83 54TH STREET MASPETH NY 11378	02/26/2016	02/26/2021
DOL	NYC	*****3228	HEIGHTS ELEVATOR CORP.		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
DOL	DOL	*****5131	INTEGRITY MASONRY, INC.	M&R CONCRETE	722 8TH AVE WATERVLIT NY 12189	06/05/2018	06/05/2023
DOL	DOL		IRENE KASELIS		32 PENNINGTON AVE WALDWICK NJ 07463	05/30/2019	05/30/2024
DOL	AG		J A M CONSTRUCTION CORP		SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457	04/07/2016	04/07/2021
DOL	DOL		J.A. HIRES CADWALLADER		P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		JAMES C. DELGIACCO		722 8TH AVE WATERVLIT NY 12189	06/05/2018	06/05/2023
DOL	AG		JAMES FALCONE		SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457	04/07/2016	04/07/2021
DOL	DOL		JAMES LIACONE		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		JAMES RACHEL		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		JASON W MILLIMAN		C/O ROCHESTER ACOUSTICAL P O BOX 799HILTON NY 14468	02/19/2016	02/19/2021
DOL	DOL	*****5368	JCH MASONRY & LANDSCAPING INC.		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023
DOL	NYC		JENNIFER GUERRERO		1936 HEMPSTEAD TURNPIKE EAST MEADOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		JESSICA WHITESIDE		C/O BRRESTORATION NY INC 140 ARCADIA AVENUEOSWEGO NY 13126	09/12/2016	09/12/2021
DOL	AG		JOHN ANTHONY MASSINO		36-49 204TH STREET BAYSIDE NY 11372	02/07/2018	02/07/2023
DOL	DOL		JOHN F. CADWALLADER		200 LATTA BROOK PARK HORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL	*****4612	JOHN F. CADWALLADER, INC.	THE GLASS COMPANY	P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		JOHN GOCEK		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	AG	*****0600	JOHNCO CONTRACTING, INC.		36-49 204TH STREET BAYSIDE NY 11372	02/07/2018	02/07/2023
DOL	DOL		JON E DEYOUNG		261 MILL RD P.O BOX 296EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	DOL		JORI PEDERSEN		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DOL		JOSE CHUCHUCA		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023
DOL	AG		JOSEPH FALCONE		SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457	04/07/2016	04/07/2021
DOL	NYC		JOSEPH FOLEY		66-05 WOODHAVEN BLVD. STE 2REGO PARK NY 11374	04/20/2017	04/20/2022
DOL	DOL	*****9273	JOSEPH M LOVETRO		P O BOX 812 BUFFALO NY 14220	08/09/2016	08/09/2021

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DOL	NYC		JOSEPH MARTINO		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	DOL		JOY MARTIN		2404 DELAWARE AVE NIGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL	*****5062	K R F SITE DEVELOPMENT INC		375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579	01/23/2017	01/23/2022
DOL	NYC		K.S. CONTRACTING CORP.		29 PHILLIP DRIVE PARSIPPANY NJ 07054	02/13/2017	02/13/2022
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATIE BURDICK		2238 BAKER RD GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL		KENNETH FIORENTINO		375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579	01/23/2017	01/23/2022
DOL	DOL	*****9732	KENT HOLLOW SIDING LLC		29A BRIDGE STREET NEW MILFORD CT 06776	01/15/2016	01/15/2021
DOL	DOL	*****3490	L & M CONSTRUCTION/DRYWALL INC.		1079 YONKERS AVE YONKERS NY 10704	08/07/2018	08/07/2023
DOL	DA	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	AG	*****4643	LALO DRYWALL, INC.		221 OLD FORD ROAD NEW PLATZ NY 12561	05/20/2016	05/20/2021
DOL	DOL	*****4505	LARAPINTA ASSOCIATES INC		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	DOL		LAVERN GLAVE		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	06/24/2016	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	06/24/2016	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	01/17/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	08/14/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	08/14/2017	08/14/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	01/17/2017	09/19/2022
DOL	DA	*****4460	LONG ISLAND GLASS & STOREFRONTS, LLC		4 MANHASSET TRL RIDGE NY 11961	09/06/2018	09/06/2023
DOL	AG	*****4216	LOTUS-C CORP.		81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	NYC		LUBOMIR PETER SVOBODA		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	AG		LUIS MARTINEZ	LALO DRYWALL	211 MAIN ST. NEW PLATZ NY 12561	05/20/2016	05/20/2021
DOL	NYC		M & L STEEL & ORNAMENTAL IRON CORP.		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	DOL		M ANVER BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL		M. ANVER BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL	*****1784	MADISON AVE CONSTRUCTION CORP		39 PENNY STREET WEST ISLIP NY 11795	11/02/2016	11/02/2021

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DOL	DOL		MALARKEY'S BAR & GRILL LLC		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	*****0705	MALARKEY'S PUB & GRUB LLC		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DA		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	DA		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	NYC		MAREK FABIJANOWSKI		50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	DOL		MARIACHI'S PIZZERIA		C/O DOUGLAS L MALARKEY 64 VICTORIA DRIVEBINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	NYC		MARTINE ALTER		1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	DOL		MARVIN A STURDEVANT		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	DOL		MASONRY CONSTRUCTION, INC.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****3333	MASONRY INDUSTRIES, INC.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	NYC		MATINA KARAGIANNIS		97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2023
DOL	DOL		MATTHEW P. KILGORE		4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	DOL		MAURICE GAWENO		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****6416	MCCALL MASONRY		P O BOX 304 SAYRE PA 18840	08/09/2016	08/09/2021
DOL	DOL		MCLEAN "MIKKI BEANE"		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		MCLEAN "MIKKI" DRAKE		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		MCLEAN M DRAKE-BEANE		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL	*****9445	MCLEAN M WALSH	ELITE PROFESSIONAL PAINTING OF CNY	1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL	*****9445	MCLEAN M WALSH	ELITE PROFESSIONAL PAINTING OF CNY	1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	NYC		MICHAEL HIRSCH		C/O MZM CORP 163 S MAIN STREETNEW CITY NY 10956	01/28/2016	01/28/2021
DOL	DOL		MICHAEL LENIHAN		1079 YONKERS AVE UNIT 4YONKERS NY 10704	08/07/2018	08/07/2023
DOL	AG		MICHAEL RIGLIETTI		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL	*****4829	MILESTONE ENVIRONMENTAL CORPORATION		704 GINESI DRIVE SUITE 29MORGANVILLE NJ 07751	04/10/2019	04/10/2024
DOL	NYC	*****9926	MILLENNIUM FIRE PROTECTION, LLC		325 W. 38TH STREET SUITE 204NEW YORK NY 10018	11/14/2019	11/14/2024
DOL	NYC	*****0627	MILLENNIUM FIRE SERVICES, LLC		14 NEW DROP LNE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	NYC	*****3826	MOVING MAVEN OF NY, INC.		1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	NYC	*****3550	MOVING MAVEN, INC		1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	AG		MSR ELECTRICAL CONSTRUCTION CORP.		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL		MUHAMMAD BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL		MUHAMMAD BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	NYC		MUHAMMED A. HASHEM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC	*****3613	MZM CORP		163 S MAIN STREET NEW CITY NY 10956	01/28/2016	01/28/2021
DOL	DA	*****9786	NATIONAL INSULATION & GC CORP		180 MILLER PLACE HICKSVILLE NY 11801	12/12/2018	12/12/2023

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DOL	NYC	*****4839	NEW YORK RIGGING CORP		58-83 54TH STREET MASPETH NY 11378	02/26/2016	02/26/2021
DOL	NYC		NICHOLAS FILIPAKIS		7113 FORT HAMILTON PARKWA BROOKLYN NY 11228	12/09/2016	12/09/2021
DOL	DOL	*****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTI ON, INC.	444 SCHANTZ ROAD ALLEN TOWN PA 18104	09/17/2020	09/17/2025
DOL	DOL	*****6966	NORTH COUNTRY DRYWALL AND PAINT		23167 COUNTY ROUTE 59 DEXTER NY 13634	10/24/2016	10/24/2021
DOL	DOL	*****0065	NORTHEAST LANDSCAPE AND MASONRY ASSOC		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523	01/23/2017	01/23/2022
DOL	DOL	*****1845	OC ERECTERS, LLC A/K/A OC ERECTERS OF NY INC.		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	NYC	*****0818	ONE TEN RESTORATION, INC.		2366 61ST ST BROOKLYN NY 11204	12/15/2016	12/15/2021
DOL	NYC		PARESH SHAH		29 PHILLIP DRIVE PARSIPPANY NJ 07054	02/13/2017	02/13/2022
DOL	NYC	*****9422	PELIUM CONSTRUCTION, INC.		22-33 35TH ST. ASTORIA NY 11105	12/30/2016	12/30/2021
DOL	DOL		PETER M PERGOLA		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523	01/23/2017	01/23/2022
DOL	DOL		PIERRE LAPORT		224 COUNTY HIGHWAY 138 BROADALBIN NY 12025	03/07/2017	03/07/2022
DOL	DOL	*****1543	PJ LAPORT FLOORING INC		224 COUNTY HIGHWAY 138 BROADALBIN NY 12025	03/07/2017	03/07/2022
DOL	NYC	*****5771	PMJ ELECTRICAL CORP		7113 FORT HAMILTON PARKWA BROOKLYN NY 11228	12/09/2016	12/09/2021
DOL	DOL	*****0466	PRECISION BUILT FENCES, INC.		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	NYC	*****4532	PROFESSIONAL PAVERS CORP.		66-05 WOODHAVEN BLVD. REGO PARK NY 11374	04/20/2017	04/20/2022
DOL	DA	*****6817	QUADRANT METAL BUILDINGS LLC		2740 SW MARTIN DOWNS BLVD PALM CITY FL 34990	08/25/2016	08/25/2021
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****1068	RATH MECHANICAL CONTRACTORS, INC.		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP		3 PARK CIRCLE MIDDLETOWN NY 10940	01/30/2018	01/30/2023
DOL	AG	*****7015	RCM PAINTING INC.		69-06 GRAND AVENUE 2ND FLOORMASPETH NY 11378	02/07/2018	02/07/2023
DOL	DOL		REGINALD WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DA		RIANN MULLER		2740 SW MARTIN DOWNS BLVD PALM CITY FL 34990	08/25/2016	08/25/2021
DOL	DOL	*****9148	RICH T CONSTRUCTION		107 WILLOW WOOD LANE CAMILLUS NY 13031	11/13/2018	11/13/2023
DOL	DOL		RICHARD MACONE		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023
DOL	DOL		RICHARD REGGIO		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	DOL	*****9148	RICHARD TIMIAN	RICH T CONSTRUCTI ON	108 LAMONT AVE SYRACUSE NY 13209	10/16/2018	10/16/2023
DOL	DOL		RICHARD TIMIAN JR.		108 LAMONT AVE SYRACUSE NY 13209	10/16/2018	10/16/2023
DOL	DOL		RICHARD TIMIAN JR.		108 LAMONT AVE SYRACUSE NY 13209	11/13/2018	11/13/2023
DOL	DOL		ROBBYE BISSESAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROBERT A. VALERINO		3841 LANYARD COURT NEW PORT RICHEY FL 34652	07/09/2019	07/09/2024
DOL	DOL		ROBERT BRUNO		3 GAYLORD ST AUBURN NY 13021	11/15/2016	11/15/2021
DOL	DOL		ROBERT BRUNO		5 MORNINGSIDE DRIVE AUBURN NY 13021	05/28/2019	05/28/2024
DOL	NYC		ROBERT HOHMAN		149 FIFTH AVE NEW YORK NY 10010	12/29/2016	12/29/2021
DOL	DOL	*****3859	ROCHESTER ACOUSTICAL CORP		P O BOX 799 HILTON NY 14468	02/19/2016	02/19/2021

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DOL	DOL		RODERICK PUGH		404 OAK ST SUITE 101SYRACUSE NY 13203	07/23/2018	07/23/2023
DOL	DOL	*****4880	RODERICK PUGH CONSTRUCTION INC.		404 OAK ST SUITE 101SYRACUSE NY 13203	07/23/2018	07/23/2023
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL		RONALD MESSEN		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL		ROSEANNE CANTISANI			06/12/2018	06/12/2023
DOL	DOL		RYAN ALBIE		21 S HOWELLS POINT ROAD BELLPORT NY 11713	02/21/2017	02/21/2022
DOL	DOL	*****3347	RYAN ALBIE CONTRACTING INC		21 S HOWELLS POINT ROAD BELLPORT NY 11713	02/21/2017	02/21/2022
DOL	DOL	*****1365	S & L PAINTING, INC.		11 MOUNTAIN ROAD P.O BOX 408MONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL	*****7730	S C MARTIN GROUP INC.		2404 DELAWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	NYC		SABIR MUHAMMED		SUITE B-8 782 PELHAM PARKWAY SOUTHBRONX NY 10462	04/21/2016	04/21/2021
DOL	DOL		SALVATORE A FRESINA			08/26/2016	08/26/2021
DOL	DOL		SAM FRESINA			08/26/2016	08/26/2021
DOL	NYC	*****0349	SAM WATERPROOFING INC		168-42 88TH AVENUE APT.1 AJAMAICA NY 11432	11/20/2019	11/20/2024
DOL	NYC		SANDEEP BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL	*****9751	SCW CONSTRUCTION		544 OLD ROUTE 23 ACRE NY 12405	02/14/2017	02/14/2022
DOL	AG		SERGIO RAYMUNDO		109 DUBOIS RD. NEW PALTZ NY 12561	05/20/2016	05/20/2021
DOL	NYC	*****6597	SHAIRA CONSTRUCTION CORP.		421 HUDSON STREET SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	DOL	*****1961	SHANE BURDICK	CENTRAL TRAFFIC CONTROL, LLC.	2238 BAKER ROAD GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE BURDICK		2238 BAKER ROAD GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE NOLAN		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		SHULEM LOWINGER		11 MOUNTAIN ROAD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL	*****0816	SOLAR ARRAY SOLUTIONS, LLC		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL	*****2221	SOUTH BUFFALO ELECTRIC, INC.		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL	*****6844	STEAM PLANT AND CHX SYSTEMS INC.		14B COMMERCIAL AVENUE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL	*****9933	STEED GENERAL CONTRACTORS, INC.		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL		STEFANOS PAPASTEFANOU, JR. A/K/A STEVE PAPASTEFANOU, JR.		256 WEST SADDLE RIVER RD UPPER SADDLE RIVER NJ 07458	05/30/2019	05/30/2024
DOL	DOL	*****9751	STEPHEN C WAGAR		544 OLD ROUTE 23 ACRE NY 12405	02/14/2017	02/14/2022
DOL	DOL		STEVE TATE		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	NYC		STEVEN GOVERNALE		601 PORTION RD RONKONKOMA NY 11779	11/18/2016	11/18/2021
DOL	DOL		STEVEN MARTIN		2404 DELWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL		STEVEN P SUCATO		15-68 208TH STREET BAYSIDE NY 11360	06/23/2016	06/23/2021
DOL	DOL		STEVEN TESTA		50 SALEM STREET - BLDG B LYNNFIELD MA 01940	01/23/2017	01/23/2022
DOL	NYC	*****5863	SUKHMANY CONSTRUCTION, INC.		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022



**NYSDOL Bureau of Public Work Debarment List 01/13/2021**

**Article 8**

DOL	DOL	*****1060	SUNN ENTERPRISES GROUP, LLC		370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601	02/11/2019	02/11/2024
DOL	DOL	*****8209	SYRACUSE SCALES, INC.		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	DOL		TALAILA OCAMPA		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	DOL	*****9852	TAP STEEL INC		ROUTE 26 3101 P O BOX 457CONSTABLEVILLE NY 13325	01/28/2016	01/28/2021
DOL	DOL		TERRY THOMPSON		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL		TEST		P.O BOX 123 ALBANY NY 12204	05/20/2020	05/20/2025
DOL	DOL	*****5570	TESTA CORP		50 SALEM STREET - BLDG B LYNNFIELD MA 01940	01/23/2017	01/23/2022
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		TIMOTHY A PALUCK		C/O TAP STEEL INC RTE 26 3101/ P O BOX 457CONSTABLEVILLE NY 13325	01/28/2016	01/28/2021
DOL	DOL	*****3453	TORCHIA'S HOME IMPROVEMENT		10153 ROBERTS RD SAUQUOIT NY 13456	08/09/2016	08/09/2021
DOL	DOL	*****8311	TRIPLE B FABRICATING, INC.		61 WILLETT ST. PASSAIC NJ 07503	10/26/2016	10/26/2021
DOL	DOL	*****9407	TURBO GROUP INC		15-68 208TH STREET BAYSIDE NY 11360	06/23/2016	06/23/2021
DOL	DOL	*****6392	V.M.K CORP.		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023
DOL	DOL	*****6418	VALHALLA CONSTRUCTION, LLC.		796 PHELEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	*****7361	VIALE HOLDINGS, INC.	MOVING MAVEN	1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	DOL		VICTOR ALICANTI		42-32 235TH ST DOUGLSTON NY 11363	01/14/2019	01/14/2024
DOL	DOL		VICTOR ROTENBERG		C/O GMDV TRANS INC 67048 182ND STREETFRESH MEADOWS NY 11365	06/24/2016	06/24/2021
DOL	NYC		VIKTAR PATONICH		2630 CROPSY AVE BROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	DOL		VIKTORIA RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC		VITO GARGANO		1535 RICHMOND AVE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	NYC	*****3673	WALTERS AND WALTERS, INC.		465 EAST AND THIRD ST MT. VERNON NY 10550	09/09/2019	09/09/2024
DOL	DOL		WAYNE LIVINGSTON JR	NORTH COUNTRY DRYWALL AND PAINT	23167 COUNTY ROUTE 59 DEXTER NY 13634	10/24/2016	10/24/2021
DOL	DOL	*****3296	WESTERN NEW YORK CONTRACTORS, INC.		3841 LAYNARD COURT NEW PORT RICHEY FL 34652	07/09/2019	07/09/2024
DOL	DOL		WHITE PLAINS CARPENTRY CORP		442 ARMONK RD	06/12/2018	06/12/2023
DOL	DOL		WILLIAM C WATKINS		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		WILLIAM DEAK		C/O MADISON AVE CONSTR CO 39 PENNY STREETWEST ISLIP NY 11795	11/02/2016	11/02/2021
DOL	DOL	*****4043	WINDSHIELD INSTALLATION NETWORK, INC.		200 LATTI BROOK PARK HORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL	*****4730	XGD SYSTEMS, LLC	TDI GOLF	415 GLAGE AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DOL	*****7345	YES SERVICE AND REPAIRS CORPORATION		145 LODGE AVE HUNTINGTON STATION NY 11476	08/09/2016	08/09/2021
DOL	NYC		ZAKIR NASEEM		30 MEADOW ST BROOKLYN NY 11206	10/10/2017	10/10/2022
DOL	NYC	*****8277	ZHN CONTRACTING CORP		30 MEADOW ST BROOKLYN NY 11206	10/10/2017	10/10/2022

"General Decision Number: NY20210006 01/01/2021

Superseded General Decision Number: NY20200006

State: New York

Construction Types: Heavy and Highway

Counties: Clinton and Essex Counties in New York.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes and apartments up to and including 4 stories), HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/01/2021

BRNY0002-013 06/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 37.23	19.51+a

FOOTNOTE:

a. PAID HOLIDAYS: Memorial Day, July the 4th, Labor Day, and Thanksgiving Day (provided the employee is employed (1) day before and (1) day after the holiday.

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CARP0291-006 07/01/2020

	Rates	Fringes
CARPENTER HEAVY & HIGHWAY		

## CONSTRUCTION

Carpenter.....	\$ 33.82	22.85
Pile Driver.....	\$ 33.02	21.10

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ELEC0910-001 04/01/2020

	Rates	Fringes
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ELECTRICIAN.....	\$ 36.00	5.75%+21.23
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ELEC1249-003 05/06/2019

	Rates	Fringes
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ELECTRICIAN (LINE  
CONSTRUCTION: LIGHTING AND  
TRAFFIC SIGNAL Including any  
and all Fiber Optic Cable  
necessary for Traffic Signal  
Systems, Traffic Monitoring  
systems and Road Weather  
information systems)

Flagman.....	\$ 27.00	6.75%+24.15
Groundman (Truck Driver)....	\$ 36.00	6.75%+24.15
Groundman Truck Driver (tractor trailer unit).....	\$ 36.00	6.75%+24.15
Lineman & Technician.....	\$ 45.00	6.75%+24.15
Mechanic.....	\$ 36.00	6.75%+24.15

## FOOTNOTE:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, plus President's Day, Good Friday, Decoration Day, Election Day for the President of the United States and Election Day for the Governor of the State of New York, provided the employee works the day before or the day after the holiday.

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ELEC1249-004 05/06/2019

	Rates	Fringes
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ELECTRICIAN (Line  
Construction)

Overhead and underground  
distribution and  
maintenance work and all  
overhead and underground  
transmission line work  
including any and all  
fiber optic ground wire,  
fiber optic shield wire or  
any other like product by  
any other name  
manufactured for the dual  
purpose of ground fault  
protection and fiber optic  
capabilities :

Flagman.....	\$ 31.23	6.75%+24.15
Groundman digging machine operator.....	\$ 46.85	6.75%+24.15
Groundman truck driver (tractor trailer unit).....	\$ 41.64	6.75%+24.15
Groundman Truck driver.....	\$ 41.64	6.75%+24.15

Lineman and Technician.....	\$ 52.05	6.75%+24.15
Mechanic.....	\$ 41.64	6.75%+24.15
Substation:		
Cable Splicer.....	\$ 57.26	6.75%+24.15
Flagman.....	\$ 31.23	6.75%+24.15
Ground man truck driver....	\$ 41.64	6.75%+24.15
Groundman digging machine operator.....	\$ 46.85	6.75%+24.15
Groundman truck driver (tractor trailer unit).....	\$ 41.64	6.75%+24.15
Lineman & Technician.....	\$ 52.05	6.75%+24.15
Mechanic.....	\$ 41.64	6.75%+24.15
Switching structures; railroad catenary installation and maintenance, third rail type underground fluid or gas filled transmission conduit and cable installations (including any and all fiber optic ground product by any other name manufactured for the dual purpose of ground fault protection and fiber optic capabilities), pipetype cable installation and maintenance jobs or projects, and maintenance bonding of rails; Pipetype cable installation		
Cable Splicer.....	\$ 58.71	6.75%+24.15
Flagman.....	\$ 32.02	6.75%+24.15
Groundman Digging Machine Operator.....	\$ 48.03	6.75%+24.15
Groundman Truck Driver (tractor-trailer unit).....	\$ 42.70	6.75%+24.15
Groundman Truck Driver.....	\$ 42.70	6.75%+24.15
Lineman & Technician.....	\$ 53.37	6.75%+24.15
Mechanic.....	\$ 42.70	6.75%+24.15

## FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, Good Friday, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, and Election Day for the President of the United States and Election Day for the Governor of New York State, provided the employee works two days before or two days after the holiday.

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ELEC1249-008 01/01/2019

	Rates	Fringes
ELECTRICIAN (Line Construction)		
TELEPHONE, CATV FIBEROPTICS CABLE AND EQUIPMENT		
Cable splicer.....	\$ 32.78	3%+4.93
Groundman.....	\$ 16.49	3%+4.93
Installer Repairman-Teledata		

Lineman/Technician-		
Equipment Operator.....	\$ 31.12	3%+4.93
Tree Trimmer.....	\$ 25.79	3%+9.98+a

a. New Year's Day, President's Day, Good Friday, Decoration Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving, Christmas Day.

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 ENGI0106-001 07/01/2018

#### HEAVY & HIGHWAY

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 43.47	26.05+a
GROUP 2.....	\$ 42.56	26.05+a
GROUP 3.....	\$ 39.99	26.05+a
GROUP 4.....	\$ 47.47	26.05+a
GROUP 5.....	\$ 46.47	26.05+a
GROUP 6.....	\$ 45.47	26.05+a
GROUP 7.....	\$ 45.08	26.05+a

#### POWER EQUIPMENT OPERATOR CLASSIFICATIONS (HEAVY & HIGHWAY):

GROUP 1: Asphalt Curb Machine, Self Propelled, Slipform, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck , Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine, Self Propelled, Slipform, Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All Purpose Hydraulically Operated) (Gradall or Similar), Front End Loader ( 4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.) Quad 9, Quarry Master (or equivalent), Scraper, Fireman, Form Tamper, Grout Pump, Guniting Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker, ride-on, Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement, Shovel, Side Boom, Slip Form Paver, Tractor Drawn, BeltType Loader, Truck or Trailer Mounted Log , Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

GROUP 2: Asphalt Paver, Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant (NonAutomated) and All Concrete Batching Plants, Cherry Picker (5 tons capacity and under), Concrete Paver (Over 16S), Crawler Drill, Self-contained, Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders, L.C.M. Work Boat Operator, Locomotive Mixer (for stabilized base selfpropelled), Monorail Machine, Plant

Engineer, Profiler (105 H.P. and under), Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinus Widener, Roller (Grade and Fill), Scarifier, ride-on, Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw, ride-on, Steam Cleaner, Pug Mill, Pump Crete Ready Mix Concrete Plant Refrigeration Equipment (for soil stabilization) Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill, Excluding Air-Track Type Drill, Skidder, Tractor with Dozer and/or Pusher, Trencher. Tugger Hoist, Vermeer saw (ride on, any size or type), Winch, Winch Cat

GROUP 3: A Frame Winch Hoist on Truck , Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving, Machine (ride on), Ballast Regulator, Ride-on Boiler (used in conjunction with production), Bituminous Heater, self-propelled, Boat (powered), Cement and Bin Operator, Compressors, Dust Collectors, Fork Lift, Generators, Pumps, Welding Machines, Light Plants, Heaters (hands-off equipment), Concrete Pavement Spreader and Finisher, Concrete Paver or Mixer (16S and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill, (Core), Drill, (Well,) Farm Tractor with accessories, Fine Grade Machine, Tamper, ride-on, Tie Extractor, ride-on, Tie Handler, ride-on, Tie Insertter, ride-on, Tie Spacer, ride-on, Tire Repair, Track Liner, ride-on, Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point

GROUP 4: Tower Cranes

GROUP 5: Cranes 50 tons and over

GROUP 6: Cranes 49 tons and below

GROUP 7: Master Mechanic

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day

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IRON0012-002 07/01/2019

	Rates	Fringes
Ironworkers:		
SHEETER.....	\$ 31.80	28.59
STRUCTURAL, ORNAMENTAL, MACHINERY MOVER & RIGGERS, FENCE ERECTOR, REINFORCING, STONE DERRICKMAN, WELDER.....	\$ 31.55	28.59

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LAB01822-001 07/01/2018

HEAVY & HIGHWAY

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 25.67	23.75+a
GROUP 2.....	\$ 25.47	23.75+a

GROUP 3.....	\$ 25.87	23.75+a
GROUP 4.....	\$ 26.07	23.75+a
GROUP 5.....	\$ 27.67	23.75+a

## LABORERS CLASSIFICATIONS (HEAVY &amp; HIGHWAY)

GROUP 1. Basic Rate, Flagman Outboard and Hand Boats.

GROUP 2. Bull Float, Chain Saw, Concrete Aggregate Bin, Concrete Bootman, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer Paverment Breaker, Handlers of all Steel Mesh, Small Generators of Laborers' tools, installation of bridge drainage pipe, Pipe Layers, Vibrator type rollers, tamper, Drill doctor, tail or screw operator on asphalt paver, water pump operator (1 1/2" and single diaphragm) nozzle (asphalt, gunite, seeding and sand blasting), Laborers on chain link fence erection, Rock splitter and power unit, pusher type concrete saw and all other gas, electric, oil and air tool operators, Wrecking Labor.

GROUP 3. All rock or drilling machine operators (except quarry master and similar type) Acetylene Torch operator, asphalt raker, powderman.

GROUP 4. Blaster, form setters, stone or granite curb setters.

GROUP 5. Hazardous Waste, Asbestos Abatement and Removal.

## FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

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PAIN0201-002 05/01/2019

Rates	Fringes
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## Painters:

Zone #2 All of ESSEX COUNTY		
Lead Abatement Workers,		
Structural Steel.....	\$ 30.09	16.65
Painters, Drywall		
Finishers, Spray.....	\$ 29.09	16.65
Zone #3 All of CLINTON COUNTY		
Lead Abatement Workers,		
Structural Steel.....	\$ 30.09	15.45
Painters, Drywall		
Finishers, Spray.....	\$ 29.09	15.45

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\* PAIN0806-003 10/01/2020

## CLINTON AND ESSEX COUNTIES

Rates	Fringes
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## Painters:

Structural Steel and Bridge.	\$ 51.50	49.63
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PLUM0773-001 05/01/2019

Rates	Fringes
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## Plumber and Steamfitter

CLINTON COUNTY.....	\$ 37.50	30.98
ESSEX COUNTY.....	\$ 38.50	30.98

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SHEE0083-001 06/01/2019

	Rates	Fringes
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Sheet metal worker.....	\$ 33.73	33.04+a
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## FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day. If any of these holidays fall on a Saturday or Sunday, either the preceding Friday or following Monday will be observed as the holiday.

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TEAM0687-003 06/01/2018

	Rates	Fringes
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## Truck drivers:

HEAVY &amp; HIGHWAY

CONSTRUCTION

GROUP 1:.....	\$ 25.82	25.16+a
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GROUP 2:.....	\$ 26.04	25.16+a
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## FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, provided the employee has worked the day before and the day after the holiday.

## TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Pick-ups, panel trucks, flatboy materials trucks (straight jobs), single axle dump trucks, dumpsters and receivers, greasers, truck tireman, parts chaser, tandems and batch trucks, mechanics, semi trailer, lowboy trucks, asphalt distributor trucks and agitator, mixer trucks and dumpcrete type vehicles, truck mechanic, fuel truck and bus

GROUP 2: Specialized earth moving equipment - euclid type or similar off-highway equipment, where not self-loaded, straddle (ross) carrier, self-contained concrete unit, off highway tandem back dump, twin engine equipment and double hitched equipment where not self loaded

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their



own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage

payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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## SECTION 01010

### SUMMARY OF WORK

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Project Work covered by Contract Documents.
- B. Contractor's use of site and premises.
- C. Limits of Work area.
- D. Construction permits and easements.
- E. Owner occupancy.
- F. Work sequence and milestone dates
- G. Connections to existing facilities.

##### 1.2. PROJECT – WORK COVERED BY CONTRACT DOCUMENTS

- A. Work covered by the Contract Documents is described in the Agreement.
- B. Work not specifically identified in the Bid Item Descriptions, but nevertheless required in the Contract Documents, shall be performed as shown and/or specified.

##### 1.3. CONTRACTS

- A. Perform Work of each Prime Contract under separate lump sum and unit price contracts with the Owner.
- B. Work of each separate Contract is identified in the following Articles in the Contract Documents.

##### 1.4. CONTRACTOR USE OF SITE AND PREMISES

- A. Limit use of Site to allow:
  - 1. Owner occupancy.
  - 2. Work by Owner.

##### 1.5. LIMITS OF WORK AREA

- A. Confine construction operations within the area shown on the Drawings.
- B. Storage of equipment and materials, or erection and use of sheds outside of the Contract Limits, if such areas are the property of Owner, shall be used only with Owner's approval. Such storage or temporary structures, even within the Contract Limits, shall be confined to Owner's property and shall not be placed on properties designated as easements or rights-of-way.

#### 1.6. CONSTRUCTION PERMITS

- A. Contractor will obtain and pay for necessary construction permits from those authorities or agencies having jurisdiction over land areas, utilities, or structures which are located within the contract limits and which will be occupied, encountered, used, or temporarily interrupted by Contractor's operations.
- B. When construction permits are accompanied by regulations or requirements issued by a particular authority or agency, it shall be Contractor's responsibility to familiarize himself and comply with such regulations or requirements as they apply to his operations on this project. Any costs associated with additional field supervision by authorities or agencies shall be the Contractor's responsibility.
- C. Contractor shall acquire, pay, and comply with for all requirements associated with all required permits necessary to complete the work described in the Contract Documents.

#### 1.7. OWNER OCCUPANCY

- A. The Owner will occupy the premises during the entire period of construction for the conduct of normal operations.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

#### 1.8. OPERATION OF EXISTING FACILITIES

- A. Normal operations of the existing facilities will be performed by Owner. Only Owner's staff is allowed to operate existing facilities including equipment, valves, gates, motor controls, etc.
  - 1. Provide Owner and Engineer a minimum of five working days written notice of necessary operation of existing valves, pumps, or equipment to facilitate construction activities.
  - 2. Contractor's activities shall not disrupt Owner's access to operate and maintain existing equipment and facilities. Contractor shall furnish any temporary access required, including ladders, which shall comply with OSHA laws and regulations, for necessary operations.
  - 3. Contractor's operations shall not disrupt access to existing properties and buildings.
  - 4. Existing isolation valves shown on Drawings or identified in the field shall not be relied upon to be operable. Contractor is responsible for isolating lines where necessary or where called for by Engineer.

#### 1.9. CONNECTIONS TO EXISTING FACILITIES

- A. Contractor shall provide all cutting and patching required for connection to existing facilities.
- B. Temporary connections to existing facilities are covered in Section 01500, Temporary Facilities.

#### 1.10. WORK SEQUENCE AND MILESTONE DATES

- A. Construct work in sequence to maintain water service and accessibility to properties and minimize disruption to pedestrian and vehicular traffic. Construction should begin at one end of the project and proceed to the other end in a sequential manner.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.



## SECTION 01019

### CONTRACT CONSIDERATIONS

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Cash allowances.
- B. Schedule of Values.
- C. Application for Payment.
- D. Change procedures.
- E. Alternates.

##### 1.2. DEFINITIONS

- A. Mobilization - Mobilization includes, but is not limited to, performance of preparatory construction operations, including the movement of personnel and equipment to the Project Site; application, fee payment, and acquisition of all required permits (i.e. erosion and sediment control plans (if required), temporary and permanent building and trade permits, utility connections, etc.); and the establishment of Engineer's and Contractor's offices, buildings, and other facilities required at the Site in order to begin work on a substantial phase of the Contract. The cost of insurance and bonds per the Contract Documents.

##### 1.3. SCHEDULE OF VALUES

- A. Submit three hard copies of Schedule of Values and one electronic copy in Microsoft Excel of Schedule of Values in accordance with the time frames identified in General and Supplemental Conditions.
- B. Line items shall be subdivided into the Bid Items shown on the Bid Form.
- C. The sum of all line items in the Schedule of Values shall equal the Total Bid Price included on the Bid Form.
- D. Each line item shall include a directly proportional amount of the Contractor's overhead and profit.
- E. Schedule of Values shall serve as a breakdown Work used to establish progress payments. Progress payments for lump sum items will be made based on the percentages of completion of the work items included in the Schedule of Values for each lump sum item. Progress payments for Unit Price Work will be based on actual quantities of work performed. Progress payments for Contingent Unit Price work will only be made if work is authorized by Owner and/Engineer. Progress payments for Allowances will be made as described elsewhere in the Contract Documents.
- F. For Lump Sum Bid Items, the following Format shall be followed when developing the Schedule of Values.
  - 1. If Mobilization is not identified in the Bid Form as a separate Bid Item, Contractor may include in the Schedule of Values a line item for Mobilization as part of a Lump Sum Bid Item.

- a. Lump sum line item shall include all work described in the definition of mobilization included herein.
  - b. Costs for bonds and insurance shall be included in the lump sum mobilization line item.
  - c. When Contractor has made utility connections, installed Contractor's field offices, Owner's and/or Engineer's field offices (if required), and all other facilities required to begin work on a substantial portion of the Project, a payment of 50 percent of the lump sum mobilization Bid item will be made provided Contractor has already satisfied the requirements of General Conditions Article 2. The remaining 50 percent will be prorated over the next five monthly progress payments.
  - d. Mobilization cost shall not be greater than 5 percent of the Total Bid Price.
2. Included separate line items for demobilization and contract closeout.
3. Site work shall be subdivided into itemized quantities and unit costs for all individual construction components. Items shall be separated according to specification section titles listed in the Table of Contents.
- a. Sitework shall not include earthwork (such as excavation) or structural work (such as foundations) specific to a particular structure or process.
  - b. Include erosion and sediment control under sitework.
  - c. Include bypass pumping under sitework and include daily, weekly, or monthly unit costs for providing and operating the bypass pumping system(s).
  - d. Include dewatering under sitework and include daily costs for each structure.
  - e. Include off-site hauling of fill material under sitework.
  - f. Include site restoration.
  - g. Include piping.
    - 1) Piping shall be subdivided into itemized quantities and unit costs for individual components.
    - 2) Identify major piping by pipe diameter and material as individual line items (i.e. 12-inch ductile iron pipe).
    - 3) Piping costs shall be stated as cost per unit length, based on the number of linear feet for each piping system estimated by Contractor.
    - 4) Piping installation costs may include labor, excavation, bedding, encasement, and/or backfill if desired.
  - h. Include valves and hydrants based on valve type and size.

4. Revise Schedule of Values to include executed Change Orders with each Application for Payment. List each Proposed Change Order (PCO) that is incorporated into executed Change Orders.

#### 1.4. APPLICATIONS FOR PAYMENT

- A. Submit three original signature versions of each application on forms furnished by Engineer.
- B. Contractor must have all record documents as identified in General Conditions Article 15 current and up to date prior to submitting Applications for Payment.

#### 1.5. CHANGE PROCEDURES

- A. Supplementing the General Conditions and Supplementary Conditions, Engineer may issue a Proposal Request or Notice of Change which includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a proposal to perform the indicated work indicating a proposed adjustment in Contract Price and Contract Times within 10 days.
- B. Contractor may propose changes by submitting a request for change to Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors.
- C. Execution of Change Orders - Engineer will issue Change Orders for signatures of parties in the following order: Engineer, Contractor, Owner.

#### 1.6. ALTERNATES

- A. Bid alternates identified on the Bid Form will be reviewed and accepted or rejected at the Owner's discretion prior to execution of the Agreement. Accepted Additive and Deductive Alternates will be identified in the Agreement. Accepted Additive Alternates will be included in the Work and accepted deductive alternatives will not be included in the Work.

#### 1.7. STANDARD FORMS

- A. Use EJCDC Change Order Form No. C-941, attached to this section.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01025

UNIT PRICE ITEMS  
(BID ITEM DESCRIPTIONS)

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Price make-up.
- B. Elements of Bid Item Description page.
- C. List of unit price items.
- D. Bid Item Descriptions - Attached pages.

1.2. PRICE MAKE-UP

- A. Unit prices bid by Contractor are deemed to be full compensation for all required labor, products, tools, equipment, plant, transportation, testing, inspection, services, incidentals, administrative, procedures, applicable taxes, permit fees, overhead, profit, and other miscellaneous expenses.

1.3. ELEMENTS OF BID ITEM DESCRIPTION PAGE

- A. Identification of unit price item, as set forth in the Bid Form.
- B. Brief statement of work involved in the item.
- C. Listing of components of work which make-up the item including reference to the Specification section(s) covering each component.
- D. Cross-references to associated work not included in the item.
- E. Criteria to be applied in measuring number of completed units, for payment purposes.
- F. Limitations, if any, imposed on the measurement of completed units, for payment purposes.

1.4. LIST OF UNIT PRICE ITEMS - CONTRACT NO. 1

Bid Item No.	Bid Item Description
1	Mobilization, demobilization, bonds & insurance
2	Maintenance & protection of traffic
3	Erosion & Sediment Control
4	Utility clearance/support during construction
5	Site work & site restoration
6	Water main & appurtenances installation - 8"
7	Water main & appurtenances installation - 6"

<b>Bid Item No.</b>	<b>Bid Item Description</b>
8	Water main & appurtenances installation - 4"
9	Water main removal including cut & capping existing main
10	Valve box removal & disposal
11	Buried gate valve Installation - 8"
12	Buried gate valve installation - 4"
13	Water service line installation - same side
14	Water service line installation - opposite side
15	Water curb box removal
16	Water main connections to existing mains
17	Flushing hydrant installation
18	Air release valve assembly installation
19	Sewer main installation - 8"
20	Existing sewer main removal & disposal
21	Sewer manhole installation
22	Sewer manhole installation - drop manhole
23	Existing sewer manhole removal & disposal
24	Sewer lateral replacement - same side
25	Sewer lateral replacement - far side
26	Sewer bypass pumping
27	Sidewalk demolition & replacement
28	Asphalt demolition & replacement
29	Preparation of As-Built Drawings
30	Construction Allowance

1.5. BID ITEM DESCRIPTIONS

- A. Bid Item Description pages are attached at the end of this section.

1. BID ITEM NUMBER: 1

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Mobilization, demobilization, bonds & insurance

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:

- i. Mobilize and demobilize as many times as necessary during the project.
- ii. Provide and maintain project security/bonds.
- iii. Provide insurance certificates and maintain insurances for the contract with the Owner.
- iv. Preparation for, attendance at, and responses required to issues raised at project meetings.
- v. Provide site security at all times during both construction activity and non-work activity.
- vi. Provide submittals.
- vii. Provide payment application materials.
- viii. Provide and maintain project schedule.
- ix. Provide warranties and guarantees.
- x. All permits and fees (as required).
- xi. Perform construction field surveying/stakeout.
- xii. All coordination with all regulatory authorities including local codes offices, NYSDEC and NYSDOH.
- xiii. Coordination with the Town, Engineer, property owners, etc.
- xiv. Supply and install temporary construction sign for the Project at the project location specified by Owner. See the project sign specification and template included within the Project Manual as required by the Office of Community Renewal for the Community Development Block Grant.
- xv. Comply with all requirements as specified in the Contract Documents for compliance with funding agency (NYS Office of Homes and Community Renewal Community Development Block Grant).

c. WORK INCLUDED UNDER THIS ITEM:

- i. Mobilization
- ii. Demobilization
- iii. Insurance and Bonds (General & Supplementary Conditions)
- iv. Summary of Work (Section 01010)
- v. Contract Considerations (Section 01019)
- vi. Coordination and Meetings (Section 01039)
- vii. Submittals (Section 01300)
- viii. Progress Schedules (Section 01310)
- ix. Quality Control (Section 01400)
- x. Temporary Facilities (Section 01500)
- xi. Materials and Equipment (Section 01600)
- xii. Contract Closeout (Section 01700)
- xiii. Project Sign

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein

e. METHOD OF PAYMENT:

- i. Payment will be made on a lump sum basis in accordance with the Contractor's Schedule of Values which shall be broken down into sufficient detail for Engineer to adequately review progress payment amounts.

f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made

shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.

---

2. BID ITEM NUMBER: 2

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Maintenance & protection of traffic
  - b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
    - i. Provide site work security (e.g.: fencing, barricades, etc.).
    - ii. Provide traffic control, flag persons, lights, signage, etc., as required to maintain safe vehicular travel to and from and through the work area.
    - iii. Maintain traffic flow for at least one lane during the entire project unless otherwise agreed to in advance with the Town's Public Works Superintendent on any project roadway.
    - iv. Coordinate roadway signage and traffic restrictions with the Town on Town Streets.
    - v. Perform regular clean-up of work areas.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. Maintenance and Protection of Traffic (Section 01550)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - e. METHOD OF PAYMENT: Payment will be made on a lump sum basis in accordance with the Contractor's Schedule of Values which shall be broken down into sufficient detail for Engineer to adequately review progress payment amounts.
  - f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.
- 

3. BID ITEM NUMBER: 3

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Erosion & Sediment Control
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. Erosion Control (Section 01564)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
- e. METHOD OF PAYMENT: Payment will be made on a lump sum basis in accordance with the Contractor's Schedule of Values which shall be broken down into sufficient detail for Engineer to adequately review progress payment amounts.
- f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.

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4. BID ITEM NUMBER: 4

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Utility clearance/support during construction
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents to complete any required utility clearance & support as required for successful completion of the Project. Work shall generally include, but is not necessarily limited to;
- i. Contact 811/One Call Center/New York Dig Safely and utility companies and work with utility companies to properly deal with all utilities affected by the work, including both overhead and underground utilities (all that are affected).
  - ii. Coordinate with affected utilities to mark-out utilities and establish clearance and support, and temporary and/or permanent relocation requirements, and confirm as-built information requirements.
  - iii. Temporary and permanent relocation of affected utilities and/or a temporary means of providing service to local residents and continuing service during all phases of construction.
  - iv. Provide and maintain support of utilities.
  - v. Provide verification to the Owner and Engineer, in the form of letters or other acceptable documents (e.g.: email), throughout the work, prior to final roadway paving and prior to issuance of Substantial Completion of the work, from affected utilities that their utilities have been acceptably cleared, supported, relocated, and restored for permanent service, adequate as-built/record information has been provided, and that service has been acceptably maintained throughout construction.
    1. Record as-built information (e.g: utility identification such as gas), plan location and elevations/depths (note all changes in elevation and direction), pipe/conduit types and diameters, concrete encasement or special embedment, other information deemed necessary by the utility companies, etc., on the Contract Drawings and in supplementary notebooks as necessary, and provide to Engineer and utility companies at the completion of the work.
- c. WORK INCLUDED UNDER THIS ITEM:
- i. General Requirements (Sections 01010 through 01700)
  - ii. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
- i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Pavement & Sidewalk Installation
- e. METHOD OF PAYMENT: Payment for this item will be made on a unit price in accordance with the Contractor's unit price bid.
- f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.

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5. BID ITEM NUMBER: 5

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Site work & site restoration



- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents to complete any required site work and restoration required for successful completion of the Project.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. General Requirements (Sections 01010 through 01700)
    - ii. Site Clearing (Section 02110)
    - iii. Site Rehabilitation (Section 02980)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Pavement & Sidewalk Installation
  - e. METHOD OF PAYMENT: Payment for this item will be made on a unit price in accordance with the Contractor's unit price bid.
  - f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.
- 

6. BID ITEM NUMBER: 6

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water main & appurtenances installation - 8"
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new polyethylene wrapped 8-inch nominal diameter class 52 ductile iron water main, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill, and installation of thrust blocks and mechanical joint restraints per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and shall complete pressure and leakage testing (Section 02674) and disinfection (Section 02675) as required for the successful installation of water main.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheeting and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Furnish & Install 8-Inch Ductile Iron Water Main & Fittings (Section 02661)
  - ix. Pressure Testing of Water Distribution Systems (Section 02674)
  - x. Disinfection of Water Distribution Systems (Section 02675)
  - xi. Protection of Existing Facilities (Section 02205)
  - xii. Thrust Blocks (Section 03001 and 02661)

- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Water Valves and Hydrants (Section 02662)
    - iv. Pavement & Sidewalk Installation
    - v. Water Service Lines (Bid Items 13 & 14)
  - e. METHOD OF PAYMENT:
    - i. Payment for this item will be made on a unit price per linear foot basis and in accordance with Contractor's unit price bid.
  - f. MEASUREMENT & LIMITS:
    - i. The quantity for which payment will be made shall be the total linear footage of 8-inch diameter water main and fittings installed complete as specified and measured along the centerline of the installed pipe & fittings.
- 

7. BID ITEM NUMBER: 7

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water main & appurtenances installation - 6"
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new polyethylene wrapped 6-inch nominal diameter class 52 ductile iron water main, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill, and installation of thrust blocks and mechanical joint restraints per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and shall complete pressure and leakage testing (Section 02674) and disinfection (Section 02675) as required for the successful installation of water main.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheeting and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Furnish & Install 8-Inch Ductile Iron Water Main & Fittings (Section 02661)
  - ix. Pressure Testing of Water Distribution Systems (Section 02674)
  - x. Disinfection of Water Distribution Systems (Section 02675)
  - xi. Protection of Existing Facilities (Section 02205)
  - xii. Thrust Blocks (Section 03001 and 02661)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Water Valves and Hydrants (Section 02662)
  - iv. Pavement & Sidewalk Installation
  - v. Water Service Lines (Bid Items 13 & 14)

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price per linear foot basis and in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

- i. The quantity for which payment will be made shall be the total linear footage of 6-inch diameter water main and fittings installed complete as specified and measured along the centerline of the installed pipe & fittings.

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8. BID ITEM NUMBER: 8

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water main & appurtenances installation - 4"

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:

- i. Provide and install new polyethylene wrapped 4-inch nominal diameter class 52 ductile iron water main, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents
- ii. Provide and install all required excavation, installation of pipe embedment and backfill, and installation of thrust blocks and mechanical joint restraints per the Contract Documents
- iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and shall complete pressure and leakage testing (Section 02674) and disinfection (Section 02675) as required for the successful installation of water main.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Pavement Cutting (Section 02112)
- iii. Protection of Existing Facilities (Section 02205)
- iv. Trenching (Section 02225)
- v. Compaction (Section 02228)
- vi. Sheeting and Bracing (Section 02161)
- vii. Removal of Water (Section 02141)
- viii. Furnish & Install 8-Inch Ductile Iron Water Main & Fittings (Section 02661)
- ix. Pressure Testing of Water Distribution Systems (Section 02674)
- x. Disinfection of Water Distribution Systems (Section 02675)
- xi. Protection of Existing Facilities (Section 02205)
- xii. Thrust Blocks (Section 03001 and 02661)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein
- ii. Rock Removal (Section 02226)
- iii. Water Valves and Hydrants (Section 02662)
- iv. Pavement & Sidewalk Installation
- v. Water Service Lines (Bid Items 13 & 14)

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price per linear foot basis and in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

- i. The quantity for which payment will be made shall be the total linear footage of 4-inch diameter water main and fittings installed complete as specified and measured along

the centerline of the installed pipe & fittings.

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9. BID ITEM NUMBER: 9

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water main removal including cut & capping existing main
  - b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to remove existing water mains, fittings and appurtenances including the cut & capping of the existing mains as detailed on the Contract Documents and provide proper backfill and compaction as required for successful completion of this bid item.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. General Requirements (Sections 01010 through 01700)
    - ii. Demolition (Section 02030)
    - iii. Pavement Cutting (Section 02112)
    - iv. Protection of Existing Facilities (Section 02205)
    - v. Trenching (Section 02225)
    - vi. Compaction (Section 02228)
    - vii. Sheet piling and Bracing (Section 02161)
    - viii. Removal of Water (Section 02141)
    - ix. Thrust Blocks (Section 03001 and 02661)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Pavement & Sidewalk Installation
  - e. METHOD OF PAYMENT: Payment for this item will be on a unit price linear foot basis in accordance with the Contractor's bid.
  - f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total linear footage of removed water main including fittings & appurtenances, complete or specified and measured along the centerline of the removed pipe & fittings.
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10. BID ITEM NUMBER: 10

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Valve box removal & disposal
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to remove existing valve boxes and covers as detailed on the Contract Documents and provide proper backfill and compaction as required for successful completion of this bid item.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Demolition (Section 02030)
  - iii. Pavement Cutting (Section 02112)
  - iv. Protection of Existing Facilities (Section 02205)
  - v. Trenching (Section 02225)
  - vi. Compaction (Section 02228)
  - vii. Sheet piling and Bracing (Section 02161)
  - viii. Removal of Water (Section 02141)
  - ix. Thrust Blocks (Section 03001 and 02661)

- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Pavement & Sidewalk Installation
  - e. METHOD OF PAYMENT: Payment for this item will be on a unit price basis in accordance with the Contractor's bid.
  - f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of removed units, complete or specified. One unit shall constitute the existing valve box and cover.
- 

11. BID ITEM NUMBER: 11

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Buried gate valve Installation - 8"
  - b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to furnish, install and test 8-inch gate valves, including valve boxes and cover, thrust blocks, and anchoring/mechanical joint restraints as shown on the Contract Drawings and as specified herein.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. General Requirements (Section 01010 through 01700)
    - ii. Furnish and Install 8-Inch Gate Valve, Valve Box & Cover (Section 02662)
    - iii. Concrete (Section 03001)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Pavement & Sidewalk Installation
    - iv. Water Service Lines (Bid Items 13 & 14)
    - v. 8-Inch Ductile Iron Water Main & Fittings, In Place
    - vi. Final Cleanup and Site Restoration (Bid Item 5)
    - vii. Hydrant Assembly (Bid Item 17)
  - e. METHOD OF PAYMENT: Payment for this item will be made on a unit price in accordance with the Contractor's unit price bid.
  - f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new 8-inch gate valve, valve box, and cover with associated thrust block and anchoring/mechanical joint restraint.
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12. BID ITEM NUMBER: 12

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Buried gate valve installation - 4"
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to furnish, install and test 4-inch gate valves, including valve boxes and cover, thrust blocks, and anchoring/mechanical joint restraints as shown on the Contract Drawings and as specified herein.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Section 01010 through 01700)
  - ii. Furnish and Install 8-Inch Gate Valve, Valve Box & Cover (Section 02662)
  - iii. Concrete (Section 03001)

- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Pavement & Sidewalk Installation
    - iv. Water Service Lines (Bid Items 13 & 14)
    - v. 8-Inch Ductile Iron Water Main & Fittings, In Place
    - vi. Final Cleanup and Site Restoration (Bid Item 5)
    - vii. Hydrant Assembly (Bid Item 17)
  - e. METHOD OF PAYMENT: Payment for this item will be made on a unit price in accordance with the Contractor's unit price bid.
  - f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new 4-inch gate valve, valve box, and cover with associated thrust block and anchoring/mechanical joint restraint.
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13. BID ITEM NUMBER: 13

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water service line installation - same side
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to furnish and install a water service line from the water main to the curb stop, including and size adapters and appurtenances necessary to transition into the existing water service line at the property boundary, saddle with corporation stop valve, curb box, curb stop, concrete bearing block, and curb stop encasement (as required) by open cut methods as shown on the Contract Documents and specified herein. This work is for water services on the same (near) side of the proposed water main.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheeting and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Water Service Lines (Bid Items 13 & 14)
  - ix. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Water Valves and Hydrants (Section 02662)
  - iv. Pavement & Sidewalk Installation
  - v. Furnish & Install 8-Inch Ductile Iron Water Main & Fittings (Section 02661)
  - vi. Pressure Testing of Water Distribution Systems (Section 02674)
  - vii. Disinfection of Water Distribution Systems (Section 02675)
  - viii. Thrust Blocks (Section 03001 and 02661)
- e. METHOD OF PAYMENT: Payment for this item will be on a unit price basis in accordance with the Contractor's bid.
- f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total

number of installed units, complete or specified. One unit shall constitute the new k-copper water service line, saddle with corporation stop valve, curb box, curb stop, concrete bearing block, curb stop encasement (as required), and coupling or size/transition adapter to connect to the existing service at the property boundary.

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14. BID ITEM NUMBER: 14

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water service line installation - opposite side
  - b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to furnish and install a water service line from the water main to the curb stop, including and size adapters and appurtenances necessary to transition into the existing water service line at the property boundary, saddle with corporation stop valve, curb box, curb stop, concrete bearing block, and curb stop encasement (as required) by open cut methods as shown on the Contract Documents and specified herein. This work is for water services on the opposite (far) side of the proposed water main.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. General Requirements (Sections 01010 through 01700)
    - ii. Pavement Cutting (Section 02112)
    - iii. Protection of Existing Facilities (Section 02205)
    - iv. Trenching (Section 02225)
    - v. Compaction (Section 02228)
    - vi. Sheeting and Bracing (Section 02161)
    - vii. Removal of Water (Section 02141)
    - viii. Water Service Lines (Bid Items 13 & 14)
    - ix. Protection of Existing Facilities (Section 02205)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Water Valves and Hydrants (Section 02662)
    - iv. Pavement & Sidewalk Installation
    - v. Furnish & Install 8-Inch Ductile Iron Water Main & Fittings (Section 02661)
    - vi. Pressure Testing of Water Distribution Systems (Section 02674)
    - vii. Disinfection of Water Distribution Systems (Section 02675)
    - viii. Thrust Blocks (Section 03001 and 02661)
  - e. METHOD OF PAYMENT: Payment for this item will be on a unit price basis in accordance with the Contractor's bid.
  - f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new k-copper water service line, saddle with corporation stop valve, curb box, curb stop, concrete bearing block, curb stop encasement (as required), and coupling or size/transition adapter to connect to the existing service at the property boundary.
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15. BID ITEM NUMBER: 15

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water curb box removal
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to remove existing water curb boxes as detailed on the Contract Documents and provide proper backfill and compaction as required for

successful completion of this bid item.

- c. WORK INCLUDED UNDER THIS ITEM:
    - i. General Requirements (Sections 01010 through 01700)
    - ii. Demolition (Section 02030)
    - iii. Pavement Cutting (Section 02112)
    - iv. Protection of Existing Facilities (Section 02205)
    - v. Trenching (Section 02225)
    - vi. Compaction (Section 02228)
    - vii. Sheeting and Bracing (Section 02161)
    - viii. Removal of Water (Section 02141)
    - ix. Thrust Blocks (Section 03001 and 02661)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein
    - ii. Rock Removal (Section 02226)
    - iii. Pavement & Sidewalk Installation
  - e. METHOD OF PAYMENT: Payment for this item will be on a unit price basis in accordance with the Contractor's bid.
  - f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of removed units, complete or specified. One unit shall constitute the existing curb box.
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16. BID ITEM NUMBER: 16

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Water main connections to existing mains
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new polyethylene wrapped class 52 ductile iron water main, fittings, reducer(s), restrained couplings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents to connect to the existing water mains.
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill, and installation of thrust blocks and mechanical joint restraints per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and shall complete pressure and leakage testing (Section 02674) and disinfection (Section 02675) as required for the successful installation of water main connections to existing mains.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheeting and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Furnish & Install Ductile Iron Water Main & Fittings (Section 02661)
  - ix. Pressure Testing of Water Distribution Systems (Section 02674)
  - x. Disinfection of Water Distribution Systems (Section 02675)
  - xi. Protection of Existing Facilities (Section 02205)



xii. Thrust Blocks (Section 03001 and 02661)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein
- ii. Rock Removal (Section 02226)
- iii. Water Valves and Hydrants (Section 02662)
- iv. Pavement & Sidewalk Installation
- v. Water Service Lines (Bid Items 13 & 14)

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price basis and in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

The quantity for which payment will be made shall be the quantity of water main connections to existing mains installed complete as specified.

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17. BID ITEM NUMBER: 17

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Flushing hydrant installation

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to furnish and install flushing hydrants, gate valves, valve box and cover, reducer fittings, pipe lateral, and any required fittings or appurtenances necessary for a complete flushing hydrant installation at the locations shown on the Contract Documents and as specified herein.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Pavement Cutting (Section 02112)
- iii. Protection of Existing Facilities (Section 02205)
- iv. Trenching (Section 02225)
- v. Compaction (Section 02228)
- vi. Sheeting and Bracing (Section 02161)
- vii. Removal of Water (Section 02141)
- viii. Furnish & Install Ductile Iron Water Main & Fittings (Section 02661)
- ix. Water Valves and Hydrants (Section 02662)
- x. Pressure Testing of Water Distribution Systems (Section 02674)
- xi. Disinfection of Water Distribution Systems (Section 02675)
- xii. Protection of Existing Facilities (Section 02205)
- xiii. Thrust Blocks (Section 03001 and 02661)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein
- ii. Rock Removal (Section 02226)
- iii. Pavement & Sidewalk Installation
- iv. Water Service Lines (Bid Items 13 & 14)

e. METHOD OF PAYMENT: Payment for this item will be made on a unit price basis for the number of units (flushing hydrant assemblies) installed, complete as specified and in accordance with the Contractor's unit price bid.

f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of installed units. One unit (flushing hydrant assembly) shall consist of a flushing hydrant, gate valve, valve box and cover, reducer fittings, pipe lateral, and any required fittings or appurtenances necessary for a complete flushing hydrant installation.

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18. BID ITEM NUMBER: 18

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Air release valve assembly installation
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall provide all labor, materials, and equipment necessary to furnish, install and test the air relief valve, ball valve, nipples, inflow preventer assembly, restrained couplings and manhole structure as shown on the Contract Drawings and specified herein.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Section 01010 through 01700)
  - ii. Trenching (Section 02225)
  - iii. Sheeting and Bracing (Section 02161)
  - iv. Removal of Water (Section 02141)
  - v. Furnish and Install Air Relief Valve Assembly and Manhole (Section 02662)
  - vi. Concrete (Section 03001)
  - vii. Precast Concrete Structures (Section 03350)
  - viii. Non-Shrink Grout (Section 04070)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Pavement & Sidewalk Installation
  - iv. Water Service Lines (Bid Items 13 & 14)
  - v. 4-Inch Ductile Iron Water Main & Fittings, In Place
  - vi. Final Cleanup and Site Restoration (Bid Item 5)
  - vii. Hydrant Assembly (Bid Item 17)
- e. METHOD OF PAYMENT: Payment for this item will be made on a unit price in accordance with the Contractor's unit price bid.
- f. MEASUREMENT & LIMITS: The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new air relief valve, ball valve, nipple(s), inflow preventer assembly, ductile iron tee and flanges, restrained couplings, and manhole structure, steps, extension rings, lid and frame as indicated on the Contract Documents.

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19. BID ITEM NUMBER: 19

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sewer main installation - 8"
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new 8-inch sanitary sewer main, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and specified leakage testing (Section 02660) as required for the successful installation of sanitary sewer main.
- c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheet piling and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Furnish & Install 8-Inch Sanitary Sewer Main & Fittings (Section 02601)
  - ix. Polyvinyl Chloride Sewer Pipe (Section 02732)
  - x. Pressure Testing of Sanitary Sewer (Section 02660)
  - xi. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
- i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Sanitary Sewer Lateral Installation
  - iv. Sewer Bypass Pumping (Section 02665)
  - v. Installation of Sanitary Sewer Manhole Assemblies
  - vi. Pavement & Sidewalk Installation
- e. METHOD OF PAYMENT:
- i. Payment for this item will be made on a unit price per linear foot basis and in accordance with Contractor's unit price bid.
- f. MEASUREMENT & LIMITS:
- i. The quantity for which payment will be made shall be the total linear footage of 8-inch diameter sanitary sewer main and fittings installed complete as specified and measured along the centerline of the installed pipe & fittings.

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20. BID ITEM NUMBER: 20

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Existing sewer main removal & disposal
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
- i. Remove and dispose of existing sanitary sewer main, fittings & appurtenances as detailed within the Contract Documents
  - ii. Provide and install all required excavation, installation of backfill per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) as required for the successful removal and disposal of sewer main.
- c. WORK INCLUDED UNDER THIS ITEM:
- i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheet piling and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
- i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)

iii. Pavement & Sidewalk Installation

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price per linear foot basis and in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

- i. The quantity for which payment will be made shall be the total linear footage of sanitary sewer main and fittings removed and disposed of as specified and measured along the centerline of the removed pipe & fittings.

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21. BID ITEM NUMBER: 21

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sewer manhole installation

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:

- i. Provide and install new sanitary sewer manhole assemblies including precast concrete base, riser and top sections with grade rings, frame and covers, steps, flexible pipe boots, manhole bench and any miscellaneous appurtenances in conformity with the lines and grades as detailed within the Contract Documents
- ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
- iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and specified leakage testing for structures (Section 02660) as required for the successful installation of sanitary sewer manhole assemblies.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Pavement Cutting (Section 02112)
- iii. Protection of Existing Facilities (Section 02205)
- iv. Trenching (Section 02225)
- v. Compaction (Section 02228)
- vi. Sheeting and Bracing (Section 02161)
- vii. Removal of Water (Section 02141)
- viii. Pressure Testing of Sanitary Sewer (Section 02660)
- ix. Protection of Existing Facilities (Section 02205)
- x. Concrete (Section 03001)
- xi. Precast Concrete Structures (Section 03350)
- xii. Non-Shrink Grout (Section 04070)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein
- ii. Rock Removal (Section 02226)
- iii. Furnish & Install 8-Inch Sanitary Sewer Main & Fittings (Section 02601)
- iv. Polyvinyl Chloride Sewer Pipe (Section 02732)
- v. Sanitary Sewer Lateral Installation
- vi. Sewer Bypass Pumping (Section 02665)
- vii. Installation of Sanitary Sewer Manhole Assemblies
- viii. Pavement & Sidewalk Installation

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

- i. The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new precast concrete base, riser and top sections with grade rings, frame and covers, steps, flexible pipe boots, manhole bench and any miscellaneous appurtenances as indicated on the Contract Documents.

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22. BID ITEM NUMBER: 22

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sewer manhole installation - drop manhole

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:

- i. Provide and install new sanitary sewer manhole assemblies including precast concrete base, riser and top sections with grade rings, frame and covers, steps, flexible pipe boots, manhole bench, drop pipe, fittings, and any miscellaneous appurtenances in conformity with the lines and grades as detailed within the Contract Documents
- ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
- iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and specified leakage testing for structures (Section 02660) as required for the successful installation of sanitary sewer manhole assemblies.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Pavement Cutting (Section 02112)
- iii. Protection of Existing Facilities (Section 02205)
- iv. Trenching (Section 02225)
- v. Compaction (Section 02228)
- vi. Sheet piling and Bracing (Section 02161)
- vii. Removal of Water (Section 02141)
- viii. Pressure Testing of Sanitary Sewer (Section 02660)
- ix. Protection of Existing Facilities (Section 02205)
- x. Concrete (Section 03001)
- xi. Precast Concrete Structures (Section 03350)
- xii. Non-Shrink Grout (Section 04070)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein
- ii. Rock Removal (Section 02226)
- iii. Furnish & Install 8-Inch Sanitary Sewer Main & Fittings (Section 02601)
- iv. Polyvinyl Chloride Sewer Pipe (Section 02732)
- v. Sanitary Sewer Lateral Installation
- vi. Sewer Bypass Pumping (Section 02665)
- vii. Installation of Sanitary Sewer Manhole Assemblies
- viii. Pavement & Sidewalk Installation

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

- i. The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new precast concrete base,

riser and top sections with grade rings, frame and covers, steps, flexible pipe boots, manhole bench, drop pipe, fittings, and any miscellaneous appurtenances as indicated on the Contract Documents.

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23. BID ITEM NUMBER: 23

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Existing sewer manhole removal & disposal
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Remove existing sanitary sewer manhole assemblies including precast concrete base, riser and top sections with grade rings, frame and covers, steps, flexible pipe boots, manhole bench, drop pipe, fittings, and any miscellaneous appurtenances in conformity with the lines and grades as detailed within the Contract Documents
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) as required for the successful removal and disposal of existing sanitary sewer manhole assemblies.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheet piling and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Furnish & Install 8-Inch Sanitary Sewer Main & Fittings (Section 02601)
  - iv. Pressure Testing of Sanitary Sewer (Section 02660)
  - v. Polyvinyl Chloride Sewer Pipe (Section 02732)
  - vi. Sanitary Sewer Lateral Installation
  - vii. Sewer Bypass Pumping (Section 02665)
  - viii. Installation of Sanitary Sewer Manhole Assemblies
  - ix. Pavement & Sidewalk Installation
  - x. Concrete (Section 03001)
  - xi. Precast Concrete Structures (Section 03350)
  - xii. Non-Shrink Grout (Section 04070)
- e. METHOD OF PAYMENT:
  - i. Payment for this item will be made on a unit price in accordance with Contractor's unit price bid.
- f. MEASUREMENT & LIMITS:
  - i. The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the existing precast concrete base, riser and top sections with grade rings, frame and covers, steps, flexible pipe boots, manhole bench, drop pipe, fittings, and any miscellaneous appurtenances as indicated on the Contract Documents.

24. BID ITEM NUMBER: 24

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sewer lateral replacement - same side
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new 4-inch nominal diameter sanitary sewer laterals, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents for the same (near) side services that are closest to the proposed sewer main.
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and specified leakage testing (Section 02660) as required for the successful installation of sanitary sewer main.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheet piling and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Furnish & Install 4-Inch Sanitary Sewer Laterals & Fittings (Section 02601)
  - ix. Polyvinyl Chloride Sewer Pipe (Section 02732)
  - x. Pressure Testing of Sanitary Sewer (Section 02660)
  - xi. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Sewer Bypass Pumping (Section 02665)
  - iv. Installation of Sanitary Sewer Manhole Assemblies
  - v. Pavement & Sidewalk Installation
- e. METHOD OF PAYMENT:
  - i. Payment for this item will be made on a unit price in accordance with Contractor's unit price bid.
- f. MEASUREMENT & LIMITS:
  - i. The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new 4-inch nominal diameter sanitary sewer lateral, fittings, transition couplings to tie into the existing service line at the property boundary, appurtenances, etc. as required for successful installation as indicated on the Contract Documents.

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25. BID ITEM NUMBER: 25

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sewer lateral replacement - far side
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the

Contract Documents and as outlined below:

- i. Provide and install new 4-inch nominal diameter sanitary sewer laterals, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents for the far (opposite) side services that are farthest from the proposed sewer main.
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and specified leakage testing (Section 02660) as required for the successful installation of sanitary sewer main.
- c. WORK INCLUDED UNDER THIS ITEM:
- i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheet piling and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Furnish & Install 4-Inch Sanitary Sewer Laterals & Fittings (Section 02601)
  - ix. Polyvinyl Chloride Sewer Pipe (Section 02732)
  - x. Pressure Testing of Sanitary Sewer (Section 02660)
  - xi. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
- i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Sewer Bypass Pumping (Section 02665)
  - iv. Installation of Sanitary Sewer Manhole Assemblies
  - v. Pavement & Sidewalk Installation
- e. METHOD OF PAYMENT:
- i. Payment for this item will be made on a unit price in accordance with Contractor's unit price bid.
- f. MEASUREMENT & LIMITS:
- i. The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new 4-inch nominal diameter sanitary sewer lateral, fittings, transition couplings to tie into the existing service line at the property boundary, appurtenances, etc. as required for successful installation as indicated on the Contract Documents.

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26. BID ITEM NUMBER: 26

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sewer bypass pumping
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents.
- c. WORK INCLUDED UNDER THIS ITEM:
- i. General Requirements (Sections 01010 through 01700)
  - ii. Sewer Bypass Pumping (Section 02665)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
- i. Work that may be identified under other Bid Items, but not specifically identified herein



- e. METHOD OF PAYMENT:
    - i. Payment will be made on a lump sum basis in accordance with the Contractor's Schedule of Values which shall be broken down into sufficient detail for Engineer to adequately review progress payment amounts.
  - f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.
- 

27. BID ITEM NUMBER: 27

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sidewalk demolition & replacement
  - b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents including, but not necessarily limited to:
    - i. Complete demolition and removal of the existing sidewalk and subbase, provide new geotextile, subbase and concrete sidewalk for the widths and lengths shown on the Contract Documents.
    - ii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) and concrete testing (Section 03001) as required for the successful installation of sidewalk installation.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. General Requirements (Sections 01010 through 01700)
    - ii. Pavement Cuts (Section 02112)
    - iii. Removal of Water (Section 02141)
    - iv. Sheeting and Bracing (Section 02161)
    - v. Protection of Existing Facilities (Section 02205)
    - vi. Trenching (Section 02225)
    - vii. Compaction (Section 02228)
    - viii. Concrete Sidewalk Installation (Section 03001)
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Work that may be identified under other Bid Items, but not specifically identified herein.
    - ii. Pavement Installation
  - e. METHOD OF PAYMENT:
    - i. Payment for this item will be made on a unit price per square foot basis and in accordance with Contractor's unit price bid.
  - f. MEASUREMENT & LIMITS:
    - i. The quantity for which payment will be made shall be the total square footage of square footage of new sidewalk replaced as specified and measured along the centerline of the sidewalk and multiplied by the width.
- 

28. BID ITEM NUMBER: 28

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Asphalt demolition & replacement
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents including, but not necessarily limited to, the demolition and disposal of

the existing asphalt and subbase, installation of new geotextile, subbase, and hot mix asphalt.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Pavement Cuts (Section 02112)
- iii. Removal of Water (Section 02141)
- iv. Sheeting and Bracing (Section 02161)
- v. Protection of Existing Facilities (Section 02205)
- vi. Trenching (Section 02225)
- vii. Compaction (Section 02228)
- viii. Hot Mix Asphalt Paving (Section 02510)
- ix. Site Rehabilitation (Section 02980)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein.
- ii. Concrete Sidewalk Installation (Section 03001)

e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price per ton basis and in accordance with Contractor's unit price bid.

f. MEASUREMENT & LIMITS:

- i. The quantity for which payment will be made shall be the total tonnage of new hot mix asphalt replaced as specified and measured within the payment limits shown on the Contract Drawings.

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29. BID ITEM NUMBER: 29

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Preparation of As-Built Drawings

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents to provide the Engineer and Owner with As-Built Drawings with the following information:

- i. Indicating (in red color to clearly show changes from construction plans) actual horizontal and vertical location(s) of all surface features and underground utilities installed.
- ii. Show the actual field location of all underground utilities including lengths of pipes, rim elevations, frame elevations, material of pipe, inverts, percents-of-grade for sanitary and storm sewers, ties to all wyes and curb boxes, lengths of pipe between all appurtenances (e.g.: valves, tees, bends, hydrants, etc.).
- iii. Show light poles, parking spaces, curbing, trees, sidewalks, bench marks, retention/detention areas, fences, berms, retaining walls, dumpsters, and any other pertinent site features.
- iv. Include road and utility profiles, as applicable.
- v. Contractor shall sign and date As-Built drawings that indicates the work has been completed in accordance with the approved drawings and specifications and any authorized changes, and that the plans shown the actual facilities and infrastructure as they were installed in the field.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Construction Documentation (Section 01380)

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified

herein.

e. METHOD OF PAYMENT:

- i. Payment will be made on a lump sum basis in accordance with the Contractor's Bid.

f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.

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30. BID ITEM NUMBER: 30

a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Construction Allowance

b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents as deemed necessary by the Owner & Engineer if additional unforeseen work is encountered for completion of the project. The allowance will only be utilized if specified in writing by Owner or Engineer for specific tasks deemed necessary for completion of the Project.

c. WORK INCLUDED UNDER THIS ITEM:

- i. General Requirements (Sections 01010 through 01700)
- ii. Any other applicable sections/items as deemed necessary by the Owner & Engineer for completion of the work.

d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:

- i. Work that may be identified under other Bid Items, but not specifically identified herein.

e. METHOD OF PAYMENT:

- i. Payment will be made on a lump sum basis as detailed in writing by Owner or Engineer prior to completing any additional work to be paid for with the Construction Allowance.

f. MEASUREMENT & LIMITS: Not applicable as the quantity for which payment will be made shall be the lump sum as required for the Contractor to successfully complete the Project in accordance with the Contract Documents.

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**Bid Alternate Items:**

1. BID ITEM NUMBER: 1A

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Sidewalk Replacement
  - b. BID ITEM SUPPLEMENTARY DESCRIPTION: Same as Bid Item 27.
  - c. WORK INCLUDED UNDER THIS ITEM:
    - i. Same as Bid Item 27.
  - d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
    - i. Same as Bid Item 27.
  - e. METHOD OF PAYMENT:
    - i. Same as Bid Item 27.
  - f. MEASUREMENT & LIMITS:
    - i. Same as Bid Item 27.
- 

2. BID ITEM NUMBER: 2A

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Catch basin replacement
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new catch basin assembly and appurtenances in conformity with the lines and grades as detailed within the Contract Documents. This cost shall include the removal and disposal of the existing catch basin and appurtenances
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) as required for the successful installation of the catch basin replacements.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheeting and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Concrete (Section 03001)
  - ix. Precast Concrete Structures (Section 03350)
  - x. Non-Shrink Grout (Section 04070)
  - xi. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Pavement & Sidewalk Installation
- e. METHOD OF PAYMENT:

- i. Payment for this item will be made on a unit price in accordance with Contractor's unit price bid.
  - f. MEASUREMENT & LIMITS:
    - i. The quantity for which payment will be made shall be the total number of installed units, complete or specified. One unit shall constitute the new catch basin assembly with required materials and appurtenances, etc. as required for successful installation as indicated on the Contract Documents.
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3. BID ITEM NUMBER: 3A

- a. BID ITEM DESCRIPTION (AS DETAILED ON BID FORM): Stormwater main replacement
- b. BID ITEM SUPPLEMENTARY DESCRIPTION: Under this item, the Contractor shall furnish all materials, labor, tools, and construct the general construction work as called for in the Contract Documents and as outlined below:
  - i. Provide and install new high density polyethylene stormwater pipe, fittings & appurtenances in conformity with the lines and grades as detailed within the Contract Documents.
  - ii. Provide and install all required excavation, installation of pipe embedment and backfill per the Contract Documents.
  - iii. The Contractor shall hire a 3rd party testing firm to complete compaction testing (Section 02228) as required for the successful installation of stormwater main.
- c. WORK INCLUDED UNDER THIS ITEM:
  - i. General Requirements (Sections 01010 through 01700)
  - ii. Pavement Cutting (Section 02112)
  - iii. Protection of Existing Facilities (Section 02205)
  - iv. Trenching (Section 02225)
  - v. Compaction (Section 02228)
  - vi. Sheeting and Bracing (Section 02161)
  - vii. Removal of Water (Section 02141)
  - viii. Protection of Existing Facilities (Section 02205)
- d. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM:
  - i. Work that may be identified under other Bid Items, but not specifically identified herein
  - ii. Rock Removal (Section 02226)
  - iii. Pavement & Sidewalk Installation
- e. METHOD OF PAYMENT:
  - i. Payment for this item will be made on a unit price per linear foot basis and in accordance with Contractor's unit price bid.
- f. MEASUREMENT & LIMITS:
  - i. The quantity for which payment will be made shall be the total linear footage of stormwater main and fittings installed complete as specified and measured along the centerline of the installed pipe & fittings.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

## SECTION 01039

### COORDINATION AND MEETINGS

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Coordination.
- B. Field engineering.
- C. Preconstruction conference.
- D. Site mobilization conference.
- E. Progress meetings.
- F. Connection conference.

##### 1.2. COORDINATION

- A. Coordinate scheduled work sequences and related operations beforehand with appropriate local, county, or state officials and agencies including affected property owners, when Project is to be located in or adjacent to a public right-of-way.
- B. Coordinate scheduling, submittals, and Work of the various Specification sections to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections in preparation for Substantial Completion and for portions of work designated for Owner's partial utilization.
- G. After Owner's use of facilities, coordinate access to Site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

##### 1.3. FIELD ENGINEERING

- A. Control datum for survey work is that provided by Engineer as shown on the Drawings.

- B. Engineer reserves right to inspect or check results of Contractor field engineering services specified herein for conformance with the Contract Documents.
- C. Contractor shall provide field engineering services as follows:
  - 1. Employ a land surveyor licensed in the State of New York.
  - 2. Protect all control and reference points. Accurately replace any such point which is damaged or moved.
  - 3. Provide correct lines, grades, locations and elevations for construction of all Project components.
  - 4. Provide correct information for preparation of Project record documents.
  - 5. Submit a copy of a registered Site drawing and certificate signed by the land surveyor who provided field engineering services that the locations and elevations of the Work are in conformance with the Contract Documents.

#### 1.4. PRECONSTRUCTION CONFERENCE

- A. Engineer will schedule a conference after the Effective Date of Agreement.
- B. Attendance Required - Owner, Engineer, Contractor, Department of Health, Town Water Operator, Essex County Planning and the Office of Community Renewal.
- C. Agenda
  - 1. Distribution of extra sets of Contract Documents.
  - 2. Submission of list of Subcontractors, list of products, Schedule of Submittals, Schedule of Values, and Progress Schedule.
  - 3. Designation of personnel representing the parties in contract, and Engineer.
  - 4. Procedures and processing of field decisions, submittals, substitutions, Applications for Payments, proposal requests, Change Orders and Contract closeout procedures.
  - 5. Scheduling.
  - 6. Scheduling activities of testing laboratory.
  - 7. Requirements of regulatory agencies.
  - 8. Use of premises by Owner and Contractor.
  - 9. Temporary facilities to be provided by Owner; and by Contractor.
  - 10. Procedures for testing.
  - 11. Procedures for maintaining record documents.
  - 12. Maintenance of vehicular and pedestrian traffic.
  - 13. Periodic cleanup of Site.



14. Notification of utilities' owners.

D. Engineer will record minutes and distribute copies to participants.

#### 1.5. SITE MOBILIZATION CONFERENCE

A. Engineer and Owner will schedule a conference at the Project site prior to Contractor occupancy.

B. Attendance Required - Owner, Engineer, the NYS Office Of Community Renewal, Department of Health, Essex County Planning Department, Contractor, Contractor's superintendent, and major subcontractors.

C. Agenda

1. Use of premises by Owner and Contractor.

2. Owner's requirements and partial occupancy.

3. Construction facilities and controls provided by Owner.

4. Temporary utilities provided by Owner.

5. Survey layout.

6. Security and housekeeping procedures.

7. Schedules.

8. Procedures for testing.

9. Procedures for water main breaks during construction.

10. Procedures for maintaining record documents.

11. Requirements for disinfection of equipment.

12. Inspection and acceptance of water mains put into service during construction period.

13. Requirements of regulatory agencies, including CDBG Pre-Construction Conference Agenda items.

D. Record minutes and distribute copies within 10 days after meeting to participants and to those affected by decisions made.

#### 1.6. PROGRESS MEETINGS

A. Engineer will schedule and administer meetings throughout progress of the Work at maximum monthly intervals.

B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within 10 days to participants, and those affected by decisions made.

C. Attendance Required - Engineer, job superintendent of each prime Contractor, major Subcontractors and Suppliers, as appropriate to agenda topics for each meeting.

D. Agenda

1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems which impede planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of Progress Schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on Progress Schedule and coordination.
13. Other business relating to Work.

1.7. CONNECTION CONFERENCE

- A. Engineer will schedule a coordinating conference at least 14 days prior to connection to the existing distribution system (if required).
- B. Attendance Required - Owner, Engineer, Contractor, and job superintendent.
- C. Agenda
  1. Determine status of equipment.
  2. Ascertain presence of materials required to be at site for connection procedure.
  3. Review responsibilities of Owner and Contractor.
  4. Establish connection procedure; develop schedule(s) when appropriate.
  5. General coordination of all aspects of connection.
- D. Engineer will record minutes of meeting and distribute copies within five days to participants (if required).

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

## SECTION 01300

### SUBMITTALS

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Submittal procedures.
- B. Schedule of submittals.
- C. Shop drawings.
- D. Manufacturer's instructions.

##### 1.2. SUBMITTAL PROCEDURES

- A. Transmit each required submittal using Engineer accepted form.
- B. Number the submittals as follows:
  - 1. First: Specification section number.
  - 2. Submittal number within the Specification section.
  - 3. Review cycle number.
  - 4. Title of submittal.
  - 5. For example:
    - a. 15073-01-01 – Field lock gaskets for DIP (first review cycle)
    - b. 15073-01-02 - Field lock gaskets for DIP (second review cycle)
    - c. 15073-02-01 – Flange pipe and fittings (first review cycle)
    - d. 15073-02-02 – Flange pipe and fittings (second review cycle)
    - e. 15073-02-03 – Flange pipe and fittings (third review cycle)
- C. Identify Project, Contractor, Subcontractor, and Supplier; pertinent Drawing number and detail number(s), and Specification sections, as appropriate.
- D. Apply stamp, signed or initialed providing certification required by General Condition Article 7.16.A.2. At a minimum, stamp shall include the following information:
  - 1. Submittal Number \_\_\_\_\_
  - 2. Deviations: None \_\_\_\_\_; As Listed \_\_\_\_\_
  - 3. Reference Specification Section \_\_\_\_\_
  - 4. Reference Drawing Number \_\_\_\_\_
  - 5. Space Requirement: As Designed \_\_\_\_\_ Different, As Listed \_\_\_\_\_
  - 6. Representation is made to Owner and Engineer that Contractor has satisfied the

requirements of General Conditions Article 7.16.A.1.a through d, associated Supplementary Conditions, and that the Contractor hereby approves this submittal.

Contractor \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

- E. Schedule submittals to expedite the Project, and deliver to parties in the quantities and at the locations specified herein.
- F. Identify deviations from Contract Documents in accordance with General Conditions Article 7.16.A.3.
- G. Identify product and/or system limitations which may be detrimental to successful performance of the completed Work.
- H. Identify space requirements which differ from those designed and/or shown on the Contract Documents.
- I. Provide space for Contractor and Engineer review stamps.
- J. Revise and resubmit in accordance with General Conditions Article 7.16.E. Identify all changes made since previous submittal in a cover letter or memorandum.
- K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- L. Submittals not required will not be recognized or processed.
- M. Items shall not be fabricated or delivered without fully approved Shop Drawings.
- N. Ensure no associated work begins until associated Shop Drawings are fully approved.
- O. Fabrication prior to receiving an "Approved" or "Approved as Corrected – No Resubmittal Required" is at Contractor's risk.

#### 1.3. SCHEDULE OF SUBMITTALS

- A. Submit three copies of preliminary Schedule of Submittals in accordance with General Conditions Article 2.05.
- B. Revise and resubmit until acceptable to Engineer.

#### 1.4. SHOP DRAWINGS

- A. Provide information in accordance with General Conditions Article 7.16 as supplemented herein and as required by individual Specification sections.
- B. Shop Drawing submittals shall include all descriptive data, performance characteristics, material specifications, spare parts list, drawings, piping diagrams, wiring schematics, and shall be complete and accurate to indicate item-by-item compliance with the Contract Documents.
- C. Shop Drawings shall be drawn at scales matching those on the Drawings depicting the same items.

- D. All catalog cuts, manufacturer's specifications, drawings, and verbal descriptions shall be clearly marked to allow identification of the specific products used.
- E. If the submittal deviates from the requirements of the Specifications in any way, it shall be clearly marked in the submittal with the justifying reason stated for evaluation by Engineer.
- F. Submit five opaque reproductions to Engineer, three copies of which will be retained by the Engineer.

#### 1.5. MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, in quantities specified for shop drawings.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01310  
PROGRESS SCHEDULE

PART 1 GENERAL

1.1. SUMMARY

- A. This Specification section covers the development and utilization of the Progress Schedule. In the event of conflicts or discrepancies with any other provisions of the Contract Documents relating to such, this section shall govern.

1.2. DEFINITIONS

- A. Terms used herein shall be in accordance with the definitions set forth in the Associated General Contractor's of America (GCA) publication, "Construction Planning & Scheduling".

1.3. BASIC REQUIREMENTS

- A. Schedule and monitor all Work using Critical Path Method (CPM) techniques. Scheduling software shall be Microsoft Project.
- B. Progress Schedule shall be maintained throughout entire Contract and shall be used by Contractor to schedule, plan, organize, and execute the Work.
- C. Progress Schedule shall:
  - 1. Comply with Contract Times identified in the Agreement.
  - 2. Reflect all mandated sequencing identified in Contract Documents.
  - 3. Include adequate time for Engineer's review of submittals. Under no circumstances will the progress schedule be allowed to include Engineer review times shorter than those prescribed in Section 01300, Submittals and individual Specification sections. The need for resubmittals based on Engineer's review will not entitle Contractor to Contract Time extensions and the Progress Schedule must include adequate time for resubmittals.
  - 4. Include time required by Contract Documents based on work days lost due to inclement weather.
  - 5. Progress Schedule shall include adequate time for testing and startup.
- D. Each activity, except Notice to Proceed, shall have at least one predecessor. Each activity, except final completion, shall have at least one successor.
- E. Construction activities shall have a maximum duration of 20 work days. All durations shall be developed based on definitive manpower and resource planning.
- F. Float is not for the exclusive benefit of the Owner or Contractor and must be used in the best interest of the Project in order to maintain Contract Times. Contractor will not be allowed to sequester float through such strategies as extended activity durations, extensive crew/resource sequencing, etc.

#### 1.4. SUBMITTALS

- A. Submit the following in accordance with the procedures identified in Section 01300, Submittals:
  - 1. Preliminary 90-Day Progress Schedule
    - a. Submit one electronic version on compact disc and three 11-inch x 17-inch hard copies of bar chart within time frame identified in General Conditions Article 2.05.A.1.
    - b. Bar chart shall show the following for each activity:
      - 1) Activity ID
      - 2) Activity description
      - 3) Original duration
      - 4) Early start
      - 5) Early finish
  - 2. Detailed Baseline Progress Schedule
    - a. Submit one electronic version on compact disc and three 11-inch x 17-inch hard copies of bar chart within 30 days after acceptance of preliminary Progress Schedule.
    - b. Bar chart shall clearly identify the critical path and shall provide a tabulated listing of the following for each activity:
      - 1) Activity ID
      - 2) Activity description
      - 3) Original duration
      - 4) Percent complete
      - 5) Remaining duration
      - 6) Early start
      - 7) Early finish
      - 8) Late start
      - 9) Late finish
      - 10) Total float

#### 1.5. PROGRESS SCHEDULE ARCHITECTURE

- A. Each activity in the Progress Schedule shall include:



1. A unique activity identification (ID) number
  2. Activity description
  3. Original Duration
  4. Responsibility code assigning activities to Contractor, Subcontractors, Engineer, Owner, or other entity.
- B. Calendars - At a minimum, establish the following calendars:
1. Work day calendar excluding all holidays identified in the Contract Documents.
  2. Calendar days for activities with durations based on calendar days.

#### 1.6. PRELIMINARY 90-DAY PROGRESS SCHEDULE

- A. Include the following:
1. Detailed activities with associated logic for first 90 days after Notice to Proceed. The Preliminary 90-Day Progress Schedule shall include, but not be limited to, mobilization, site work, demolition, key procurement activities (i.e., submissions, approvals, fabrication and delivery) and all other work that will occur in the first 90 days after Notice to Proceed.
  2. The balance of the Work shall be shown in a summary log and shall include a summary of activities for construction of each proposed system.

#### 1.7. DETAILED BASELINE PROGRESS SCHEDULE

- A. Baseline Progress Schedule shall include no activity progress.
- B. Incorporate 90-day preliminary Progress Schedule.
- C. Provide sufficient detail to allow use for planning, scheduling, and control all Work included in Contract. The degree of detail shall be to the satisfaction of the Engineer, and shall account for the following Project specific items:
1. Structural breakdown of Project.
  2. Required phasing.
  3. Milestones.
  4. Maintaining operation of existing facilities.
  5. Subcontractor work plans.
  6. Crew flows and sizes.
  7. Access to site and work areas.
  8. Identification of coordination between Contractor, subcontractors, and suppliers.
  9. Testing and disinfection/connection.

10. Service transfer.
- D. In addition to a breakdown of physical construction activities specified herein, include activities for the following:
1. Submittals
  2. Engineer's review of submittals
  3. Fabrication and delivery of materials and equipment
  4. Finish milestone activity for all Functional Tests associated with a given system.
- E. The accepted baseline Progress Schedule will form the basis of the first monthly update.

#### 1.8. SCHEDULING MEETINGS

- A. Attend monthly meetings with Engineer one week prior to submitting monthly Progress Schedule updates.
- B. Review proposed activity progress completed during the period, current status of the Project, planned work for the next period, and areas where Contractor needs to coordinate with Owner and/or Engineer.

#### 1.9. REVISIONS

- A. Engineer will be the custodian of all official versions of the Progress Schedule including the 90-Day Preliminary Progress Schedule, the baseline Progress Schedule, and each acceptable subsequent monthly update included with Applications for Payment.
- B. The Owner, Engineer, and Contractor shall have the right to propose revisions to the Progress Schedule if it is deemed to be in the best interest of the Project.
- C. All Owner, Engineer, and Contractor proposed revisions must be submitted to each party no later than seven days prior to the date by which Contractor must submit monthly updates in order for proposed revisions to be considered for that update.
- D. Objections to Proposed Revisions:
1. If Owner, Engineer, and/or Contractor object to proposed revisions made by any other party, the objecting party shall provide written notice to each other party within seven days of receipt of proposed revisions, stating objections.
  2. Proposed revisions that are not mutually agreeable shall be discussed at the monthly scheduling meetings.
- E. Engineer shall have final say on acceptance or rejection of all proposed Progress Schedule revisions based solely on requirements of the Contract Documents.
- F. All Engineer accepted revisions will be incorporated into the next Progress Schedule update.

#### 1.10. RECOVERY SCHEDULES

- A. If Contractor fails to achieve planned progress, as indicated in the Progress Schedule, and lack of progress delays the critical path or an intermediate Milestone by more than 10 work

days, submit a proposed recovery schedule to Engineer identifying how Contractor will recover lost time.

- B. Failure to submit a recovery schedule and failure to cooperate with the Owner and/or Engineer in the recovery schedule process shall allow Owner the right to order Contractor to increase manpower to recover lost time, without adjustment to the Contract Price. Furthermore, Owner has the right to withhold progress payments until such time as Contractor's progress is brought into compliance with Progress Schedule.

#### 1.11. DELAYS AND EXTENSIONS OF CONTRACT TIMES

- A. When Contractor believes that Contract Times will be delayed by circumstances outside of its control, Contractor shall include the following with its notice of claim:
  - 1. Summary of all requested extensions to Contract Times.
  - 2. Cause of the delay, actions Contractor proposes to take to minimize delays, and actions Contractor proposes for Owner and/or Engineer to minimize delays.
- B. Engineer will review each claim. If acceptable to Engineer, Engineer will provide written notice to Owner within 14 days of submission, copying Contractor on correspondence, recommending that the change should be incorporated into the Progress Schedule and a Change Order should be issued providing requested extension of Contract Times. Owner will provide written notice to Contractor within 14 days of receipt of Engineer's recommendation, either concurring or denying Engineer's recommendation.
- C. If a claim submittal is not acceptable to Engineer, Engineer will provide written notice to Contractor identifying deficiencies with claim. Contractor will have 7 days from receipt of Engineer's written notice to submit a revised claim.
- D. Contract Time extensions will only be considered for events that impact Contract Times as demonstrated by acceptable claims.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.

END OF SECTION

## SECTION 01380

### CONSTRUCTION DOCUMENTATION

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Construction photographs.

##### 1.2. DESCRIPTION

- A. Take construction record photographs prior to mobilization and periodically during the course of the Work.
- B. General Contractor shall provide construction documentation in specified in this section unless otherwise noted.

##### 1.3. CONSTRUCTION PHOTOGRAPHS

- A. Digital construction photographs shall be taken at each of the major stages on construction listed below and shall be furnished to Engineer and Owner with each Application for Payment.
  - 1. Site before mobilization.
  - 2. Completion of hydrants and valves prior to backfilling.
  - 3. Existing condition of each driveway.
  - 4. Completion of work at each driveway.
  - 5. Completion of excavations for each road crossing.
  - 6. Testing of all piping, equipment, and systems.
  - 7. Completion of site restoration and landscaping.
- B. Views and Quantities Required - One view of each item.
- C. Camera used for digital photography shall be a 6.0 megapixel or greater.
- D. Electronic Copies
  - 1. Maintain database of pictures for the entire length of the Project.
  - 2. Each month, provide two CDs with electronic versions of all prints taken in the past month.
  - 3. Provide two CDs with electronic versions of all prints taken in during the course of the Project (in .jpg format) with final Application for Payment.

4. All electronic copies of photos shall be in .jpg format. All electronic copies of photos shall be arranged on CDs by date and subject. Each .jpg photo file name shall include the subject description and date.

#### 1.4. REUSE OF CONSTRUCTION DOCUMENTATION

- A. All construction documentation furnished to Owner shall become the property of the Owner and cannot be copyright or otherwise protected in a manner that prevents free reuse by either the Owner and/or Engineer.

### PART 2 PRODUCTS

#### 2.1. PRINTS

- A. Digital Progress Photos
  1. Printer
    - a. Printer shall be designed to print digital photos.
    - b. Printer shall have a minimum 4800 x 1200 dpi resolution.
  2. Color Prints
    - a. Paper - Single weight, smooth, photo-quality paper.
    - b. Finish - Smooth matte-finish.
    - c. Size - 8-inch x 10-inch.
    - d. Enclosure - Each print shall be provided in an acid-free plastic sleeve, three hole punched, for insertion into a three ring binder. Provide a suitable quantity of three-ring binders for containing all prints, labeled on the front and spine of the binder with the name and Owner's Contract number.
  3. Identify each print on front, listing:
    - a. Name and Owner's Contract number.
    - b. Subject and orientation of view (for example, "127 Maple St., looking north").
    - c. Date and time of exposure.
    - d. Contractor's numbered identification of exposure (i.e., December 2018, Photo #1).

### PART 3 EXECUTION

#### 3.1. DELIVERY OF PRINTS

- A. Preconstruction photos and negatives shall accompany the first Application for Payment. This Application for Payment will not be approved without receipt of such materials.

- B. Monthly construction photos (in both print and CD format) shall accompany each monthly Application for Payment. Monthly Applications for Payment will not be approved without receipt of such materials.
- C. Final construction photos and negatives shall accompany the final Application for Payment. This Application for Payment will not be approved without receipt of such materials.

END OF SECTION

SECTION 01400  
QUALITY CONTROL

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References and standards.
- C. Tolerances.
- D. Inspection and testing services.
- E. Testing by Contractor.
- F. Manufacturers' field services and reports.

1.2. QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over Suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions.
- C. Verify that field measurements are as indicated on Shop Drawings and as instructed by the manufacturer.
- D. If manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- E. Comply with specified standards as a minimum quality for the Work except when code requirements or equipment manufacturer requires more stringent standards.
- F. Perform Work by persons qualified to produce workmanship of specified quality.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion and disfigurement.

1.3. REFERENCES AND STANDARDS

- A. For products and workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified and/or are required by applicable codes.

1.4. TOLERANCES

- A. Monitor fabrication and installation tolerance control to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. If manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

- C. Adjust products to appropriate dimensions; position before securing products in place.

#### 1.5. TESTS AND INSPECTIONS

- A. Contractor shall employ and pay for the services of an independent testing laboratory to perform inspections, tests, and approvals as indicated in General Conditions Article 14.02.D.
- B. Independent testing laboratory will:
  - 1. Perform inspections, tests, and other services specified in the individual specification sections and as required by Engineer and Owner.
  - 2. Perform inspecting, testing, and source quality control which may occur on or off project site, as required by Engineer or Owner.
  - 3. Prepare and submit reports to the Engineer, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents. Engineer will forward copy of report(s) to Contractor.
- C. Contractor shall:
  - 1. Cooperate with independent firm; furnish samples of materials; furnish design mix, equipment, tools, storage and assistance as requested.
  - 2. Notify Engineer and independent firm 48 hours prior to expected time for operations requiring services.
  - 3. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's own use.
- D. Retesting required because of non-conformance to specified requirements shall be performed, on instructions by the Engineer, by the same independent firm which performed the initial tests and inspections, whether employed by Owner or Contractor.
- E. Costs for retesting and re-inspection will be deducted from progress payments to Contractor.

#### 1.6. MANUFACTURERS' FIELD SERVICES

- A. When additional manufacturer services are specified in other individual Specification sections, require material or product Suppliers or manufacturers to provide qualified personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, testing and adjusting, as applicable, and to initiate instructions when necessary.
- B. Report observations, Site conditions, or instructions given to applicators or installers, that are supplemental or contrary to manufacturers' written instructions.
- C. Submit report to Engineer within 30 days of observation.

### PART 2 PRODUCTS

Not used.



PART 3 EXECUTION

Not used.

END OF SECTION

## SECTION 01500

### TEMPORARY FACILITIES

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Continuity of service.
- B. Temporary Utilities - Electricity, lighting, heating, cooling, telecommunications service, water, and sanitary facilities.
- C. Temporary Controls - Barriers, enclosures and fencing, protection of the Work, water control and pollution controls.
- D. Construction Facilities - Access roads, parking, maintenance of traffic, and progress cleaning.

##### 1.2. CONTINUITY OF SERVICE

- A. Provide temporary equipment including pumps, piping, valves, bulkheads, electrical equipment and all system components necessary to maintain the existing facilities in service during construction.
- B. Provide temporary power, instrumentation, controls, and alarms necessary to assure continued facilities operation during the alterations of existing facilities components or installation of new equipment.
- C. Construction may require the closing of various gates and valves to isolate lines and services. The Owner does not guarantee that the existing gates and valves will be completely watertight. It is the Contractor's responsibility to take whatever measures are necessary to proceed with construction in the event that valves or gates leak.
- D. Provide temporary access required, including ladders, platforms, grating, walkways, and awais which comply with OSHA laws, for necessary facilities operations.
- E. Provide all line stops, wet taps and temporary bypass piping and valves required to connect new piping to existing piping, unless otherwise specified.
- F. No extra payment shall be made for any labor, materials, tools, equipment or temporary facilities required during construction. All costs therefore shall be considered to have been included in the Bid.

##### 1.3. TEMPORARY ELECTRICITY

- A. General Contractor shall provide and pay for power service required from utility source for Contractor operations, including equipment, job trailers, etc.

##### 1.4. TEMPORARY LIGHTING

- A. General Contractor shall provide and maintain lighting for Contractor operations to achieve:

1. A minimum lighting level of 2 watt/sq.ft. for construction operations.
  2. 1 watt/sq.ft. lighting to exterior staging and storage areas after dark for security purposes.
- B. General Contractor shall maintain lighting and provide routine repairs.
- C. Permanent building lighting may not be utilized during construction.

#### 1.5. TEMPORARY HEATING

- A. Existing facilities shall not be used.
- B. General Contractor shall provide and pay for heat devices and heat as required to maintain specified conditions for Contractor's construction operations.
- C. General Contractor shall maintain minimum ambient temperature of 50 degrees F in areas where construction is in progress, unless indicated otherwise in individual specification sections.

#### 1.6. TEMPORARY COOLING

- A. Existing facilities shall not be used.
- B. General Contractor shall provide and pay for cooling devices and cooling as needed to maintain specified conditions for Contractor's construction operations.
- C. Maintain maximum ambient temperature of 80 degrees F in areas where construction is in progress, unless indicated otherwise in specifications.

#### 1.7. TELECOMMUNICATIONS SERVICE

- ~~A. Contractor shall provide, maintain and pay for telecommunications service to its field office and for Engineer's field representative for the duration of the contract. Telephone services shall be paid for completely by Contractor including all connection fees, monthly fees (phone and internet), local and long distance usage charges, taxes and all other telecommunications services provided under this contract.~~
- ~~B. Provide direct line telephone services to Engineer for the duration of the contract as follows:~~
- ~~1. One dedicated telephone line with call waiting.~~
  - ~~2. One dedicated fax line.~~
- ~~C. Provide high speed internet service to Engineer's field trailer as follows:~~
- ~~1. Internet service shall include modem, cables, installation, and all other equipment necessary for a complete functioning system.~~
  - ~~2. Internet service shall be available for use within two weeks of Contractor's mobilization.~~
  - ~~3. Coordinate all maintenance and repairs to the system for the duration of the Contract. No components shall be out of service for more than 24 consecutive hours.~~

~~D. Provide telephone equipment as follows:~~

- ~~1. Two DECT 6.0 cordless telephones by AT&T or equal. Phones shall be two line, pushbutton, and equipped to record and play back incoming messages using a device which can be switched into service during Engineer's absence. The answering device shall answer a call on the first ring, provide a prerecorded outgoing message, and then record the caller's incoming message.~~
- ~~2. One plain paper facsimile printer/copy machine by Cannon. Provide paper and toner for the duration of the Contract. The machine shall have a minimum 100-sheet capacity and minimum of 10 programmable preset fax numbers.~~
- ~~3. Contractor shall be responsible for servicing the aforementioned equipment. No components shall be out of service for more than 24 consecutive hours.~~

~~1.8. CELLULAR PHONE~~

- ~~A. Provide, maintain, and pay for a smart phone with internet service to be exclusively used by Resident Project Representative for the duration of the contract. General Contractor shall pay for all costs associated with the use of the cellular phone, including unlimited voice, voice mail, email, text, and data plans with uninterrupted service over the entire project area and surrounding locality.~~

1.9. TEMPORARY WATER SERVICE

- A. Provide and maintain suitable quality water service required for Contractor's construction operations and those of other contractors.
- B. Extend branch piping with outlets located so water is available by hoses with threaded connections for use by all Contractors. Provide temporary pipe insulation to prevent freezing as necessary.
- C. Each Contractor shall provide sufficient potable quality drinking water for workers at the project site.

1.10. TEMPORARY SANITARY FACILITIES

- A. General Contractor shall provide and maintain required sanitary facilities and enclosures for use by all persons employed at the Site. Provide at time of mobilization. Existing facilities shall not be used.
- B. General Contractor shall remove facilities from site at end of construction.
- C. Facilities shall be maintained in conformance with applicable State Regulations and Local ordinances. Contents shall be removed and disposed of in satisfactory manner by General Contractor as occasion requires.
- D. Contractor shall enforce sanitary regulations amongst employees and take precautions against infectious diseases as deemed necessary. Isolate infected employee(s) and arrange for immediate removal of such person(s) from site.

#### 1.11. BARRIERS

- A. General Contractor shall provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect vehicles, stored materials, Site and structures from damage.
- E. Supplement barriers with suitable signs, railings and night lights, as necessary to conform with governing authorities and regulations.

#### 1.12. FENCING

- A. General Contractor shall provide 6-foot high fence around construction; equip with vehicular and pedestrian gates with locks.
- B. Construction - Commercial grade chain link fence.

#### 1.13. WATER CONTROL

- A. General Contractor shall grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect Site from puddling or running water. Provide water barriers as required to protect Site from soil erosion.

#### 1.14. EXTERIOR ENCLOSURES

- A. General Contractor shall provide temporary insulated weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual Specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

#### 1.15. PROTECTION OF INSTALLED WORK

- A. Each Contractor shall protect his installed Work from damage and deterioration due to construction activities, traffic, birds, pests, vermin, wild-life, pets, pedestrians, visitors, vandals, dust, vapors, floods, precipitation, driving rain, wind, snow storms, melting temperatures, or freezing temperatures; provide special protection where specified in individual Specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic over landscaped areas. Provide adequate barriers, directional signs, and/or guards, if necessary to provide adequate protection of landscaped areas.
- G. Owner reserves right to order that additional protective measures be taken beyond those proposed by Contractors, to safeguard the existing facilities and Work at no additional cost to Owner.

#### 1.16. SECURITY

- A. General Contractor shall provide security and facilities to protect his Work and that of other contractors, including existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate security measures taken with Owner's own security program.

#### 1.17. ACCESS ROADS

- A. General Contractor shall provide and maintain temporary access roads to the staging area as follows:
  - 1. Construct roads on Owner's property to connect public thoroughfare(s) with construction area.
  - 2. Roads shall be free for use by all personnel involved in Project, and be adequate for transportation of persons, materials, equipment and products to construction area.
  - 3. Maintain roads in serviceable condition, free of obstructions, potholes, ponded water, debris, accumulated snow and ice, until completion of project or until permanent access roads are installed.
- B. Designated existing on-site roads may be used for construction traffic.

#### 1.18. PARKING

- A. Contractor shall coordinate parking areas with Owner.
- B. Contractor shall arrange for temporary gravel surface parking areas to accommodate all construction personnel involved with Project.
- C. When Site space is not adequate, General Contractor shall provide additional off-site parking.
- D. Do not allow vehicle parking on existing residential streets.
- E. Designate one parking space for the Engineer and identify same with appropriate signs for each space.

#### 1.19. MAINTENANCE OF TRAFFIC

- A. General Contractor shall maintain and regulate traffic within Contract Limits in accordance with applicable state, county, and local regulations, and Section 01550.

#### 1.20. PROGRESS CLEANING

- A. General Contractor shall maintain areas free of waste materials, debris, and rubbish. Maintain Site and structures in a clean and orderly condition, as follows:
  - 1. Remove debris and rubbish from pipe chases, plenums, attics, crawlspaces, and other closed or remote spaces, prior to enclosing the space.
  - 2. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
  - 3. Collect and remove waste materials, debris, and rubbish from Site weekly and dispose of off-site.
- B. Each Contractor shall store unused tools and equipment at its yard or base of operations.

#### 1.21. POLLUTION CONTROLS

- A. Dust Control
  - 1. Each Contractor shall execute Work by methods to minimize raising dust from construction operations.
  - 2. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
  - 3. Wash down disturbed areas daily.
  - 4. Implement best management practices in accordance with requirements of agencies have jurisdiction over dust control.
- B. Erosion and sediment control shall be provided in accordance with the Contract Documents, the requirements of governing regulatory agencies, and Section 01564.
- C. Noise Control
  - 1. All construction equipment and tools exhibiting potential noise nuisance shall be provided with noise muffling devices.
  - 2. Confine use of such equipment and tools between the hours of 8:00 a.m. and 5:00 p.m.
  - 3. Implement best management practices in accordance with requirements of agencies having jurisdiction over noise control.
- D. Pollutants Control - Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

#### 1.22. REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Respective Contractors responsible for temporary utilities, facilities, and controls shall remove temporary utilities, equipment, facilities, controls, materials prior to Final Application for Payment.

- B. Remove temporary barriers, enclosures, etc. in concert with completion of those segments of Work which no longer require such measures.
- C. Remove temporary underground installations to a minimum depth of 2 feet. Grade site as indicated.
- D. Clean and repair damage caused by installation or use of temporary work.
- E. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

#### 1.23. CONTRACTOR'S FIELD OFFICE

- A. Provide weathertight field office with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture, drawing rack, drawing display table, and filing cabinets for Contractor's use.

#### ~~1.24. ENGINEER'S FIELD OFFICE~~

- ~~A. Provide and maintain a weathertight field office for exclusive use of Engineer with lighting, electrical outlets (one for each wall), permanent heating, cooling and ventilating equipment, and equipped with the following sturdy furniture:~~
  - ~~1. One standard size desk, 3-foot x 5-foot, each with rolling padded desk chair, and at least three drawers.~~
  - ~~2. Two Drafting Tables—39 inches x 72 inches x 36 inches high with one equipment drawer.~~
  - ~~3. One drafting table stool.~~
  - ~~4. Two 3-foot x 6-foot folding table.~~
  - ~~5. One plan rack to hold a minimum of six sets of project drawings.~~
  - ~~6. Three standard four-drawer legal-size metal filing cabinets with locks and keys.~~
  - ~~7. Ten folding chairs.~~
  - ~~8. One 8-foot x 30-inch folding leg table.~~
  - ~~9. One fire extinguisher.~~
  - ~~10. Two wastebaskets.~~
  - ~~11. One coat rack.~~
  - ~~12. Two tackboards, 36 inches x 30 inches.~~
  - ~~13. One heavy-duty, metal three-hole punch.~~
  - ~~14. One 10-inch outdoor-type thermometer.~~
  - ~~15. One rain gauge.~~



- ~~16. One water cooler (provide refills as required throughout Project).~~
  - ~~17. One refrigerator, minimum of 4.0 cubic feet, with freezer minimum of 1.0 cubic feet.~~
  - ~~18. One microwave oven, 0.8 cubic feet, 800 watt minimum.~~
  - ~~19. Heavy duty wall shelving 20 sq. ft. minimum.~~
  - ~~20. One digital camera with 2.0 megapixels or greater.~~
- ~~B. Engineer's field office shall be ready for occupancy within 10 days following Notice to Proceed. Mobile field office trailer is acceptable if it contains the required facilities. At a minimum, provide the following:~~
- ~~1. Minimum Field Office Size 720 square feet.~~
  - ~~2. Equip windows and doors with locking devices to prevent unauthorized entry. Provide three sets of keys to Owner.~~
  - ~~3. Provide horizontal mini blinds for all windows.~~
  - ~~4. Hot and cold water connected to the facilities potable water system.~~
  - ~~5. Bathroom with elongated toilet and sink with hot and cold water.~~
  - ~~6. Telecommunications services identified in this section.~~
- ~~C. Install 24 inch x 30 inch sign on outside wall as determined by Engineer. Paint sign white with blue, 3 inch high lettering, neatly arranged, to read: "Field Office, Engineer."~~
- ~~D. Arrange for offices to be cleaned at least once every week. Restroom supplies shall be provided for the duration of the contract.~~
- ~~E. Locate the office a minimum distance of 30 feet from existing and new structures as indicated on the Drawings. Engineer's office to be erected at location approved by Engineer, and shall not be disturbed, moved or interrupted without the Engineer's approval.~~
- ~~F. On completion of the Contract, remove the field office from the Site.~~

## PART 2 PRODUCTS

Not used.

## PART 3 EXECUTION

Not used.

END OF SECTION

## SECTION 01550

### MAINTENANCE AND PROTECTION OF TRAFFIC

#### PART 1 GENERAL

##### 1.1. DESCRIPTION

- A. Work Specified - The work specified shall include all labor, material, equipment, services and incidentals necessary to maintain and protect vehicular and pedestrian traffic through all construction areas.
- B. Related Work Specified Elsewhere
  - 1. Division 2 and 3 Technical Specifications

##### 1.2. QUALITY ASSURANCE

- A. Reference Standards - New York State Department of Transportation Standard Specifications, latest revision.

#### PART 2 PRODUCTS

- A. Post-Mounted and Wall-Mounted Traffic Control and Informational Signs - In accordance with the Federal Manual of Uniform Traffic Control Devices with NYS Supplement, current version.
- B. Traffic Control Signals - As approved by local jurisdictions.
- C. Traffic Cones and Drums, Flares, and Lights - As approved by local jurisdictions.
- D. Flagman Equipment - As approved by local jurisdictions.

#### PART 3 EXECUTION

##### 3.1. GENERAL

- A. This work shall consist of maintaining traffic and protecting the public from damage to person and property within the limits of and for the duration of the Contract.
- B. All existing site roads, streets, sidewalks, and traffic ways shall be kept open for the passage of traffic and pedestrians during the construction period unless otherwise approved by the Owner, Engineer or authority having jurisdiction over same.
- C. When required to cross, obstruct or temporarily close an existing site road, street, sidewalk or trafficway, Contractor shall provide and maintain suitable detours or other approved temporary expedient for the accommodation of traffic both vehicular and pedestrian. Closings shall be for the shortest time practical, and passage shall be restored immediately after completion of backfill and temporary paving or bridging.

- D. Contractor shall give 48 hours advance notice to the fire and police departments of the proposed operations including temporary shutdowns.
- E. Contractor shall provide signs, signals, barricades, flares, lights and all other equipment, service and personnel required to regulate and protect all traffic, and warn of hazards. All such work shall conform to requirements of the Owner or authority having jurisdiction. Remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions.
- F. Traffic shall be maintained over a reasonably smooth traveled way which shall be so marked by signs, delineators, guiding devices and other methods, that a person who has no knowledge of conditions may safely, and with a minimum of discomfort and inconvenience, ride, drive or walk, day or night, over all or any portion of the street under construction where traffic is to be maintained. All work shall conform to the requirements of the current Federal Manual of Uniform Traffic Control Devices with NYS Supplement.
- G. Contractor shall control dust and keep the traveled way free from materials spilled or tracked from hauling equipment.
- H. Contractor shall provide the necessary traffic control equipment and flagmen for adequate traffic control on the traveled way. Flaggers shall be used where opposing traffic is restricted to one lane or where other conditions require, or as required by permit conditions.
- I. Contractor shall provide ingress and egress to and from intersecting streets, homes, businesses and commercial establishments.
- J. Contractor shall provide adequate protection for pedestrian traffic during all phases of construction.
- K. Contractor shall maintain existing bus stops, if any, so passengers are reasonably accommodated.
- L. Contractor shall make the necessary repairs to existing pavement as required to provide a reasonable smooth traveled way where vehicle operation is maintained.
- M. The Contractor's responsibility to the public is to protect the public from damage to person and property, which may result directly or indirectly from any construction operation.
- N. The Contractor shall provide temporary markings in accordance with provisions of the Federal Manual of Uniform Traffic Control Devices with NYS Supplement, current version, as required by the agency having jurisdiction, as shown in the plans and specifications and/or as ordered by the Engineer
- O. The Contractor shall schedule work to keep to a minimum and consistent with the physical requirements of the contract, the amount of existing pavement and/or facilities that are destroyed or substantially torn up at any one time.
- P. The Contractor shall at all times conduct his operations in a manner to insure the convenience of the motorist, the pedestrians and the abutting property owners and their safety as well as the safety of his own employees.
- Q. The Contractor shall furnish, install, move, remove and maintain all signs and barricades and lighting for construction barricades as shown on the plans or as ordered by the Engineer, and in accordance with the Federal Manual of Uniform Traffic Control Devices with NYS Supplement, current version.

- R. The Contractor shall provide and maintain delineation and guiding devices which shall include: delineators, barrels, flashers, railing, temporary curb of any kind, pavement markings, and other similar materials or methods acceptable to the Engineer/Department of Public Works.
- S. The Contractor shall construct, move or remove, as directed, temporary structures, approaches, detours, pavements and necessary appurtenances.
- T. The Contractor will be responsible to prepare a work zone traffic control plan and submit the plan to the Engineer for information and the Department of Public Works Superintendent (as required) for approval. The maintenance and protection of traffic plan shall be prepared by an engineer licensed to practice in the State of New York.

### 3.2. PARKING CONTROL

- A. Control all Contractor-related vehicular parking within the limits of the designed parking area to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations, or construction operations. Provide temporary parking facilities as may be required because of construction or operations.
- B. Monitor parking of all construction and private vehicles:
  - 1. Maintain free vehicular access to and through parking areas.
  - 2. Prohibit parking on or adjacent to access roads, or in non-designated areas.
  - 3. Parking will not be allowed in areas which limit sight distance of passing motorists.
  - 4. Contractor is responsible for his vehicles while on-site.

### 3.3. HAUL ROUTES

- A. Consult with governing authorities and establish thoroughfares which will be used as haul routes and site access.
- B. Provide traffic control of haul routes to expedite traffic flow and to minimize interference with normal traffic.
- C. Provide vehicle cleaning.

### 3.4. ADDITIONAL REQUIREMENTS

- A. The Contractor shall maintain the traveled way reasonably smooth and hard at all times, and shall be well drained and free of potholes, bumps, irregularities and depressions that hold or retain water. Construction operations shall be conducted to insure a minimum of delay to traffic. Stopping traffic for more than 5 minutes shall not be permitted unless specifically authorized, in writing, by the Engineer or the Department of Public Works. The necessary equipment and personnel to attain and maintain a satisfactory riding surface shall be available and used as needed at all times when work is under way and when work is temporarily suspended for any period of time. Special attention to maintenance of a satisfactory traveled way shall be given during weekends, holidays and the winter season.
- B. The Contractor shall provide a sufficient number of competent flagmen in areas where traffic exists, particularly where construction equipment is operating. Each flagger shall use an orange safety vest. The vest shall be worn outside all other clothing worn by the flagger.

- C. Traffic shall be maintained in accordance with the details shown in conformance with the Federal Manual of Uniform Traffic Control Devices with NYS Supplement, current version.
- D. Fencing
  - 1. The Contractor shall completely enclose by temporary fences and meet all NYSDOT plating guidelines for all open excavations and all other potentially hazardous locations, at the end of each working day. Fencing shall be not less than 4 feet in height, mounted in steel angles or other satisfactory means of support rigidly driven into the ground and spaced at intervals not to exceed 8 feet. A minimum of one flasher per 15 feet of fencing will be required. In areas where an excavation is to remain open in excess of 14 calendar days, rigid fencing will be required having supports at intervals not to exceed 4 feet. Snow fence, cyclone fence, or wire fabric with rectangular mesh are considered minimally acceptable fencing materials.
  - 2. The Engineer in charge may limit, extend, include or exclude areas to be fenced as conditions warrant.
- E. Where sidewalk has been removed by the Contractor, he will be responsible for establishing a temporary stabilized walk for pedestrian traffic within 24 hours after removal of the sidewalk. This sidewalk may be located in the location of the original sidewalk or adjacent to the original sidewalk, providing there is an adequate right-of-way and the new location is safe for pedestrian traffic. The minimum width of the walkway is 4 feet. No additional payment will be made for installing and/or maintaining this walkway by the Contractor.
- F. All existing highway signs and supports within the contract limits are to remain and are to be maintained for the duration of the contract by the Contractor.
- G. On postal routes, mailboxes serviced from motor vehicles shall be maintained by the Contractor in a usable location during construction. The Contractor should not move any mailbox which contains mail. He will advise the property owner to remove such mail before he moves the box. Before acceptance of the work, any mailbox which has been disturbed or removed shall be replaced in size, kind and type by the Contractor in a location acceptable to the property owner and the Engineer.
- H. Contractor must provide access to all school buses and emergency vehicles including ambulances, police cars, fire engines, etc., traveling through or stopping at any part of the construction site. At his expense, Contractor will yield to these vehicles and cease construction activities, as necessary.

END OF SECTION

SECTION 01564  
EROSION CONTROL

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Installation of sedimentation and erosion control barriers.
- B. Anchoring all topsoil stockpiles with straw mulch and ringing with straw bales.
- C. Protection of catch basins with Fiber Logs, straw bales or silt fence rings.
- D. Inspection of all erosion measures after each rainfall and at least daily during prolonged rainfall.
- E. Repairing immediately any failed sedimentation and erosion control barrier.
- F. Removing and disposing sediment deposits in a manner that does not result in additional erosion or pollution.
- G. Removal of temporary controls including straw bales and silt fences after completion of construction and permanent stabilization of erosion.
- H. Removal of sedimentation barriers after completion of construction.

1.2. PERFORMANCE REQUIREMENTS

- A. Observe government policy established by United States Environmental Protection Agency (USEPA) Memorandum 78-1.
- B. Observe requirements set forth by the Federal Highway Administration Task Force 25.
- C. Conform all erosion and sedimentation control measures of "New York Guidelines for Urban Erosion and Sediment Control" published by USDA Soil Conservation Service.
- D. Temporary erosion and sediment control measures shall be installed as the first step in construction and shall not be removed until permanent cover is completely established and stabilized.

1.3. PLAN

- A. The Contractor shall implement his program of operations to effectively control erosion and sediment runoff in accordance with the approved Erosion and Sediment Control Plan.
  - 1. Requests for variations from the approved Erosion and Sediment Control Plan will be submitted in writing to the project engineer prior to undertaking any actions not compliant with the Erosion and Sediment Control Plan.
  - 2. Contractor shall maintain one copy of the erosion control-related records at the project site at all times, which shall be made available for examination

by authorized representatives of the regulatory agencies having jurisdiction over the project.

3. The erosion control records shall be arranged so as to include:
  - a. Chronological completion dates for each temporary (and permanent) measure for controlling erosion and sediment.
  - b. Location, type and purpose for each temporary measure to be undertaken.
  - c. Dates when those temporary measures will be removed.
4. The plan shall be submitted within 10 days after the Notice to Proceed.

## PART 2 MATERIAL AND PRODUCTS

### 2.1. MATERIALS

- A. Straw Bales - Shall be securely tied and measure 14 inches by 18 inches by 30 inches long or greater.
- B. Silt Fence
  1. Propex - Silt stop, Mirafi 100X or equal meeting the physical and mechanical requirements of FHA Task Force 25 specification guide for temporary silt fence.
  2. Silt fence shall be constructed using fence posts and wire fence or prefabricated units in accordance with New York guidelines for urban erosion and sediment control.
- C. Stakes and Fasteners
  1. Shall be two #3 rebar or two 2-inch by 2-inch minimum hardwood stakes for each straw bale.
  2. Shall be a minimum of 2-inch by 2-inch by 48-inch hardwood post for silt fences.
- D. Erosion Control Fabric - North American Green Type S75 or equal shall be used.

### 2.2. PRODUCTS

- A. Mulch and Seeding - Mulch and seeding shall be in accordance with requirements of Tables 1 through 4 of this section.

### 2.3. MISCELLANEOUS BEST MANAGEMENT PRACTICES

- A. Catch basin inlet protection.
- B. Stone
- C. Geotextiles.
- D. Sump pit.
- E. See Contract Drawings for specifications.

## PART 3 EXECUTION

### 3.1. GENERAL REQUIREMENTS

- A. General drawings do not show all of the necessary control measures to prevent erosion and sedimentation.
  - 1. The Drawings only show several techniques such as straw bale and silt fence details. There are a number of control techniques discussed in this Section.
  - 2. It is the Contractor's responsibility to design, implement and maintain erosion and sedimentation control measures which effectively prevent accelerated erosion and sedimentation.
- B. Earthmoving activities shall be conducted in such a manner as to prevent accelerated erosion and sedimentation.
- C. All erosion and sedimentation control measures shall be inspected by the Contractor daily and immediately after periods of rainfall.
  - 1. Repair and/or maintenance of sedimentation and erosion control measures will be made as soon as needed.
  - 2. The Contractor will be held responsible for the implementation and maintenance of all control measures on this site.
- D. Land disturbance shall be kept to a minimum.
  - 1. Restabilization will be scheduled immediately after any disturbance.
- E. Silt fences or straw bales will be installed along the toe of all critical cut and fill slopes.
- F. Catch basins shall be protected with fiber logs, silt fences or straw bales throughout the construction sequence and until all disturbed areas are stabilized.
- G. Erosion and sedimentation control measures shall be installed prior to all construction activities.
- H. Sediment removal from control structures shall be the responsibility of the Contractor.
  - 1. Sediment shall be disposed of in a manner which is consistent with overall intent of plan and which does not result in additional erosion.
- I. The erosion and sedimentation control measures described herein are intended as a general guide for the Contractor.
  - 1. It is the Contractor's responsibility to provide any and all work necessary to prevent erosion of soil from the construction site and to provide fiber logs, silt fences, straw bales or other control measures as the need arises during construction at no additional cost to the Owner.
- J. Remove all sedimentation and erosion control barriers after completion of construction and permanent stabilization of erosion.

### 3.2. DIVERSION TERRACES – NOT USED.



### 3.3. TRENCH BARRIERS

- A. Trench barriers shall be used where the disturbed area is sloped in the direction of the pipeline, when the slope exceeds 15 percent.
- B. Trench barriers shall be earth-filled sacks or piled stone, stacked to the top of the trench after installation of the sewer and prior to backfill, if backfill is delayed.
- C. Trench barriers shall act as an erosion check by preventing the washout of the trench.
- D. Recommended Dimensions and Materials
  - Height - To top of trench
  - Spacing - Approximately every 150 feet
  - Material - Earth-filled sacks or piled stones

### 3.4. SEDIMENT BARRIERS

- A. Sediment barriers shall be used at storm drain inlets; across minor swales and ditches; and at other applications where the structure is of a temporary nature and structural strength is not required.
  - 1. Sediment barriers are temporary berms or other barriers that are constructed to retain sediment on-site by retarding and filtering storm runoff.
- B. Recommended Materials and Dimensions
  - 1. Straw Bales
    - a. Bales should be bound with twine.
    - b. Bales should be anchored to the ground with fence posts, wood pickets, or #3 rebar. Two anchors per bale are required.
    - c. Bales shall be installed so that runoff cannot escape freely under the bales.
    - d. Height - 1.5 feet  
Width - 1.5 to 3.0 feet  
Cross-Sectional Area Required Per Tributary Acre - 50 square feet
  - 2. Stone
    - a. Height - 1.5 to 2.0 feet (uniform top elevation) top  
Width - 3 to 5 feet  
Side Slopes - 3:1 or flatter  
Cross-Sectional Area Required Per Tributary Acre - 20 square feet  
Material - Coarse rock or stone
  - 3. Silt Fence
    - a. Synthetic fabric 48 inches wide for fencing material.

- b. Hardwood stakes shall be minimum 2-inch diameter or be spaced at 8 to 10 feet apart for posts.
- c. Height -  $\pm 30$  inches above ground.

4. Fiber Logs

3.5. MULCH

- A. Used alone or in conjunction with other structural or vegetative erosion control measure, mulch is applied on any disturbed area which is subject to erosion, for protection of disturbed soil or newly reseeded areas. Mulch shall not contain seeds.

3.6. EROSION CONTROL FABRIC

- A. Erosion control fabric shall be used on slopes greater than 10 percent. Prior to installation of the erosion control fabric, the underlying layer is to be graded as shown on the Drawings.

3.7. VEGETATION

A. Temporary Vegetation

- 1. The planting of temporary vegetative cover shall be performed on disturbed areas where the earthmoving activities will be ceased for a period of more than 30 days.
  - a. The vegetation shall provide short-term rapid cover for the control of surface runoff and erosion, until permanent vegetation can be established or earthmoving activities can resume.
- 2. Table 2 gives recommended types of temporary vegetation, corresponding rates of applications, and planting seasons.
  - a. In situations where other cover is desired, the recommendations of the local and County Conservation Districts shall be followed.

B. Permanent Vegetation

- 1. Planting of various permanent vegetative covers shall be performed on disturbed areas where the earthmoving activities have ceased. The vegetation shall reestablish ground cover for the control of surface runoff and erosion.
- 2. The seed bed for permanent vegetative cover shall be prepared by using lime and fertilizer.
  - a. If the time of the seeding occurs during a dry period, mulch shall be applied to conserve soil moisture.
- 3. Tables 3 and 4 give recommended procedures for establishing various types of permanent vegetation.
  - a. The tables are differentiated by the drainage of the disturbed area.
  - b. In situations where other cover is desired, the recommendations of the County Conservation Districts shall be followed.

TABLE 1

MULCH MATERIALS, RATES AND USES

MULCH MATERIAL	QUALITY STANDARDS	APPLICATION PER 1,000 SQ.FT.	RATES PER ACRE	DEPTHS OF APPLICATION
Straw	Air-dried Free from coarse	75-100 lbs. 2-3 bales	1.5-2.5 tons 90-120 bales	Lightly cover 75 to 90% of surface
Wood chips	Green or air-dried	500-900 lbs.	10-20 tons	2" - 7"

TABLE 2

TEMPORARY SEEDINGS FOR EROSION CONTROL OF CONSTRUCTION SITES

SPECIES OR MIXTURE FOR TEMPORARY COVER	PERCENT BY WEIGHT	SEEDING RATES IN LBS. PER 1,000 SQ.FT.	RECOMMENDED SEEDING DATES
Annual Rye Grass	100%	1	April 1 to June 1 and August 15 to October 15
Field Broomegrass	100%	1	March 1 to June 15 and August 15 to September 15
Sundangrass	100%	1	May 15 to August 15

TABLE 3

PERMANENT SEEDINGS FOR WELL DRAINED AREAS

SPECIES OR MIXTURE FOR PERMANENT COVER	PERCENT BY WEIGHT	SEEDING RATES IN LBS. PER 1,000 SQ.FT.	RECOMMENDED SEEDING DATES
Ryegrass	100%	1	April 1 to October 15
Tall Fescue	100%	1 to 2	April 1 to October 15
Timothy	100%	1	April 1 to October 15
Tall Fescue or Ryegrass Crownvetch <sup>(1)</sup>	66% 34%	1 to 2	April 1 to July 15
Creeping Red Fescue and Crownvetch	67% 33%	1 to 2	April 1 to May 24
Flat Pea and Tall Fescue or <sup>(2)</sup> Ryegrass	66 (80)% 34 (20)%	1 to 2	April 1 to July 15

- (1) Inoculate legume seeds - use four times the normal rate when hydroseeding.  
 (2) When seedings are mulched, seeding may be extended from October 15 to April 1 for dormant seedings and April 1 to September 15 for regular seedings.

TABLE 4

PERMANENT SEEDINGS FOR AREAS OF VARIABLE DRAINAGE

SPECIES OR MIXTURE FOR PERMANENT COVER	PERCENT BY WEIGHT	SEEDING RATES IN LBS. PER 1,000 SQ.FT.	RECOMMENDED SEEDING DATES
Tall Fescue Birdsfoot	67%	1 to 2	April 1 to June 15
Trefoil	33%		
Tall Fescue Birdsfoot <sup>(2)</sup> Trefoil Crownvetch <sup>(1)</sup>	55% 25% 20%	1 to 2	April 1 to June 15

- (1) Inoculate legume seeds - use four times the normal rate when hydroseeding.  
 (2) When seedings are mulched, seeding dates may be extended from October 15 to April 1 for dormant seedings and April 1 to September 15 for regular seedings.

### 3.8. SPECIAL CONDITIONS

- A. Prohibited Construction Practices - Prohibited construction practices include but shall not be limited to the following:
- Dumping of spoil material into any stream corridor, any wetlands, any surface waters or at unspecified locations, even with permission of the property owner.
  - Indiscriminate, arbitrary or capricious operation of equipment in any stream corridors, any wetlands or any surface waters.
  - Pumping of silt-laden water from trenches or other excavations into any surface waters, any stream corridors, any wetlands or storm sewer.
  - Damaging vegetation adjacent to or outside of the access road or the right-of-way.

5. Disposal of trees, brush and other debris in any stream corridors, any wetlands, any surface water or at unspecified locations.
  6. Permanent or unspecified alteration of the flow line of the stream.
  7. Open burning of construction project debris.
- B. Defective Devices - Any erosion and sediment control devices which become damaged, clogged or otherwise non-functional shall be immediately replaced by the Contractor, without additional compensation.
- C. Adjustment
1. If the planned measures do not result in effective control of erosion and sediment runoff to the satisfaction of the regulatory agencies having jurisdiction over the project, the Contractor shall immediately adjust his program and/or institute additional measures so as to eliminate excessive erosion and sediment-runoff.
  2. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor.

END OF SECTION

SECTION 01600  
MATERIALS AND EQUIPMENT

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Products.
- B. Shipping and handling.
- C. Storage and protection.
- D. Substitutes.

1.2. PRODUCTS

- A. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- B. Provide interchangeable components of the same manufacturer, for components being replaced.

1.3. SHIPPING AND HANDLING

- A. Arrange deliveries in accordance with the Progress Schedule.
- B. Coordinate deliveries to avoid conflicts with Work, conditions at the Site, work of other contractors, work of Owner, and availability of personnel and handling equipment.
- C. Transport by methods to avoid damage.
- D. Deliver in manufacturer's unopened containers or packaging, dry, with identifying labels intact and legible.
- E. Provide equipment and personnel for handling to prevent soiling and damage.
- F. Protect sensitive equipment and finishes against impact, abrasion and other damage.
- G. Promptly inspect shipments to assure compliance with requirements, correct quantities, and identify damage.

1.4. STORAGE AND PROTECTION

- A. Store and protect in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive items in weather-tight, climate controlled enclosures in an environment favorable to item.
- B. For exterior storage of fabricated items, place on sloped supports, above ground.
- C. Provide bonded off-site storage and protection when storage and protection cannot be provided on Site.

- D. Cover items subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store items by methods that prevent soiling, disfigurement, and damage.
- G. Arrange storage to permit access for inspection. Periodically inspect to assure items are undamaged and are maintained in acceptable conditions.
- H. Piping and materials shall not be stored along the route for more than 1-days' length of anticipated construction.

#### 1.5. SUBSTITUTES

- A. Submit three copies of requests for substitution to Engineer including all items required by General Conditions Article 7.05. Each submittal shall be provided with a transmittal letter stating "REQUEST FOR SUBSTITUTION" and identifying the specific item for which the substitution is being requested.
- B. Limit each request to one proposed substitute item.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01700  
CONTRACT CLOSEOUT

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Warranties and bonds.
- G. Spare parts and maintenance materials.

1.2. CLOSEOUT PROCEDURES

- A. Contract closeout procedures shall be in accordance with GC-15.06.

1.3. RECORD DOCUMENTS

- A. The following supplements the requirements of GC-7.11:
  - 1. Recording, keep, and monitor up to date record documents of work constructed in the field. Legibly mark in red ink or red pencil to show all changes in, or directly associated with, the Work of this Contract. Keep entire set or record documents current on a day to day basis. Record documents shall be kept on hand in the Contractor's field office and shall be available for periodic examination by Engineer upon request.
  - 2. Final Record Drawings - Provide the sidewalk limits, location of control joints, curb ramps, pedestrian ramps, walkways, road crossings, pipe sizes and horizontal and vertical location of all valve boxes, air release valves, curb boxes, meter pits, fire hydrants, blowoffs, corporations, fittings, and other appurtenances. The information will be provided digitally in the form of an ASCII file and consistent with the plan datum and control as shown on the Drawings. The ASCII file shall be in the following format: Point No., Northing, Easting, Elevation, Description. The Contractor will employ the services of a registered professional surveyor licensed in the State of New York to provide the information.
  - 3. Examples of annotations that could occur are as follows:
    - a. Change in location or elevations of underground facilities installed under this contract.
    - b. Change in materials, such as pipe materials.
    - c. Relocation of existing underground facilities.



- d. Change in elevations of finished surfaces along route of installed underground facilities.
- 4. Show measurement of pipeline location from edge of pavement, at a minimum of 100-foot intervals.
- B. At Substantial Completion, affix Contractor's red identification stamp to front cover of each set of record documents and label them as "Record Documents." One set of record documents shall be given to Engineer no later than 14 days after the date of Substantial Completion. Engineer will either approve record documents or return them to Contractor with comments. Contractor shall resubmit record documents until Engineer has no further comments. Affix Contractor's identification stamp, together with the label "Record Documents," as follows:
  - 1. On each Drawing, just above the Engineer's title block.
  - 2. On each Shop Drawing, just above the preparer's title block.
  - 3. On the front cover or front page of all other documents.
- C. Final payment to Contractor will not be considered until acceptable record documents have been turned over to Owner."

## PART 2 PRODUCTS

Not used.

## PART 3 EXECUTION

Not used.

END OF SECTION

## SECTION 02030

### DEMOLITION

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Demolition and removal of site-related construction.
- B. Demolition and removal of piping.

##### 1.2. RELATED SECTIONS

- A. Section 01010 - SUMMARY OF WORK: Work sequence and Owner's continued occupancy.
- B. Section 01039 - COORDINATION AND MEETINGS
- C. Section 01300 - SUBMITTALS
- D. Section 01500 - TEMPORARY FACILITIES
- E. Section 01700 - CONTRACT CLOSEOUT: Project record documents.
- F. Section 02225 - TRENCHING: Fill material.

##### 1.3. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Shop Drawings
  - 1. Submit proposed demolition plan together with any necessary diagrams and/or drawings, taking into account Owner's continuing occupancy and sequence of construction of the project.
  - 2. Demolition plan shall include the following:
    - a. Demolition, removal, and disposition of items identified in this section.
    - b. Disposal locations of removed items.
    - c. Relocation of salvageable items.
    - d. Time lines and sequences of operations.
    - e. Location of temporary barricades, fences, and signs.

##### 1.4. PROJECT RECORD DRAWINGS

- A. Submit under provisions of Section 01700.

- B. Accurately record actual locations of capped utilities and subsurface obstructions.

#### 1.5. REGULATORY REQUIREMENTS

- A. Conform to applicable codes for demolition of structures, protection of adjacent structures, dust control, runoff control, and disposal of materials.
- B. Obtain required permits from authorities.
- C. Notify affected utility companies before starting demolition operations and comply with their requirements.
- D. Do not close or obstruct roadways, sidewalks, hydrants, and parking areas without required permits.
- E. Conform to applicable regulatory procedures if a hazardous environmental condition is encountered at site or if hazardous material disposal is required.

#### 1.6. HAZARDOUS ENVIRONMENTAL CONDITIONS

- A. If an unknown unforeseeable hazardous environmental condition is encountered at the site, or if Contractor or anyone for whom Contractor is responsible creates a hazardous environmental condition, immediately:
  - 1. Secure or otherwise isolate such condition;
  - 2. Stop all Work in connection with such condition and in any area affected thereby; and
  - 3. Notify Owner and Engineer and NYSDOT (and promptly thereafter confirm such notice in writing).
- B. Resume Work in connection with such condition or in any affected area only after Owner has obtained any required permits related thereto and delivered to Contractor a written notice specifying under what special conditions Work may be resumed safely.

#### 1.7. SEQUENCING

- A. Sequence demolition work to conform to provisions of Section 01010.

### PART 2 PRODUCTS

#### 2.1. FILL MATERIALS

- A. Fill Material - As specified in Section 02225.

### PART 3 EXECUTION

#### 3.1. PREPARATION

- A. Thirty days prior to performing any demolition, there shall be a coordination meeting between the Contractor, Owner, and Engineer to discuss the Contractor's Demolition Plan and related procedures. Items to be discussed shall be, but not limited to, dust control, sequence of work, removal of material, protection of existing equipment, access and egress of material, etc.

Demolition procedures must be coordinated with the Owner's operating personnel and operations, and adjusted accordingly, if necessary.

Following the coordination meeting, begin demolition operations after obtaining written authorization to proceed from the Owner.

- B. Notify Owner and Engineer and NYS DOT at least 48 hours in advance of intended start of demolition operations in each affected area.
- C. Provide, erect, and maintain temporary barriers, signs, and security devices where required.
- D. Erect and maintain temporary partitions and weatherproof closures to prevent spread of dust, odors, and noise in areas of continued Owner occupancy identified in Section 01010.
- E. Protect existing structures, equipment, appurtenances, architectural features, and materials which are not to be demolished. Prevent movement or settlement of adjacent structures.
- F. Protect existing site-related items such as pavements, walkways, parking areas, curbs, aprons, and landscaping features which are not to be demolished.
- G. Protect existing electrical; heating, ventilating, and air conditioning; and plumbing systems, including related components, which are not to be demolished.
- H. Mark location of underground utilities.

### 3.2. DEMOLITION REQUIREMENTS

- A. Confine demolition operations to designated areas of the site.
- B. Conduct operations to minimize interference with adjacent and occupied building areas. Maintain protected egress and access at all times.
- C. Cease operations immediately if adjacent structures appear to be in danger. Notify Engineer. Do not resume operations until directed.
- D. All materials, except rubble and non-metallic scrap, shall become the property of the Owner and be disposed of in accordance with regulations.
- E. Dispose of rubble and non-metallic scrap at an off-site area in accordance with local laws.
- F. Dispose of designated hazardous materials in accordance with the nature of the material, required handling and disposal procedures, regulatory requirements, and applicable permits.

### 3.3. DEMOLITION

- A. Break up and remove slabs-on-grade, pavements, curbs, aprons, etc., and related items in designated areas.
- B. Empty and remove buried tanks, meter pits, and associated piping.
- C. Backfill, compact, and rough grade areas excavated, including cavities created by removal of demolished items, in accordance with Section 02225 using fill material specified in Part 2.
- D. Disconnect cap, and identify utilities within demolition areas.

- E. Remove designated buried sewer and storm drain piping systems, capping with concrete plugs those segments to be abandoned, and provide temporary capping of those segments to be reused.
- F. Carefully disconnect support, protect, and remove hydrants and designated valves to be salvaged for Owner's future use.
- G. All removed materials and equipment designated for reuse on the Project, or salvaged for Owner's future use, shall be stored at Contractors facility and protected from damage and from deterioration by weather until placed for reuse or turned over to Owner.
- H. Remove and dispose of demolished materials as work progresses. Do not burn materials; do not bury materials.
- I. Patch and refinish existing visible surfaces which are to remain and otherwise restore adjacent surfaces.
- J. Remove temporary barricades, partitions, signs, etc.
- K. Upon completion of demolition operations, leave areas in a clean condition.

#### 3.4. SCHEDULES

- A. Site-Related Construction
  - 1. Pavements, walks, steps, curbs, aprons, and other slab-on-grade.
  - 2. Underground tanks, vaults, meter pits.
  - 3. Underground water piping, valves, and valve boxes.
  - 4. Fencing, gates, signs, posts, barriers, etc.
  - 5. Filling below-grade cavities and excavations (created by removed items) with approved material(s).
- B. Piping
  - 1. Equipment, supports, anchors, concrete pads, and associated items.
  - 2. Piping, fittings, valves, hangers, concrete supports and associated items.
  - 3. Meters, gages, recording instruments, and other measuring devices.
  - 4. Disconnecting and capping of identified utilities.
  - 5. Domestic water supply piping, fittings, valves, and supports.
  - 6. Plumbing specialties, such as hydrants, backflow preventers, and water hammer arrestors.

END OF SECTION

## SECTION 02110

### SITE CLEARING

#### PART 1 GENERAL

##### 1.1. DESCRIPTION

- A. Work under this Section of the Specifications includes general site clearing operations, including trees and vegetation removal, protection of existing trees to be left standing, and clearing and grubbing.
- 1.2. Provide barricades, coverings, or other types of protection necessary to prevent damage to existing improvements not indicated to be removed, and improvements on adjoining properties.
  - A. Restore all improvements damaged by this Work to their original condition, and acceptable to the Owner, the County, and other parties or authorities having jurisdiction.
- 1.3. Protect existing trees and other vegetation indicated to remain in place against cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling Construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary fences, barricades or guards as required to protect trees and vegetation to be left standing.
- 1.4. Burning where allowed by local ordinances will be permitted.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

##### 3.1. CLEARING

- A. Remove from the site trees, brush, shrubs, down timber, rotten wood, rubbish, other vegetation as well as fences, and incidental structures necessary to allow for new construction.
  - Remove all trees, stumps and roots within 10' of any structure or 5' of any pipeline, as detailed on the Contract Drawings or as ordered by Engineer.
  - Stumps of trees, other than the above, to be left in place shall be cut off shall be left not more than 6" above original grade. Remove all stumps unless in a fill section greater than 5 feet.
- B. Clearing work shall be restricted to area within rights-of-way or easements or within "Construction Limits" indicated on Contract Drawings.

##### 3.2. EXISTING TREES AND SHRUBS

- A. Trees and shrubs that are to remain within "Construction Limits" will be indicated on Contract Drawings or conspicuously marked on site.
- B. Ownership to Trees: Unless otherwise noted, trees within the "Construction Limits" shall become the property of the Contractor and shall be removed from the site.

### 3.3. GRUBBING

- A. Grub areas within and to a point 10' outside of all structures and 5' outside of all pipelines, areas to receive fill where finished grade will be less than 3' above existing grade, cut areas where finished grade will be less than 2' below existing grade, transitional areas between cut and fill, and any area to receive control fill.
  - B. Remove from the ground to a depth of 18", all stumps, roots ½" and larger, organic material and debris.
  - C. Use only hand methods for grubbing inside the drip lines of trees which are to remain.
- 3.4. Clean up debris resulting from site clearing operations continuously with the progress of the work.
- 3.5. Remove all waste material from site.
- 3.6. Remove debris from site in such a manner as to prevent spillage. Keep pavement and area adjacent to site clean and free from mud, dirt and debris at all times.

END OF SECTION

SECTION 02112  
PAVEMENT CUTTING

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Pavement cutting.
- B. Pavement scoring.
- C. Pavement (concrete) breaking.
- D. Pavement grinding.
- E. Pavement removal and disposal.

1.2. REFERENCES

- A. NYSDOT - Manual of Uniform Traffic Control Devices.

1.3. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEMS: Requirements applicable to unit prices for the work of this section.
- B. Section 01026 - LUMP SUM ITEMS: Requirements applicable to lump sum prices for the work of this section.
- C. Section 01500 - TEMPORARY FACILITIES
- D. Section 01550 - MAINTENANCE AND PROTECTION OF TRAFFIC
- E. Section 02225 - TRENCHING
- F. Section 02510 - HOT MIX ASPHALT PAVING

1.4. REGULATORY REQUIREMENTS

- A. Coordinate pavement cutting with utility companies.
- B. Conform to applicable local and state codes for legal disposal of pavement materials.

PART 2 PRODUCTS

Not used.



## PART 3 EXECUTION

### 3.1. PREPARATION

- A. Notify local officials, Fire and Police Departments of streets to be blocked off, detours or restrictions to maintaining of traffic on a daily basis.
- B. Set up barricades, warning signs and traffic direction information prior to start of pavement cutting.
- C. Provide flagmen to direct traffic.

### 3.2. PAVEMENT CUTTING AND BREAKING

- A. Pavements covering those areas to be excavated shall be broken up, removed, and then disposed of in accordance with Article 1.4 above. All paved areas shall be first cut or scored continuously along a straight line, parallel to and on each side of the centerline of the trench or excavation, at a width sufficient for the trench excavation or structure excavation.
- B. Pavement cuts in concrete pavement or pavement with a concrete base shall be made by scoring or cutting the concrete with a concrete saw. The depth of the saw cut shall be to the full depth of the concrete pavement thickness. Before excavation, the concrete pavement shall then be broken up with hand operated, pneumatic paving breakers, or mechanical drop hammers designed for such purpose, providing they may be used without endangering existing utilities or causing undesirable vibrations. "Headache balls" will not be permitted for breaking up concrete pavement.
- C. Pavements cuts in blacktop pavement shall be made by scoring or cutting the pavement with a concrete saw, wheel cutter, pneumatic paving breaker or drop hammer type pavement cutter. The pavement cut must be continuous, and made for the full depth of the pavement.
- D. Pavement cuts in driveways shall be made in a straight alignment perpendicular or parallel to the driveway and for its full width.
- E. Pavement cuts in parking areas shall be made in a straight alignment parallel to the centerline of trench.

### 3.3. PAVEMENT GRINDING

- A. Where shown on the Contract Drawings, the Contractor shall remove a portion of an existing pavement including Portland cement concrete pavement, asphalt Portland cement concrete pavement base course, to the limits and profile specified by grinding, milling, or planing methods. This process shall yield a base upon which a final pavement course will be applied. The Contractor shall employ equipment especially designed and manufactured for the grinding, milling or planing of pavements.
- B. The resulting ground, milled or planed surface shall be thoroughly cleaned and free from dust, loose pavement material or other material. The surface shall be free from gouges, large cracks and unsound, soft or broken-up areas. Gouges from lack of proper control of the grinding, milling or planing machine shall be made level and true by the use of a trueing and leveling course of asphalt concrete if allowed by the Engineer. Cracks greater than 1/4-inch shall be cleaned and filled in accordance with NYSDOT Specification 633.302 referenced above. Unsound, soft or broken-up areas shall be excavated and repaired.

- C. Contractor shall dispose of all asphalt concrete removed by grinding.

END OF SECTION

SECTION 02141  
REMOVAL OF WATER

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Providing equipment, materials and labor required to successfully complete the work included in this section.
- B. Maintaining and operating pumps and related equipment, including standby equipment, of sufficient capacity to adequately perform dewatering as required by this section.
- C. Lowering the groundwater table elevation.
- D. Intercepting seepage from excavation slopes.
- E. Controlling groundwater flow that may adversely affect excavation or construction activities.
- F. Collecting, removing and disposing of all excess groundwater.
- G. Collecting, removing, and disposing of all wastewater.
- H. Removing and/or disposing of spoil, excess materials, equipment, trash and debris used for or resulting from the work included in this Section.

1.2. RELATED SECTIONS

- A. Refer to report on subsurface investigation.
- B. Section 01025 - UNIT PRICE ITEMS: Requirements applicable to unit prices for the work of this section.
- C. Section 01026 - LUMP SUM ITEMS: Requirements applicable to lump sum prices for the works of this section.
- D. Section 01500 - TEMPORARY FACILITIES
- E. Section 01564 - EROSION CONTROL
- F. Section 02225 - TRENCHING

1.3. REGULATORY REQUIREMENTS

- A. Conform to applicable local and state codes for legal disposal of water.
- B. Temporary water supplies shall meet requirements of local, state and federal regulatory agencies.
- C. Conform to applicable OSHA standards.

#### 1.4. WELLPOINT DEWATERING SYSTEM

- A. If well point dewatering methods are proposed by Contractor, he shall prepare a plan of dewatering system and discuss plan with Owner and Engineer. Review or comments by Owner and Engineer concerning the proposed plan shall not relieve Contractor of his responsibilities for dewatering his excavations in conformance with this section of the specifications.

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

##### 3.1. PREPARATION

- A. Review the subsurface investigation report and become familiar with the groundwater conditions at the site. Allocate sufficient time and use appropriate procedures based on these conditions for dewatering excavations.
- B. If necessary, arrange for water sampling and analysis of each water supply source which may be affected by dewatering operations and submit a copy of the results to the Engineer.
- C. Examine adjacent structures and utilities, both existing and under construction, for possible settlement, movement or other adverse effects resulting from dewatering methods or water removal. Take necessary precautionary steps to protect such structures and utilities.
- D. Should the drawdown of groundwater levels by removal or dewatering systems critically reduce or disrupt public or private water supplies, the Contractor shall be prepared to:
  - 1. Provide adequate potable water to the Owners or users of the affected water supplies until groundwater levels have recovered, so as to sufficiently restore those deficient water supplies.
  - 2. Provide to the Engineer documentation to confirm that temporary water supplies meet the requirements of local, state and federal regulatory agencies.

##### 3.2. REMOVAL OF WATER

- A. Assume responsibility for site, surface and subsurface drainage. Maintain such drainage as specified herein during the life of the contract.
- B. Supply all supervision, labor, material, equipment, including standby equipment, necessary to maintain a dry excavation as may be necessary to construct the project.
- C. Maintain groundwater in or below the bearing strata at a safe level at all times by methods which prevent loss of fines, which preserves the undisturbed state of subgrade soils and which sufficiently lowers the groundwater level in permeable strata at or below excavation and fill levels such that blowing or unstable conditions do not develop in the bottom or sides of excavation or fill areas.
- D. Protect all adjacent structures, existing and under construction, from settlement, flotation, damage or other adverse effects resulting from water removal or dewatering methods.

- E. Install all drains, ditching, sluiceways, pumping and bailing equipment, wicking, sumps, wells, well points, cutoff trenches, curtains, sheeting and all other equipment and structures necessary to create and maintain a dry excavation and a groundwater level at a minimum of 2 feet below excavation subgrades.
  - 1. As part of any dewatering system, observation wells or piezometers shall be provided and installed, as required, to effectively and efficiently monitor drawdown to required levels.
- F. Discharge water removed from the site to natural watercourses, storm drains, or channels.
  - 1. Large quantities of water shall not be discharged as overland flow. Overland flow is not permitted onto private property.
  - 2. Discharge water shall be removed in accordance with NYSDEC guidelines.
  - 3. Wastewater shall be disposed of in a manner satisfactory to the local Public Health Officer.
  - 4. Notify NYSDOT prior to discharging water to storm drain.
- G. Dewatering operations shall cease when all foundations, structures, pipe installations and other excavated areas have been properly backfilled and compacted, and are safe from damage, flotation, settlement and displacement.

### 3.3. MAINTENANCE

- A. Operate and maintain dewatering and removal operations on a 24-hour basis for the time required to complete that portion of the Work which requires dewatering prior to its construction and which requires protection from flotation or displacement of such Work until proper backfilling and compaction is completed.

### 3.4. REMOVAL

- A. After groundwater levels have returned to elevations appropriate for conditions and time of year, without causing damage to the work, remove all dewatering equipment and related equipment from the site and restore site to original conditions or rehabilitate site to meet requirements of Contract Documents.

END OF SECTION

SECTION 02161  
SHEETING AND BRACING

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Sheeting and bracing installation, removal, and left in place.
- B. Design requirements.
- C. Regulatory codes and requirements.
- D. Special Conditions.
- E. Materials.

1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEMS: Requirements applicable to unit prices for the work of this Section.
- B. Section 01026 - LUMP SUM ITEMS: Requirements applicable to lump sum prices for the work of this Section.
- C. Section 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS
- D. Section 02141 - REMOVAL OF WATER
- E. Section 02225 - TRENCHING
- F. Section 02226 - ROCK REMOVAL
- G. Section 02228 - COMPACTION

1.3. REGULATORY REQUIREMENTS

- A. All sheeting and bracing including the use of mobile shields shall conform to Public Law 91-596 (Williams Steiger Act); the Occupational Safety and Health Administration Act (OSHA) of 1970 and its amendments and regulations; or to the New York State Industrial Code Rule 23, entitled "Protection in Construction, Demolition and Excavation Operations" as issued by New York State Department of Labor, Board of Standards and Appeals; whichever is the most stringent.
- B. Conform to New York State Industrial Code Rule 53, entitled "Construction, Excavation and Demolition Operations at or Near Underground Facilities" as issued by the State of New York Department of Labor, Board of Standards and Appeals.

1.4. REFERENCES

- A. ASTM A6/A6M - General Requirements.
- B. ASTM A328 - Steel Sheet Piles.

- C. NFPA - National Forest Products Association.

## PART 2 PRODUCTS

### 2.1. MATERIALS

- A. Wood - Tongue and groove, #3 Common Douglas Fir or Hemlock or Utility grade Southern Pine; NFPA grading or equal, meeting the requirements of the NFPA.
- B. Steel - ASTM A36 as required by ASTM A328.
- C. Trench Boxes - Fabricated steel or aluminum.

## PART 3 EXECUTION

### 3.1. PROTECTION

- A. When so designated on the drawings or stated in the specifications or to comply with local, state, or federal (OSHA) regulations, or when sloped excavations are not feasible, not possible or allowed or if excavations endanger adjacent facilities, sheeting and bracing shall be installed by the Contractor.

### 3.2. DESIGN REQUIREMENTS

- A. All sheeting and bracing shall be designed and monitored by a professional engineer licensed in New York State.
- B. Design shall include all loading conditions to which the sheeting and bracing will be subjected during construction.
- C. Design sheeting and bracing systems against failure from the maximum loads that will occur during construction, including surcharge loads and additional loading due to construction equipment.
- D. Design sheeting and bracing systems to enable safe construction of structures, utilities and appurtenances, and prevent excessive ground loss, displacement of adjacent foundations, and displacement of the bottom of the excavation.

### 3.3. INSTALLATION

- A. Provide all materials, equipment and labor necessary to construct and maintain all required excavation support systems.
- B. Sheeting and bracing support systems shall include, but shall not be limited to, wall support such as wood sheeting, ring-wales, lagging, soldier piles, steel sheeting, trench boxes and bracing members such as stringers, wales, struts, rakers, shores, tieback anchors, etc. necessary to prevent damage to the work and for the safety of workers, the general public or adjacent property.

No excavation shall be performed below a line drawn down and away at a slope of two horizontal and one vertical from the nearest footing or grade beam of the existing building or as shown on the Drawings without providing sheeting, shoring and bracing to provide lateral support for soils beneath the foundations of the building and to prevent damage to the building.

- C. Design of bracing shall be such as to permit proper construction of the walls and footings and proper installation of the utilities as shown on the Drawings.
- D. Sheet piling shall not be driven while concrete is being placed, or within 24 hours after placement, nor during pile load testing.
- E. Do not brace to concrete without written approval of the Engineer.
- F. Install sheet piling and bracing systems in a logical sequence as excavation operations are performed.
  - 1. If a prefabricated mobile shield is used, the bottom of the shield shall be maintained as high as possible (preferably above the spring line of the pipe, maximum 2 feet) to prevent disturbance of the bedding material and tension forces on pipe joints.
  - 2. Openings or troughs created by the use of a shield shall be filled and compacted in accordance with Sections 02225 and 02228.

#### 3.4. MAINTENANCE

- A. Maintain sheet piling and bracing systems as functional on a 24-hour basis.
- B. Provide a means of determining movement of excavation walls, and adjacent soil, buildings and structures and utilities.
  - 1. If movement or damage occurs, immediately cease all construction activities, install temporary measures to prevent further movement or damage and notify the Engineer.
  - 2. Movement or damage due to failure of sheet piling and bracing systems shall be permanently repaired as soon as possible, at no cost to the Owner and at no additional cost for time.

#### 3.5. REMOVAL

- A. Remove sheet piling and bracing as the work progresses in a manner which shall prevent damage to finished work, adjacent structures and property.
  - 1. All voids created by removal of sheet piling and bracing shall be filled and compacted in accordance to the guidelines of Sections 02225 and 02228.
- B. Sheet piling to be left in place shall be new and unused material. Where shown on drawings, specified or approved, sheet piling shall be cut off as specified, or a minimum of 2-1/2 feet below proposed final grade.
  - 1. Contractor may elect to leave sheet piling and bracing in place (cut off as described above) if he elects to do so at his own expense and with Engineer's approval.
  - 2. Provide to the Engineer a drawing of cut-off sheet piling locations. Drawing should show site plan with dimensioned locations of sheet piling, type of material remaining, and depths or elevations to top and bottom of remaining sheet.

END OF SECTION



## SECTION 02205

### PROTECTION OF EXISTING FACILITIES

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Location of facilities.
- B. Notification of owners and authorities.
- C. Coordination and preparation.
- D. Protection of facilities.
- E. Relocation of facilities.
- F. Protection of storm drains.
- G. Protection of water mains near sewers.
- H. Abandonment of utilities.
- I. Restoration of property markers.

##### 1.2. RELATED SECTIONS

- A. General Conditions
- B. Section 01039 - COORDINATION AND MEETINGS
- C. Section 01300 - SUBMITTALS
- D. Section 02225 – TRENCHING
- E. Section 02161 - SHEETING AND BRACING
- F. Section 02226 - ROCK REMOVAL

#### PART 2 PRODUCTS

Not used.

#### PART 3 EXECUTION

##### 3.1. LOCATION OF FACILITIES

- A. Prior to construction, verify location of existing underground facilities near or adjacent to project.

1. Consult with appropriate Underground Facilities Protection Organization (Dig Safely NY) and owners of facilities and arrange for field stake-out or other markings to show locations.
  2. Perform exploratory excavation at key junctures and other critical points to aid in ascertaining locations.
- B. Report field stake-out findings and results of exploratory excavations to Engineer if possible changes in project location or design are indicated because of suspected interferences with existing facilities. Allow Engineer sufficient time to determine magnitude of changes and to formulate instructions in that regard.
- C. If location of an existing underground facility is uncertain, apply careful excavation and probing techniques during construction to locate and avoid damage to same.

### 3.2. NOTIFICATIONS OF OWNERS AND AUTHORITIES

- A. Prior to construction, notify owners of existing facilities, including local Police and Fire Departments, of general scope, nature and planned progress schedule of the Work.
- B. Notify owners of nearby underground facilities when excavating is to take place in a particular area, allowing them reasonable time to institute precautionary procedures or preventive measures which they deem necessary for protection of their facilities.
- C. When existing utilities, such as sewer, water, gas, telephone or electric power are damaged or disturbed during construction, immediately notify affected utility Owner and Project Owner.
- D. Notify Police and Fire Departments, including affected owners, immediately if hazardous conditions are created or have the potential for occurring, as a result of damage to an existing facility or as a result of other activities at project site. Hazardous conditions could be created from: fire, explosion, escape of gas, escape of fuel oil, gasoline or industrial fluids, downed electrical wires, and disrupted underground electrical cables.

### 3.3. COORDINATION AND PREPARATION

- A. Discuss anticipated work schedule with local authorities and owners of utilities at preconstruction meeting, including procedures to be followed if one or more utilities are damaged or disrupted. Develop contingency plans to address Contractor's role in repair of damaged utilities.
- B. Make preparations beforehand to repair and restore damaged utilities, including arrangements for standby materials and equipment to be promptly assembled at site and utilized immediately.
- C. Adjust work schedules and personnel assignments as necessary to conform with requirements of utility owner whose utility is to be temporarily interrupted during construction. Cooperate with utility owner in this regard to minimize the time of interruption.
- D. Make preparations for and conform to applicable requirements of New York State Industrial Code Rule 53 (as amended April 1, 1975) entitled, "Construction, Excavation and Demolition Operations at or Near Underground Facilities," issued by State Department of Labor.

### 3.4. PROTECTION OF FACILITIES

- A. Plan and conduct construction operations so that operation of existing facilities near or adjacent to the Work, including electric, telephone, sewer, water, gas or drainage utilities, are sustained insofar as the requirements of the project will allow.
- B. Protect existing facilities from damage or movement through installation of adequate support systems and use of proper equipment, including application of careful excavation and backfilling techniques in sensitive areas.
- C. Existing utilities and other facilities which are damaged by the Contractor's construction operations shall be promptly repaired by Contractor to the satisfaction of the affected owner or, if he so elects, that owner will perform the repairs with his own forces. Under either arrangement, such repair work shall be done at Contractor's expense.
- D. When aboveground visible facilities such as poles, wires, cables, fences, signs or structures constitute an unavoidable interference, notify Engineer and consult with affected owner regarding temporary removal and later restoration of the interfering item. Arrange with that owner to remove and later restore the interfering item to the satisfaction of the owner, subject to approval of the project Owner; or, allow affected owner to perform such work with his own forces. Under either arrangement, such work shall be done at Contractor's expense.
- E. Take all necessary precautions to prevent fires at or adjacent to the work, buildings, and other facilities. No burning of trash or debris is permitted.
- F. During construction, if an existing water main is damaged or breaks due to construction activity, the Contractor shall be required to repair the existing main at his expense and will be required to pay for all testing requirements stipulated by the Department of Health (DOH) prior to putting the main back in service.

### 3.5. RELOCATION OF FACILITIES

- A. If the location or position of an existing gas or water pipe, public or private sewer or drain, conduit or structure be such as, in the opinion of Engineer, to require its removal, realignment or change, such alteration shall be without cost to the Contractor for the work of removal, realignment or change only.
- B. Uncovering, supporting and sustaining such facility before its removal or before and after its realignment or change, shall be the Contractor's responsibility as part of the work of his Contract.
- C. Contractor shall be entitled to extension of time for completion of entire Work as the Engineer determines that the entire Work was delayed by the removal, realignment or change of such obstruction.

### 3.6. PROTECTION OF STORM DRAINS

- A. Where existing storm drain systems are being replaced or interrupted, provide temporary bypass pumping or piping to maintain flow around that segment of the Work such that no back-ups occur in existing systems.
- B. Maintain existing catch basins, and other utility structures in their pre-work condition. Any material or debris entering same due to the Contractor's operation shall be promptly removed.

### 3.7. PROTECTION OF WATER MAINS NEAR STORM SEWERS

- A. Where a minimum 10-foot horizontal separation or minimum 18 inch vertical separation (bottom of water pipe to top of sewer pipe) cannot be maintained between a water main and storm sewer line, one or more of the following remedies shall be pre-approved by the Engineer and then incorporated in the work:
  - 1. The sewer lines shall be encased in 4,000 psi mix concrete for a length of 10 feet on either side of the water main.
  - 2. Both the water main and sewer line shall be constructed of water works grade 150 psi (1.0 Mpa) pressure rated pipe meeting AWWA standards or pipe approved by the reviewing authority and shall be pressure tested to ensure water tightness.
  - 3. One full length of water main shall be centered over the sewer line, so that both joints will be as far from the sewer as possible.
  - 4. Relocate water main to obtain 18 inches minimum vertical separation.

### 3.8. ABANDONMENT OF UTILITIES

- A. Remove existing utilities to be abandoned within limits of trench excavation, or impinging on trench limits.
- B. Open ends of abandoned utilities, or those scheduled for abandonment, shall be bulkheaded by brick masonry or 4,000 psi mix concrete; or by cast iron plugs or caps in small diameter water mains. Pipes shall be filled with flowable concrete in accordance with NYSDOT standards.
- C. Abandoned manholes and water valve casings shall be backfilled to grade with approved trench backfill material.
- D. Frames, covers, grates, water valve casing, sections of water piping, hydrants (including standpipe and boot) valves and other items to be abandoned shall be salvaged for reuse and be delivered to Owner's property yard.

### 3.9. RESTORATION OF PROPERTY MARKERS

- A. Property corner markers, boundary monuments, etc., disturbed or moved by the Contractor's operation shall be restored, in conformance with the property deed description, by a licensed land surveyor. Restoration of the property corner markers or boundary monuments shall be certified by said surveyor on a map prepared by him which shows the work accomplished. One copy of the map shall be given to the property owner and one copy given to the project Owner.

END OF SECTION

## SECTION 02225

### TRENCHING

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Excavating trenches for utilities.
- B. Pipe foundations and bedding.
- C. Backfilling and compacting.
- D. Materials.

##### 1.2. RELATED SECTIONS

- A. Section 01019 - CONTRACT CONSIDERATIONS
- B. Section 01400 - QUALITY CONTROL
- C. Section 01500 - TEMPORARY FACILITIES
- D. Section 02112 - PAVEMENT CUTTING
- E. Section 02141 - REMOVAL OF WATER
- F. Section 02161 - SHEETING AND BRACING
- G. Section 02205 - PROTECTION OF EXISTING FACILITIES
- H. Section 02226 - ROCK REMOVAL
- I. Section 02228 - COMPACTION: Testing, backfill, compaction.
- J. Section 02661 - WATER DISTRIBUTION PIPING
- K. Section 03001 - CONCRETE

##### 1.3. REFERENCES

- A. Standard Material Specifications for gravel, sand, crushed stone and gravel-cement mixtures published by the Department of Transportation (NYSDOT).
- B. ASTM C136 - Sieve Analysis of Fine and Course Aggregates
- C. ASTM D1556 - Density of Soil in Place by Sand-Cone Method
- D. ASTM D1557 - Laboratory Compaction of Soil Using Modified Effort

- E. ASTM D2922 - Density of Soil in Place by Nuclear Methods
- F. ASTM D3017 - Water Content of Soil in Place by Nuclear Methods
- G. OSHA - Occupational Safety and Health Administration

#### 1.4. SUBMITTALS

##### A. Granular Materials

1. Granular materials required for filling, backfilling, bedding, subbase and other purposes shall be as shown on the Drawings. Prior to bidding, prospective contractors shall familiarize themselves with the available quantities of approved on-site and off-site materials.
2. For each on-site or off-site material proposed, furnish to Engineer for approval a certified gradation analysis at least 10 days prior to date of anticipated use of such material. Except as specified herein, only off-site approved materials shall be utilized.
3. The Engineer reserves the right to inspect proposed sources of off-site granular material and to order such tests of the materials as he deems necessary to ascertain its quality and gradation of particle size. The Contractor shall, at his own expense, engage an approved testing laboratory to perform such test, and submit certified test results to the Engineer. If similar tests of the material from a particular source were performed previously, submit results of these tests to the Engineer for consideration.
4. No granular materials shall be used on this project for fill, backfill, bedding, subbase, or other purpose until approval is obtained from the Engineer, and only material from approved sources shall be used.

##### B. Geotextile Fabric

1. Submit a 1 square foot sample of each geotextile to be used.
2. Submit manufacturer's specifications of average roll characteristics for standards ASTM geotextile tests for each geotextile to be used.

#### 1.5. FIELD MEASUREMENTS

- A. Verify that survey benchmark and intended elevations for the Work are as shown on Drawings, or as provided by the Engineer.

#### 1.6. QUANTITY FACTORS FOR VOLUME MEASUREMENT

- A. The tables on the Drawings shall be used as the basis for computing volumes of excavation below subgrade, trench lining material, special pipe foundation materials, and special backfill materials when such volumes constitute the basis for payment, as established elsewhere in the Contract Documents. No deviations from the factors shown shall be allowed because of variations between the several pipe materials and classes.
- B. No special computations of quantities shall be made for structures such as manholes, valve pits, catch basins, etc., which may occur in the various pipelines, but the quantities for payment noted above, where applicable to such structures, shall be computed by assuming that the appurtenant pipeline continues uninterrupted through such structure; such as for center-to-center of manholes.

1. Excavation Below Subgrade, Trench Lining Material and Special Pipe Foundations - The quantity for which payment shall be made will be computed by using the Quantity Factors based on nominal inside pipe diameter multiplied by the measured depth and by the measured length without regard to actual width or actual quantity.
2. Special Backfill Material - The maximum quantity of special backfill material for which payment shall be made will be computed by using the Quantity Factors based on nominal inside pipe diameter multiplied by the measured length and the measured height of special backfill, except that where soil or rock conditions allow steeper side slopes and narrow trench conditions (minimum width pipe O.D. plus 2 feet 0 inches), the quantity of special backfill shall be based on actual width, height, and length.

## PART 2 PRODUCTS

### 2.1. ON-SITE MATERIALS

- A. Type A, Excavated Material - Material under this classification shall be derived solely from excavations necessary to construct the project to the lines and grades specified. If the excavated material on-site is approved for reuse and is suitable, it shall be used for filling or backfilling purposes. If he so elects, the Contractor may, at his own expense, substitute other types of material in place of Type A Material, provided such substitution is approved in advance by the Engineer. All replaced or surplus material shall be properly disposed of.
  1. Unclassified Excavated Material

Type A-1 - Referred to as "excavated material" and from which all frozen material, boulders, trash and foreign debris greater than 6 inches in any dimension has been removed. Approved Type A-1 material shall be used for all backfilling except under structures.

Type A-2 - Referred to as "select excavated material" and from which all frozen material, humus, peat, roots, vegetation, ashes, trash, debris, and rocks or stones greater than 2 inches in any dimension have been removed.
  2. Classified Excavated Material - Where the Contract Documents allow the reuse of excavated on-site materials as a substitute for off-site sources of gravel or sands, the minimum requirements for each of those excavated materials shall be the same as required for the equivalent off-site material. If such materials are used, submit for approval in writing the proposed methods of excavation, location of stockpiles, quantities of required sand and gravels, estimated excavation quantities and proposed excavation limits within the accepted excavation area. Provide a demonstration at least 10 days prior to commencement of excavation that the methods will provide consistent quantity and quality of material as specified for off-site gravels and sands. The Engineer will require subsurface investigations, sampling, and testing to confirm the extent and quality of the proposed material. Cost of all investigations, sampling, and testing shall be the Contractor's responsibility.
- B. Type E - Borrow Material
  1. "Borrow material" is defined as approved on-site material required for fill or backfill in excess of the quantity of available approved material designated as Type "A" material.

2. No such borrow material shall be used on this project unless specified in the Contract Documents and except within the limits of borrow areas designated on the Drawings.
3. Approval of all borrow material must be obtained from the Engineer, and only material from approved sources shall be used.
4. Use of designated borrow areas shall be subject to the approval of the Engineer and Owner at all times. Test pits and analyses of borrow material shall be provided as required by the Engineer for each borrow area and at the expense of the Contractor. In addition, the Engineer may require full excavation and restoration plans for each borrow area. All borrow areas shall be stripped of topsoil and organic materials far enough in advance of operations that contamination of borrow material is prevented.

a. Unclassified Borrow Material

This material consists of a naturally occurring mixture of sand, silts, clay, gravel, deteriorated rock or other inorganic particles.

Type E-1 - Referred to as "common borrow material", from which all frozen material, boulders, trash or debris have been removed.

Type E-2 - Referred to as "select borrow material" and from which all frozen material, humus, peat, roots, vegetation, ashes, trash, debris, and rocks or stones greater than 6 inches in any dimension have been removed.

- b. Classified Borrow Material - Where the Contract Documents allow the use of on-site borrow areas as a substitute for off-site sources of gravels and sands, the requirements for each of those on-site materials shall be the same as off-site sources.

In addition, all of the requirements for "classified excavated material" (Type "E" material) must be met at least 10 days prior to the acceptance of approved borrow areas for use as a source of off-site materials (gravel or sand).

## 2.2. OFF-SITE MATERIAL

Within the following specifications where grain size distribution requires a maximum of 10 percent or less material capable of passing the #200 mesh sieve, the percentage of material finer (than the #200 sieve) by weight shall be determined by wet screening in accordance with ASTM Standard D-1140. It is the intent of the specifications to allow the use of granular materials from local suppliers. Material Specifications shall conform to the requirements of the New York State Department of Transportation, (NYSDOT) and shall conform to the latest NYSDOT Standard Specification.

No gravel, sand, crushed stone or run-of-crusher material shall be used for this project until acceptance is obtained from the Engineer, and only material from approved sources shall be used. A certified sieve analysis from the supplier shall be submitted for the Engineer's acceptance prior to the use of any materials specified in Article 2.02.

A. Bedding and Pipe Encasement

1. NYSDOT No. 1 Crushed Stone or Crushed Gravel - Bedding for PVC, DIP, and PCCP water main. Thoroughly washed, clean, sound, tough, hard, crushed limestone conforming to the requirements of NYSDOT Item No. 703.0201 or crushed gravel



conforming to the requirements of NYSDOT Item No. 703.0202, having the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	1-inch
90 - 100	1/2-inch
0 - 15	1/4-inch

2. NYSDOT No. 2A Crushed Stone or Crushed Gravel – Bedding for DIP and PCCP water main. Shall be a No. 1 and No. 2 blend, thoroughly washed, clean, sound, tough, hard, crushed limestone conforming to the requirements of NYSDOT Item No. 703.0201 or crushed gravel conforming to the requirements of NYSDOT Item No. 703.0202, having the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	1-1/2-inch
93-100	1-inch
27-58	1/2-inch
0-8	1/4-inch

3. NYSDOT Concrete Sand – Bedding for copper and polyethylene tubing. Washed, fine aggregate sand shall conform to the requirements of NYSDOT Item No. 703.07, having the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	3/8-inch
90 - 100	No. 4
75 - 100	No. 8
50 - 85	No. 16
25 - 60	No. 30
10 - 30	No. 50
1 - 10	No. 100
0 - 3	No. 200

- B. Select Backfill - NYSDOT Subbase Type 2 crusher run stone or crusher run gravel. Material shall conform to the requirements of NYSDOT Item No. 304.12, having the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	2-inch
25 - 60	1/4-inch
5 - 40	No. 40
0 - 10	No. 200

- C. Peagravel - NYSDOT Type 1A screened gravel for the annular space between the carrier pipe and the casing pipe. Screened gravel shall conform to the requirements of NYSDOT Item No. 703.0203 and have the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	1/2-inch
90 - 100	1/4-inch
0 - 15	1/8-inch

- D. Pipe Trench Special Backfill - NYSDOT subbase material 304.02, Type 4 crusher run stone or crusher run gravel. Material shall conform to the requirements of NYSDOT Item No. 304.14, having the following gradation by weight:

<u>Percent Passing</u>	<u>Sieve</u>
100	2-inch
30 - 65	1/4-inch
5 - 40	No. 40
0 - 10	No. 200

- E. Follow NYSDOT Standard Specifications if gradation data varies from those listed above.
- F. Recycled concrete or asphalt pavement shall not be allowed.
- G. Slag of any type shall not be allowed.
- H. Flowable fill shall not be allowed.
- I. Type F - Gravel-Cement Mixtures
1. Shall be a mixture of 15 parts gravel to 1 part cement by weight.
  2. Gravel shall be Type B-3.
  3. Cement shall be Type I Portland cement.
  4. Mixing of material shall be performed in an approved mixer.
  5. The mixture shall be placed and compacted in accordance with Section 02228.

## 2.3. REQUIRED MATERIALS

- A. Trench Backfill
1. In Pavement, to Subbase - Select backfill.
  2. Other Areas - Type A-1 or Type B-1 bank run gravel.
- B. Pipe Trench Special Backfill - NYSDOT Item No. 304.14.
- C. Pipe Bedding - Per pipe type.
- D. Road Construction
1. Base - NYSDOT course 304 Type 3.
  2. Subbase - NYSDOT subbase course 304 Type 3.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Submit for approval fill materials to be reused.

### 3.2. PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Prior to start of construction, notify Dig Safely, and have staked or marked all underground utilities. Utilities include water, gas, electrical, telephone, cable, storm sewer, sanitary sewers, laterals, and services. In the event such locations indicate a possible interference, or when needed to locate points of connection to existing facilities, perform exploratory excavations to determine the utilities' location and elevation. Provide the Engineer with the results of the exploratory excavations for his review. Allow the Engineer sufficient time to determine any changes required as a result of such exploratory excavations prior to start of construction.
- C. Abandoned pipes and laterals shall be filled with flowable concrete and capped or removed entirely.
- D. Conduct operations such that no interruptions to the existing utility system shall occur. Where existing storm drain systems are being replaced or interrupted, provide temporary bypass pumping or temporary piping to maintain flow around the work site such that no backups occur in these sewer systems.
- E. Maintain existing manholes, catch basins, and other utility structures above and below grade which are to remain in their pre-work condition. Any material or debris entering same due to the operation shall be promptly removed.
- F. Protect plant life, lawns, rock outcropping and other features remaining as a portion of final landscaping.
- G. Protect control points, bench marks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic. Preserve the control points provided by the Engineer throughout the life of the project, and accurately replace any such point, which is damaged or moved, at Contractor's expense.
- H. Cut out soft areas of subgrade not capable of insitu compaction. Backfill with Type III pipe foundation and compact to density equal to or greater than requirements for subsequent backfill material.
- I. Brace walls and slabs of structures to support surcharge loads and construction loads imposed by backfilling operations.
- J. Maintain a stable, dry backfill area in accordance with Section 02141.
- K. Remove all water, snow, ice and debris from surfaces to accept fill materials and from the backfill material. No calcium chloride or other chemicals shall be used to prevent freezing.
- L. Areas to receive compacted fill shall be graded to prevent surface runoff and ponding in accordance with Section 02110.
- M. No fill or backfill material may be used without approval of the Engineer.
- N. No geotextile fabric may be used without approval of the Engineer.
- O. Backfill operations shall be started at the lowest elevation in the area to be backfilled, and continue, in horizontal layers, upward to the limits specified.
- P. Backfill material shall be within 2 percent of the optimum moisture content for that material.

- Q. Any crushed gravel stockpiles which have undergone excessive particle segregation shall be reviewed and approved by the Engineer prior to placement.

### 3.3. TRENCH EXCAVATION

- A. Trenches for underground piping, ductwork, drains, and similar utilities shall be excavated and maintained as shown on the Drawings and specified in this Section. Trench widths shall be held within the minimum and maximum limits shown on the Drawings. If a prefabricated, mobile shield is utilized in lieu of conventional sheeting and bracing in pipe trenches, the bottom of the shield shall be maintained as high as possible (preferably above the spring line of the pipe) so as to prevent disturbance of the pipe foundation material and to avoid forces which would tend to pull pipe joints apart when the shield is dragged forward. Gouged openings or troughs left by the shield shall be filled with additional pipe foundation material and thoroughly compacted. Installation of sheeting and bracing and use of mobile shields shall be in complete accordance with all details of applicable safety codes, rules and regulations including all applicable local, State, Federal, and OSHA regulations.
- B. Excavation shall be such that a flat bottom trench of allowable width is established at the required subgrade elevation for subsequent installation of pipe foundation material.
- C. If indicated on the Drawings, as directed by the Engineer or when required as a result of unsuitable soil conditions, trench excavation shall be carried below the required subgrade and a special pipe foundation installed in conformance with the Contract Documents. In any event, operations shall result in stable trench walls and a stable base free from standing water, consistent with trench width requirements.
- D. Bedrock, boulders and cobbles greater than 6 inches shall be trimmed back or removed on each side of the trench so that no rock protrudes within 6 inches of the installed pipe. Rock shall also be trimmed back across the bottom of the trench so that no rock, boulder or cobble protrudes within 4 inches of the installed pipe.
- E. In general, trenches shall not be opened for more than 50 feet in advance of installed pipe. Excavation of the trench shall be fully completed at least 5 feet in advance of pipe laying operations. No more than 40 feet of trench shall be left open overnight.

### 3.4. EXCAVATION CLASSIFICATION

- A. All material excavated will be measured and classified as provided herein.
  - 1. Unclassified Excavation - "Unclassified excavation" shall include all materials excavated within the authorized lines and grades prescribed in the Drawings. Unclassified excavation shall include "rock excavation" as well as "common excavation" as defined herein. Unless specifically designated otherwise in the appropriate bid items of the Bid Proposal, all excavation shall be considered to be "unclassified excavation."
  - 2. Common Excavation - "Common excavation" shall include all excavation except "rock excavation." All unconsolidated and non-indurated material, rippable rock, loose rock, soft mineral matter, weathered rock or saprolite, and soft or friable shale which is removable with normal earth excavation equipment shall be considered "common excavation." All boulders and detached pieces of solid rock or concrete or masonry less than 1 cubic yard in volume shall be classified as "common excavation."
  - 3. Rock Excavation - "Rock excavation" shall include all sound solid masses, layers and ledges of consolidated and indurated rock or mineral matter of such hardness,

durability and/or texture that it is not rippable or cannot be excavated with normal earth excavation equipment. Should a conflict arise as to the classification of excavation as either "common" or "rock," the following tests shall be used in the appropriate determination:

- a. Where practicable, a late model tractor mounted hydraulic ripper equipped with a one digging point of standard manufacturer's design adequately sized for use with and propelled by a crawler-type tractor rated between 210 and 240 net fly-wheel horsepower, operating in low gear, shall be utilized. Should the suspect material not be effectively loosened or broken down by ripping in a single pass with the aforementioned ripper, the material shall be classified as "rock."
- b. In situations where inter-bedded strata of "common excavation" material and "rock excavation" material are encountered in the same excavation, the individual classification of those materials shall be made on an average percentage basis of the occurrence of those materials as measured in stratigraphic sections and as approved by the Engineer.
- c. When rock is encountered in excavations, it shall be removed by jackhammering or any other method suitable and safe considering the proximity of existing utilities or facilities.

### 3.5. UNAUTHORIZED EXCAVATION

- A. The Contractor shall not be entitled to additional compensation for unauthorized excavations carried beyond or below the lines and subgrades prescribed in the Contract Documents. The Contractor shall refill such unauthorized excavations at his own expense, and in conformance with the following provisions of this Article.
- B. Should the Contractor, through negligence or for reasons of his own, carry his excavation below the designated subgrade, fill concrete or such other material as may be approved by the Engineer, as specified in Part 2, shall be furnished and placed as backfill in sufficient quantities to reestablish the designated subgrade surface. Granular material used for backfilling shall be spread and compacted in conformance with the requirements of later Articles of the section, and to the percentage compaction outline therein. The cost of any tests associated with this refilling operation shall be borne by the Contractor.
- C. If the maximum widths of pipe trenches are exceeded, the installed pipes shall be fully cradled in a minimum of 6 inches of fill concrete, as specified elsewhere, and at the Contractor's expense. Excavation below subgrade which is ordered by the Engineer because the normal subgrade has been disturbed by the Contractor's operations shall be considered as unauthorized excavation.

### 3.6. MAINTENANCE OF EXCAVATIONS

- A. All excavations shall be properly and legally maintained while they are open and exposed. Sufficient and suitable barricades, warning lights, flood lights, signs, etc., to protect life and property shall be installed and maintained at all times until the excavation has been backfilled and graded to a safe and satisfactory condition. All signs, markers, barricades shall conform to the requirements of the manual of Uniform Traffic Control Devices. All barricades, signs and markers shall be reflectorized.
- B. To maintain traffic and safety temporary plating over trenches consisting of steel plates shall be used to temporarily bridge trench excavations. Plates shall be of size and positioned to

provide adequate bearing at plate edges, shall be securely anchored, and shall be fitted in place in a manner to minimize noise when crossed by traffic. Plates shall be of sufficient thickness to safely carry heavy traffic without detrimental deflection; however, unless otherwise specified, the minimum thickness of plates shall be 1-inch.

- C. Plate edges exposed to traffic shall be feathered with asphalt mix as part of trench excavation work. Work includes surveillance and adjustment of plating over trenches which shall be provided by the Contractor during non-working hours, weekends, and holidays.
- D. Additional Requirements for Support Systems for Trench Excavations
  - 1. Excavation of material to a level no greater than 2 feet below the bottom of the members of a support system shall be permitted, but only if the system is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.
  - 2. Installation of a support system shall be closely coordinated with the excavation of trenches.

### 3.7. PIPE FOUNDATIONS

- A. All pipes, fittings or specials which are to be installed in the open trench excavation shall be properly bedded in, and uniformly supported on pipe foundations of the various types specified herein and shown on the Drawings. Flat-bottom trenches of required width shall be excavated to the necessary depth as required in the Table of Quantity Factors shown on the Drawings and maintained in accordance with this section prior to installing the foundation. Trenches shall be dewatered and all work performed in a dry trench.
- B. Bedding material shall be spread in maximum of 8-inch layers to the midpoint of the pipe and each layer shall be compacted until the required total depth of the bedding has been built up. Compaction methods include hand tamping with T-bars, flat heads, shovel slicing, as well as mechanical compactors. The Contractor shall perform his bedding operations with care to maintain line and grade.
- C. The pipe foundation above the midpoint of the pipe shall be spread and compacted in 12-inch layers to 12 inches above the top of the pipe. When PVC, plastic or polyethylene pipe is used, do not compact directly over pipe until the depth of backfill has reached 2 feet above the top of the pipe.
- D. Type I - Normal Soil Conditions - Unless shown otherwise in the Drawings, all pipe shall be supported on Type I foundation. The trench shall be excavated from 4 to 8 inches deeper than the bottom of the pipe, depending on the diameter of the pipe. Stone bedding per pipe type as described above shall be furnished, placed and compacted in the trench for its full width such that, after the pipe has been uniformly bedded in this material, the required minimum depth of 4-inch pipe bedding material remains between pipe and undisturbed trench bottom. Suitable holes shall be provided in the trench bottom to permit adequate bedding of bells, couplings, or similar projections. The pipe bedding shall extend upward to a point 12 inches over the top of the pipe. Minimum width of pipe foundation shall be outside diameter of pipe plus 2 feet 0 inches.
- E. Type II - Moderately Unstable Soil Conditions - When specifically called for on the Drawings, or when ordered by the Engineer, the pipe shall be supported on Type II foundation. The foundation shall be installed where a suitable supporting soil or rock stratum occurs within 2 feet, more or less of the bottom of the pipe. The trench shall be excavated to the depth

necessary to reach the suitable supporting stratum. Pipe trench special bedding, as ordered by the Engineer as described above, shall then be furnished and placed in the trench for its full width. The material shall be spread in 12-inch layers, and each layer shall be compacted. The pipe foundation material to be supported on Type VII foundation, geotextile fabric foundation. The crushed stone or gravel depth shall extend from the supporting stratum up to an elevation 4, 6 or 8 inches below the bottom of the pipe depending upon the pipe diameter. The bedding material shall then be installed in accordance with Type I pipe foundation requirements.

- F. Type III - Unstable Soil Conditions - When specifically called for on the Drawings, or when ordered by the Engineer, the pipe shall be supported on Type III foundation. The foundation shall be installed where no suitable supporting soil or rock stratum exists within 2 feet of the bottom of the pipe. The trench shall be excavated 2 feet deeper than the bottom of the pipe. Each side of the trench shall be supported and maintained by a permanent system of tight, continuous sheeting (and bracing) which shall be driven below the trench bottom as shown and which shall extend to an elevation of at least 12 inches above the top of the pipe. Minimum plank size to be 2-inch x 12-inch tongue and groove per Section 02161.

Pipe trench special bedding material shall then be furnished and placed in the trench for its full width, and to a depth of 8 inches. The pipe foundation material to be supported on a Type VII foundation, geotextile fabric foundation. Crushed stone, special backfill material shall then be furnished and placed in the trench for its full width. All material shall be spread in layers and each layer shall be compacted until their respective total depths have been built up as required. The select backfill material depth shall extend a distance of 12 inches from the top of the compacted trench lining up to an elevation 4, 6 or 8 inches below the bottom of the pipe, depending upon the pipe diameter. Bedding material shall then be installed in accordance with Type I pipe foundation requirements. All installed sheeting below an elevation established at 12 inches above the top of the pipe shall be left in place and undisturbed. Only the cross struts and walers shall be gradually removed as construction proceeds.

- G. Type IV - Reinforced Concrete Encasement - When specifically called for on the Drawings, or when ordered by the Engineer, the pipe shall be supported on Type IV foundation. The trench shall be excavated to a depth below the bottom of the pipe equal to one-quarter of the inside diameter of the pipe or 6 inches, whichever is greater. The excavated space shall then be completely filled with, and the entire pipe encased in, concrete such that the minimum concrete encasement at any point around the outside barrel of the pipe measured 6 inches thick. The total minimum width of the concrete encasement shall equal the outside diameter of the pipe plus 12 inches and such minimum width shall be constant for the entire length of the encasement. Concrete mix, formwork, reinforcing, curing, etc., shall be in accordance with the requirements of Section 03001. Freshly placed concrete shall be maintained free from groundwater and no backfilling of the trench shall begin until initial set has taken place, but not less than 3 hours has elapsed after the encasement has been cast. Backfill a depth of 12 inches over top of concrete before beginning compaction with mechanical equipment.
- H. In the event an underground pipe is shown under a base slab, the pipe shall be encased in concrete for its entire length under the slab in accordance with details shown on the Drawings. Where no detail is shown, encasement shall be formed to provide a minimum of 8 inches of concrete cover reinforced with #5 reinforcing bars spaced 12 inches each way. When the top of the pipe is within 12 inches of the bottom of the slab, the encasement shall be tied to the base slab with reinforcing. The General Contractor shall be responsible for encasement of all pipes under slabs including piping by other contracts.
- I. Type V - Concrete Cradle - When specifically called for on the Drawings or when ordered by the Engineer, the pipe shall be supported on Type V foundation. The foundation shall be furnished and installed equal to the Type IV foundation, "Concrete Encasement," except that

only that portion of the encasement at and below the horizontal diameter of the pipe shall be encased, forming a true cradle under the bottom half of the pipe. Maintain cradle free from groundwater for a period of three hours or until initial set has taken place. Complete pipe foundation in 12-inch lifts as for Type I pipe foundation.

- J. Type VI - Plain Concrete Encasement - When specifically called for on the Drawings, or when ordered by the Engineer, the pipe shall be supported on Type VI foundation. The foundation shall be furnished and installed equal to the Type IV foundation, "Reinforced Concrete Encasement," except that no steel reinforcing is required. Maintain encasement free of groundwater for a period of three hours or until initial set has taken place.
- K. Type VII - Geotextile Fabric Foundation - When specifically called for on the Drawings, or when ordered by the Engineer, the pipe foundation shall be supported on a geotextile fabric foundation. The fabric to be placed on the bottom of the excavated foundation and extended upwards to the top of the Type I pipe foundation where it can then be placed flat with a minimum overlap of 6 inches. Longitudinal overlaps to be a minimum of 2 feet. Fabrics to be installed and stretched tight, have no wrinkles so that the fabric will be in tension when placing the pipe foundation material. Geotextile material to be Trevia Type S 1127 by Hoechst Corporation; Mirafi Type 500X by Celanese Corporation; or equal.
- L. Type VIII - Pressure Pipe Foundation

- 1. Pipe and fittings shall be laid on stable foundations, free from standing water, and trimmed to shape. Type A 2 material as described above in Part 2 shall be used for pipe foundation unless otherwise shown on the Drawings. In particular, stones 2 inches or larger shall be removed from the bearing surface of the pipe foundation. At the joints, enough depth and width shall be provided to permit the pipe layer to reach entirely around the pipe so that the joints may be made in a proper manner. Pipes shall have full bearing throughout their entire length, which shall be accomplished by shaping the bottom of the ditch or adequately tamping the backfill under the pipe in accordance with minimum compaction requirements of Section 02228. When laid in tunnels, pipes shall be blocked in such a manner as to take the weight off the bells. Pipe laid in normal trench excavation shall not be laid on wood blocking. Mechanical type joints shall be tightened within the AWWA recommended torque range.

- 2. The following sources shall be reviewed by the Contractor for installation guidelines and requirements:

PIPE MATERIAL	SOURCES
Ductile Iron	AWWA Standard C600; Project Specification, Section 02661; Project Drawings; manufacturer's recommendations.
PVC Pipe	ASTM Standard D2321; Project Specification, Section 02661; Project Drawings; manufacturer's recommendations.
Copper	Project Specification, Section 02661; Project Drawings; manufacturer's recommendations.

- 3. Unless otherwise shown on the Drawings, as a minimum, all pipe shall be backfilled to the springline, including hand tamping with T-bars, shovel slicing, and flatheads, and mechanically compacted and the remaining backfill placed in 12-inch lifts to 1 foot above the crown of the pipe in accordance with minimum compaction requirements of Section 02228. Backfill material within 12 inches of the pipe shall be free of stones greater than 2 inches in any dimension. Unless otherwise shown on the Drawings, the minimum total finished cover over the top of the pipe barrel of all pressure pipe shall be 6 feet.



### 3.8. EXPLORATORY EXCAVATIONS

- A. Where shown or ordered by the Engineer, the Contractor shall excavate and backfill test pits in advance of construction to determine conditions or location of existing facilities. The Contractor shall perform all work required in connection with excavating, stockpiling, maintaining, sheeting, shoring, backfilling, and restoring the surface for the test pits.
- B. Test pits which the Contractor excavates that are not shown on the Drawings or specified or ordered shall be at the Contractor's expense.
- C. No test pits will be dug prior to utility company stakeout.
- D. Backfill and Fill Materials
  - 1. Excavated materials may be used for backfill provided:
    - a. Material is sandy, loamy, or similar to bank run gravel.
    - b. Material is free from debris, hazardous materials, frozen materials, organic or other deleterious materials. Material greater than 4 inches in any direction is unacceptable. Material greater than 2 inches in any direction is unacceptable for backfill directly against the water main.
    - c. Maximum dry density and optimum moisture content are determined in accordance with the above.
    - d. Material is reviewed and deemed acceptable by the Engineer.
  - 2. Use select granular material within 5 feet or within a 1 on 1 slope from the trench to the edge of pavement of all roadways.
- E. Backfilling shall be in accordance with Articles 3.10 and 3.11 of this specification.
- F. Cold patch for temporary repair shall be placed as directed by the Engineer.

### 3.9. GENERAL BACKFILLING REQUIREMENTS

- A. Backfilling shall be started as soon as practicable and after structures or pipe installations have been completed and inspected, concrete has acquired a suitable degree of strength, and subgrade waterproofing materials have been in place for at least 48 hours. Backfilling shall be carried on expeditiously thereafter. Backfill shall be started at the lowest section of the area to be backfilled. Natural drainage shall not be obstructed at any time.
- B. Backfill spaces shall be inspected prior to backfilling operations and all unsuitable materials, including sheeting, bracing forms and debris, shall be removed. No backfill shall be placed against foundation walls on structural members unless they are properly shored and braced or of sufficient strengths to withstand lateral soil pressures.
- C. Backfill material shall be inspected prior to placement and all roots, vegetation, organic matter, or other foreign debris shall be removed. Stones larger than 12 inches in any dimension shall be removed or broken. Stones shall not be allowed to form clusters with voids.

- D. Backfill material shall not be placed when moisture content is more than 2 percent above optimum or is otherwise too high to allow proper compaction. When material is too dry for adequate compaction, water shall be added to the extent necessary.
- E. No backfill material shall be placed on frozen ground nor shall the material itself be frozen or contain frozen soil fragments when placed. No calcium chloride or other chemicals shall be added to prevent freezing. Material incorporated in the backfilling operation which is not in satisfactory condition shall be subject to rejection and removal at the Contractor's expense.
- F. If the Contractor fails to stockpile and protect on-site excavated material acceptable for backfill, then the Contractor shall provide an equal quantity of acceptable off-site material at no expense to the Owner.
- G. Remove surplus backfill material from site.

### 3.10. PIPE TRENCH BACKFILL

- A. Pipe foundations, to a depth of 1 foot above the pipe, shall be placed in 12-inch layers and thoroughly compacted by approved mechanical methods to ensure firm bedding and side support. Refer to Section 02228 for density requirements. For plastic or polyethylene pipe materials, do not compact directly over pipe until the 2 feet of cover has been installed. Pipe foundations are specified in the appropriate sections covering underground piping. The remainder of the trench shall be backfilled and consolidated in accordance with Section 02228 and by one of the following methods, depending on the nature of backfill material and location of trench.
- B. Procedure I - For cross-country pipelines under uncultivated areas where subsequent settlement can be tolerated:
  - 1. Backfill material shall be placed in the trench and consolidated by mechanical means to prevent voids. Refer to Section 02228 for density requirements. The top layer shall be thoroughly compacted mechanically and slightly mounded to allow for subsequent settlement. Maintain trench surface until completion of contract and regrade as necessary within guarantee period.
- C. Procedure II - For lawns, cultivated fields, gardens and non-paved areas where minimum subsequent settlement is required: Same as for Procedure I, refer to Section 02228 for density requirements. Top of back fill shall be compacted by mechanical means and surface maintained prior to topsoil installation, fine grading, and seeding.
- D. Procedure III - For streets, driveways, parking areas, highways, shoulder areas, miscellaneous type pavements, walks, curbs, gutters and other specified areas:
  - 1. Backfill material shall be placed in layers not exceeding 12 inches thick and each layer thoroughly compacted by a backhoe mounted hydraulic or vibratory tamper, up to 2 feet under pavement (below top of subgrade). The upper 2 feet shall be compacted using hand-guided or small self-propelled vibratory or static rollers or pads in layers not exceeding 6 inches in thickness. Refer to Section 02228 for density requirements.
  - 2. For pipelines in or across State Highways, backfill material and compaction shall conform with the Standard Specifications or specific requirements of the State in which the project is located.

3. Where a gravel-cement mixture (Type F) backfill is specified, the dry gravel and cement mixture shall be placed in the trench, in 6-inch layers and thoroughly tamped using mechanical or vibratory tampers. Water shall not be introduced to the gravel-cement mixture during placing and compacting thereof.

#### 3.11. BACKFILL FOR STRUCTURES

- A. Backfill shall be placed in layers not exceeding 8 inches thick and thoroughly compacted by mechanical means.
- B. Where pipelines or conduits are to be placed on structural backfill, all backfill under the pipes shall be Size D-2 crushed stone placed in 8-inch layers and mechanically tamped, unless an alternate method of supporting such pipes is specified.
- C. Hydraulic compaction by ponding or jetting will not be permitted except in very unusual conditions and then only upon written request and demonstration of its effectiveness by the Contractor and the written acceptance by the Engineer.

#### 3.12. PERIODIC CLEAN-UP; BASIC RESTORATION

- A. When work involves installation of sewers, drains, water mains, manholes, underground structures, or other disturbances of existing features in or across streets, rights-of-way, easements or private property, the Contractor shall (as the work progresses) promptly backfill, compact, grade and otherwise restore the disturbed area to a basic condition which will permit resumption of pedestrian or vehicular traffic and any other critical activity or function consistent with the original use of the land. The requirements for temporary paving of streets, walks, and driveways are specified elsewhere. Unsightly mounds of earth, large stones, boulders and debris shall be removed so that the site presents a neat appearance.
- B. The Contractor shall perform the clean-up work on a regular basis and as frequently as required. Basic site restoration in a particular area shall be accomplished immediately following the installation or completion of the required facilities in that area. Furthermore, such work shall also be accomplished if partially completed facilities must remain incomplete for some time period due to unforeseen circumstances.
- C. Upon failure of the Contractor to perform periodic clean-up and basic restoration of the site to the Engineer's satisfaction, the Owner may, upon five days prior written notice to the Contractor, without prejudice to any other rights to remedies of the Owner, cause such work for which the Contractor is responsible to be accomplished to the extent deemed necessary by the Engineer, and all costs resulting therefrom shall be charged to the Contractor and deducted from the amounts of money that may be due him.

#### 3.13. TOLERANCES

- A. Top Surface of Backfilling - Under Paved Areas -  $\pm 1/2$  inch from required elevations.
- B. Top Surface of General Backfilling -  $\pm 1$  inch from required elevations.

#### 3.14. FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01400.
- B. The Contractor shall designate an experienced person who shall be responsible for inspection of excavations on a daily basis, document, and maintain daily trenching and excavation logs per OSHA 29 CFR 1926.

- C. Tests and analysis of fill material will be performed in accordance with ASTM D1557 and with Section 02228.
- D. Compaction testing will be performed in accordance with ASTM D1556, ASTM D2922, and with Section 02228.
- E. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.
- F. Frequency of Tests - 1,000 linear feet.

3.15. PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Section 01500.
- B. Regrade and recompact fills subjected to vehicular traffic.

END OF SECTION

## SECTION 02226

### ROCK REMOVAL

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Removal of subsurface rock encountered during excavation, utilizing mechanical methods.

##### 1.2. RELATED SECTIONS

- A. Information Available to Bidders - Subsurface Report; bore hole locations and findings of subsurface materials.
- B. Section 02205 - PROTECTION OF EXISTING FACILITIES
- C. Section 02225 - TRENCHING
- D. Section 03001 - CONCRETE

##### 1.3. UNIT PRICES

- A. Rock Quantity - Determined by quantity of rock indicated in the Contract Documents.
- B. Determination of Unit Measurements - Identified by site measurements made by the Engineer and calculated in accordance with payment limits established in the appropriate Bid Item Description.

##### 1.4. REFERENCES

- A. Code of Federal Regulations (CFR) - U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), Construction Standards and Interpretation, 29 CFR Part 1926.
- B. Department of Transportation (DOT) - Title 49 (49 CFR), Parts 106, 107, 171-179, 383, and 390-399.

##### 1.5. DEFINITIONS

- A. "Rock" is defined to include all sound solid masses, layers and ledges of consolidated and indurated rock or mineral matter of such hardness, durability and/or texture that it is not rippable or cannot be excavated with normal earth excavation equipment.
- B. All boulders and detached pieces of solid rock or concrete or masonry 1 cubic yard in volume or greater, shall be classified as "rock."
- C. Should a conflict arise as to the classification of the material to be removed, the following tests shall be used to aid in the determination:
  - 1. Where practicable, a late model tractor-mounted hydraulic ripper equipped with a one digging point of standard manufacturer's design adequately sized for use with and propelled by a crawler-type tractor rated between 210 and 240 net fly-wheel horsepower, operating in low gear, shall be utilized.

Should the suspect material not be effectively loosened or broken down by ripping in a single pass with the aforementioned ripper, the material shall be classified as "rock."

2. In situations where interbedded strata of "common excavation" material and "rock excavation" material are encountered in the same excavation, the individual classification of those materials shall be made on an average percentage basis of the occurrence of those materials as measured in stratigraphic sections as approved by the Engineer.

#### 1.6. REGULATORY REQUIREMENTS

- A. Obtain permits from authorities having jurisdiction before removal by mechanical methods is started.

#### 1.7. SCHEDULING

- A. Schedule work to avoid disruption to occupied buildings nearby.
- B. Schedule work to minimize disruption of vehicular traffic in nearby public thoroughfares.
- C. Coordinate schedule with local police and fire departments, including owners of nearby existing facilities.
- D. Schedule Work to coordinate with concrete placement. Reference Section 03001.

#### 1.8. SUBMITTALS

- A. Submit plan of action for rock removal. As a minimum, include a site plan showing starting date, preconstruction inspection requirements, location, direction of progress, finish point, and completion schedule.

#### 1.9. ORDER OF WORK

- A. After the rock is determined, proceed with rock removal in accordance with the approved plan of action.
- B. The Contractor shall schedule his operations so that all rock excavation within 100 feet of any proposed structure is completed before any structure work is started.

### PART 2 PRODUCTS

Not used.

### PART 3 EXECUTION

#### 3.1. EXAMINATION

- A. Verify site conditions and location of nearby buildings, structures and other facilities, recording irregularities which exist prior to work of this section.
- B. Verify locations of nearby underground utilities and structures. Reference Section 02205.

### 3.2. PREPARATION

- A. Identify required lines, levels, contours, and datum; establish quantity of rock to be removed to meet project requirements.

### 3.3. ROCK REMOVAL - GENERAL

- A. Allow time for Engineer to take site measurements of rock quantities to be removed.
- B. Cut away rock at bottom of excavation to form level bearing surface for foundations of buildings and structures.
- C. Remove shaled layers to provide sound and unshattered base for pipe bedding.
- D. In utility trenches, trim rock to 6 inches below bottom of installed pipe (per the Recommended Standards for Water Works, Part 8.7.2) and 12 inches wider than outside diameter of installed pipe.
- E. Remove excavated materials from site.
- F. Correct unauthorized rock removal in accordance with backfilling and compaction requirements of Section 02225, concrete fill, Section 03001, under direction of Engineer.

### 3.4. ROCK REMOVAL - MECHANICAL METHOD

- A. Excavate and remove rock by mechanical methods at locations required by the Contract Documents and when trimming bottom or sides of excavation is necessary to meet project requirements.
- B. Drill holes and utilize expansive tools, wedges, and/or other mechanical means, as appropriate, to fracture rock.

### 3.5. FIELD QUALITY CONTROL

- A. Provide for Engineer's inspection of foundation bearing surfaces and cavities formed by removed rock.

END OF SECTION

## SECTION 02228

### COMPACTION

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Compaction requirements and test methods.
- B. Compact all subgrades, foundations, embankments, trench backfills, filled and backfilled material as specified.

##### 1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICES: For the work of this Section.
- B. Section 01026 - LUMP SUM ITEMS: Requirements applicable to lump sum prices for the work of this section.
- C. Section 01400 - QUALITY CONTROL: Inspection and testing by laboratory services.
- D. Section 02225 - TRENCHING

##### 1.3. REFERENCES

- A. ASTM D698 - Laboratory Compaction of Soil Using Standard Effort
- B. ASTM D1556 - Density of Soil in Place by the Sand-Cone Method
- C. ASTM D1557 - Laboratory Compaction of Soil Using Modified Effort
- D. ASTM D2922 - Density of Soil in Place by Nuclear Methods
- E. ASTM D3017 - Water Content of Soil in Place by Nuclear Methods

##### 1.4. SUBMITTAL

- A. Submit in writing a description of the equipment and methods proposed to be used for compaction.

##### 1.5. QUALITY ASSURANCE

- A. The Contractor shall adopt compaction methods which will produce the degree of compaction specified herein, prevent subsequent settlement, and provide adequate support for the surface treatment, pavement, structure and piping to be placed thereon, or therein, without damage to the new or existing facilities.
- B. The natural subgrade for all footing, mats, slabs-on-grade for structures or pipes shall consist of firm undisturbed natural soil, at the grades shown on the Drawings.



- C. After excavation to subgrade is completed, the subgrade shall be compacted if it consists of loose granular soil or if its surface is disturbed by the teeth of excavating equipment.
  - 1. This compaction shall be limited to that required to compact loose surface material and shall be terminated in the event that it causes disturbance to underlying fine-grained soils, as revealed by weaving or deflection of the subgrade under the compaction equipment.
  - 2. If the subgrade soils consist of saturated fine or silty sands, silts, or clay or varied clays, no compaction shall be applied.

## PART 2 PRODUCTS

### 2.1. MATERIALS

- A. Materials to be compacted shall be as specified in Section 02225.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Examine spaces to be filled beforehand and remove all unsuitable materials and debris including sheeting, forms, trash, stumps, plant life, etc.
- B. Inspect backfill and fill materials beforehand and remove all roots, vegetation, organic matter, or other foreign debris. Stones larger than 12 inches in any dimension shall also be removed or broken into smaller pieces.
- C. No backfill or fill material shall be placed on frozen ground nor shall the material itself be frozen or contain frozen soil fragments.
- D. Spaces to be filled shall be free from standing water so that placement and compaction of the fill materials can be accomplished in "dry" conditions.

### 3.2. PREPARATION

- A. Brace walls and slabs of structures to support surcharge loads and construction loads imposed by compaction operations.
- B. Each layer of fill shall be compacted to the specified density the same day it is placed.
  - 1. The moisture content of backfill or fill material shall be adjusted, if necessary to achieve the required degree of compaction.
- C. Compact each lift in accordance with Table 1.
- D. Match compaction equipment and methods to the material and location being compacted in order to obtain specified compaction, with consideration of the following guidelines:
  - 1. Rubber-tired rollers are preferred for most areas to prevent bridging of softer materials.

2. Double smooth drum rollers may be used provided that careful inspection can prevent bridging.
3. Compaction roller should be lighter in weight than proof-rolling equipment, with a minimum compaction force of 350 pounds per linear inch (PLI).
4. Vibratory compaction is preferred for dry, granular materials.
5. Hand compaction equipment such as impact rammers, plate or small drum vibrators, or pneumatic buttonhead compactors should be used in confined areas.
6. Hydraulic compaction by ponding or jetting will not be permitted except in unusual conditions, and then only upon written approval by the Engineer and after a demonstration of effectiveness.
7. Backhoe-mounted hydraulic or vibratory tampers are preferred for compaction of backfill in trenches under pavements over 4 feet in depth. The upper 4 feet shall be compacted as detailed above or with hand-guided or self-propelled vibratory compactors or static roller.
8. For plastic pipelines (PVC, PE or PB) do not compact directly over center of pipe until backfill has reached 2 feet above top of pipe.

**TABLE 1**  
**COMPACTION REQUIREMENTS**

Construction Element	Maximum Compaction Layer Thickness (Inches)	ASTM	Minimum Compaction
<b>I. STRUCTURES*</b>			
a. Fill beneath foundation elements and under slabs-on-grade - hand-guided compaction	6	D1557	95%
Fill beneath foundation elements and under slabs-on-grade - self-propelled or tractor-drawn compaction	8	D1557	95%
b. Fill around structures and above footings	8	D1557	95%
<b>II. TRENCHES**</b>			
a. Fill under pipelines and pipe bedding	8	D1557	95%
b. Pipe sidefills and top 4 feet of pipe backfill under pavements	12	D1557	93%
c. Backfill below 4 feet under pavement	18	D1557	90%
d. Backfill under lawns, gardens and cultivated fields	24	D1557	90%
e. All other trenches	36	D698	85%
<b>III. EMBANKMENTS AND FILLS</b>			
a. Fill under streets, parking lots, and other paved areas	12	D1557	92%
b. Embankments not supporting pavement or structures	18	D1557	90%
c. Rough site grading	24	D698	85%

- \* Where structural loads are carried by piles, caissons or other deep foundations, minimum compaction may be reduced to 95 percent.
- \*\* The first 1 foot above pipelines shall have a compacted thickness of 6 inches.

### 3.3. FIELD QUALITY CONTROL

#### A. Material Testing

1. The Engineer reserves the right to order testing of materials at any time during the work.
2. Testing will be done by a qualified, independent testing laboratory in accordance with this section and Section 01400.
3. The Contractor shall aid the Engineer in obtaining representative material samples to be used in testing.
4. For each material which does not meet specifications, the Contractor shall reimburse the Owner for the cost of the test and shall supply an equal quantity of acceptable material, at no additional compensation.
5. The Contractor shall anticipate these tests and incorporate the time and effort into procedure.

#### B. Compaction Testing

1. The Engineer reserves the right to order the qualified independent testing laboratory to conduct in-place density tests of compacted lifts.
2. Testing may be conducted for every 200 cubic yards of fill or backfill, or every 100 linear feet of trench backfill placed.
3. The Contractor shall dig test holes and provide access to all backfill areas at no additional compensation when requested by the Engineer.
4. For each test which does not meet specifications, the Contractor shall retest at his cost. If the retest does not meet specifications, the Contractor shall replace and recompact material to the specifications at no additional cost to the Owner.
5. The Contractor shall anticipate these tests and incorporate the time and effort into procedures.
6. Nuclear moisture density testing by "probe" methods will be acceptable for compacted layers not exceeding 8 inches in thickness.
  - a. Nuclear "backscatter" methods will be acceptable only for testing asphalt paving layers not in excess of 3 inches in thickness.
  - b. Only certified personnel will conduct nuclear testing.
  - c. If the nuclear method is utilized, the results shall be checked by at least one in-place density test method described above.

- C. Unacceptable Stockpiled Material - Stockpiled material may be tested according to Material Testing Materials.
- D. Alternate Methods of Compaction - The Contractor may employ alternate methods of compaction if the desired degree of compaction can be successfully demonstrated to the Engineer's satisfaction.
- E. Select Material - On-Site
  - 1. Any on-site material may be used for select fill material provided it meets all the requirements of the equivalent off-site material.
  - 2. No on-site material shall be used without prior approval of the Engineer.
- F. Systematic Compaction - Compaction shall be done systematically, and no consideration shall be given to incidental coverage due to construction vehicle traffic.

#### 3.4. PROTECTION

- A. Prior to terminating work for the day, the final layer of compacted fill, after compaction, shall be rolled with a smooth-wheel roller if necessary to eliminate ridges of soil left by tractors or equipment used for compaction or installing the material.
- B. As backfill progresses, the surface shall be graded so as to drain off during incidence of rain such that no ponding of water shall occur on the surface of the fill.
- C. The Contractor shall not place a layer of fill on snow, ice or soil that was permitted to freeze prior to compaction. These unsatisfactory materials shall be removed prior to fill placement.

END OF SECTION

SECTION 02507  
TEMPORARY PAVING

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Temporary paving roads, streets, driveways, and walks.
- B. Schedule.
- C. Compaction.
- D. Maintenance.
- E. Tolerances.

1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEMS: Requirements applicable to unit prices for the work of this section.
- B. Section 01039 - COORDINATION AND MEETING
- C. Section 01300 - SUBMITTALS
- D. Section 02112 - PAVEMENT CUTTING
- E. Section 02228 - COMPACTION

1.3. REFERENCES

- A. New York Department of Transportation Standard Specifications, dated January 10, 2013.
- B. NYSDOT - Manual of Uniform Traffic Control Devices.

1.4. COORDINATION

- A. Coordinate field work under provisions of Section 01039, including maintenance of traffic, access to private driveways, and emergency vehicle access.

PART 2 PRODUCTS

2.1. TEMPORARY PAVING MATERIAL

- A. Temporary paving to consist of one of the following types:
  - 1. Type 3, Asphalt Concrete - From May through October, or when local bituminous plants are operating, the temporary paving shall be NYSDOT Type 3 asphalt concrete binder plant mix, 2 inch compacted thickness.

- a. When temporary pavements are to be maintained through a winter season, then a 4-inch compacted thickness shall be placed.
2. Type 2, Cold Mix Bituminous - From November through April, or when local bituminous plants are not operating, provide cold mix bituminous surfacing NYSDOT Specification Section 405, Type 2, placed to a 4-inch compacted thickness.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Verify that backfill and select special backfill has been compacted and graded in accordance with Section 02228.
- B. Verify that traffic controls are in place.

### 3.2. PREPARATION

- A. Install traffic control devices in accordance with the NYS Manual of Uniform Traffic Control Devices.
- B. Excavate, fill, grade and compact the special backfill to a smooth, stable condition prior to placing of the temporary paving.

### 3.3. INSTALLATION

- A. The temporary paving to match the slope, grade and alignment of the original pavement, driveway, and walk.
- B. The temporary paving to match the elevation of the adjacent surface and to continue the existing drainage pattern.
- C. Compact temporary paving to the Engineer's satisfaction with tandem rollers or equivalent and of sufficient size and number to compact the asphalt concrete while it is still hot and in a workable condition.
  1. Rolling shall continue until all roller marks and creases are removed.
  2. At the Engineer's discretion, confined area or small sections of pavement may be compacted by mechanical means.

### 3.4. TOLERANCES

- A. Flatness - Maximum variation of 3/4-inch measured by a 10-foot straight edge.
- B. Scheduled Compacted Thickness - Within 1/4-inch.

### 3.5. SCHEDULE

- A. Place temporary paving as directed by the Engineer over all trenches and excavations in streets, driveways, and walks as soon as the backfilling and compaction operations have been completed.

1. In any event, required surfaces shall be temporarily paved by each Friday afternoon prior to the weekend shutdown of construction activity.
2. Contractor shall replace painted traffic markings in accordance with local, county, or state specifications (depending on jurisdiction).

3.6. MAINTENANCE

- A. The temporary pavement to be maintained in a manner satisfactory to the Engineer, free from depressions, potholes and rough surface until its removal is required for the installation of permanent paving.
  1. Install additional material to maintain a satisfactory driving, walk, and driveways surface.
  2. If additional material is needed due to settling or constant use, Contractor shall replace or fill at no additional cost to the Owner.

END OF SECTION

SECTION 02510  
HOT MIX ASPHALT PAVING

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Asphalt concrete paving and surface sealer; top course, binder, or base course.
- B. Driveways and parking areas.
- C. Road shoulders.
- D. Compaction.
- E. Asphalt curbs.
- F. Tolerances.
- G. Field quality control.

1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEM: Requirements applicable to unit prices for the work of this section.
- B. Section 01039 - COORDINATION AND MEETINGS
- C. Section 01300 - SUBMITTALS
- D. Section 01550 - MAINTENANCE AND PROTECTION OF TRAFFIC
- E. Section 02112 - PAVEMENT CUTTING
- F. Section 02228 - COMPACTION
- G. Section 02507 - TEMPORARY PAVING

1.3. REFERENCES

- A. New York State Department of Transportation (NYSDOT) Standard Specifications, current version.
- B. USDOT - Manual of Uniform Traffic Control Devices.
- C. NYSDOT - Manual of Uniform Traffic Control Devices (Supplement).

1.4. PERFORMANCE REQUIREMENTS

- A. Paving and repaving accomplished under this contract shall meet the finished grades, elevations and profiles shown on the Drawings.



1. Where pavement replacement is being accomplished, match the sectional profiles of the existing pavement unless otherwise stated herein or shown on the Drawings.
- B. All thicknesses of pavement courses described herein or shown on the Drawings are after completion of compaction.

#### 1.5. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Submit certification of plant job mix formulas that have been approved by the NYSDOT.
- C. Traffic control plan in accordance with Section 01550 and the Manual of Uniform Traffic Control Devices (with the NYSDOT Supplement).
- D. Tack coat material.

#### 1.6. QUALITY ASSURANCE

- A. Perform work in accordance with the NYSDOT Standard Specifications, as amended and revised to date and as they apply to the following:
  1. Materials and batch plant requirements.
  2. Construction procedures except as modified herein.
  3. Weather and seasonal limitations except as modified herein.
- B. Paving work shall be performed by a qualified paving contractor or subcontractor acceptable to the Owner and Engineer.
- C. Obtain asphalt concrete materials from same source throughout project.

#### 1.7. ENVIRONMENTAL LIMITATIONS

- A. Weather and Seasonal Limitations - Asphalt concrete and bituminous surface treatments shall not be placed on wet surfaces or when it is raining or when conditions prevent the proper handling, compacting or finishing of the asphalt concrete or when the surface temperature is less than specified in the following table:

NOMINAL COMPACTED LIFT THICKNESS	SURFACE TEMPERATURE MINIMUM (NOTE 1)	SEASONAL LIMITS
3" or greater	40°F	None
Greater than 1" but less than 3"	45°F	Notes 2, 3, and 5
0.1" or less	50°F	Notes 2 and 3
Bituminous surface treatments (Note 3)	70°F or greater	

##### NOTES:

1. All temperatures shall be measured on the surfaces (lay glass thermometer on surface and read after temperature has stabilized) where the paving is to be placed and the controlling temperature shall be the average of three temperature readings taken at locations  $\pm 25$  feet apart.
2. Surface treatments shall be placed during the period of May 1 up to and including the first Saturday after Labor Day.

3. The ambient temperature shall be not less than 50 degrees F in the shade and not more than 95 degrees F.
4. Bituminous paving mixtures for curbs, driveways, sidewalks, gutters and other incidental construction shall be placed on surfaces having a temperature of 45 degrees F or greater. Installation of these items is not subject to seasonal limitations.
5. When work is halted because of weather conditions, limited tonnage enroute to the project may be placed, if permitted, and the mixture is within the temperature requirements.

1.8. COORDINATION

- A. Coordinate field work under provision of Section 01039 including maintenance of traffic, access to private driveways, and emergency vehicle access.

1.9. SCHEDULING

- A. Schedule the paving operations such that all paving necessary to provide safe and adequate maintenance and protection of traffic or for protection of previously laid courses is completed within the weather and seasonal limitations.
  1. Such scheduling shall include expediting construction operations to permit paving before the seasonal limitations or by limiting the length of work to that which can be completed before the seasonal shut-down.
  2. The cost of scheduling and sequencing of work to conform to the seasonal limitations shall be reflected in the bid prices for the related contract items.

1.10. MAINTENANCE

- A. The Contractor shall maintain driving surfaces, free of ruts and potholes, for maintenance of traffic until temporary paving or permanent paving is installed.
  1. All temporary paving and pavement replacement shall be maintained in a safe, drivable condition until the pavement wearing course is installed.
  2. All subgrade, subbase and base courses shall also be maintained in their specific finish condition prior to placement of the next course.
- B. If the Contractor fails to complete the necessary paving operations prior to weather and seasonal limitations, all temporary materials and work which become necessary as a result of such failure, such as the lowering or shimming of castings and protrusions, drainage of the roadway, providing acceptable rideability, and other work needed for the adequate maintenance and protection of traffic until paving operations can be completed the following paving season, shall be at the Contractor's expense.
- C. For a period of one year after issuance of the Certificate of Substantial Completion, the Contractor shall promptly patch, maintain, repair, and/or replace any pavement that settles or becomes damaged due to settlement or defective materials or workmanship.
  1. Areas to be repaired shall be cut out in a square or rectangular shape to the depth matching the top course.
  2. The vertical face of asphalt to be painted with asphalt emulsion prior to placing the asphalt concrete.

3. If more than top course depth of 1-1/2 inch settlement has occurred, the pavement shall be removed to the subbase and subbase and/or binder and base course restored to proper grade before restoration of the wearing course.
4. The centerline finished grade, in any case, shall be as shown on the Contract Drawings.

## PART 2 PRODUCTS

### 2.1. HOT MIX ASPHALT (HMA) PAVEMENTS

- A. Subbase Course - The pavement base course shall be constructed of the type described below and as shown on the Drawings. Subbase course material shall be installed to a width and depth as shown on the Drawings.
  1. This subbase course shall be NYSDOT Type 2 (Sect. 304), compacted to 95% standard proctor per NYSDOT standard specifications. Final compacted thickness shall be as shown on the Drawings but not less than 12 inches.
- B. Binder Course - The pavement binder course shall be constructed of the type described below and as shown on the Drawings. Binder course material shall be laid to a width and depth shown on the Drawings. Temperature range 250 to 325 degrees F.
  1. This binder course shall be NYSDOT Item 402.257904-25 F9. Final compacted thickness shall be as shown on the Drawings, but not more than 3 inches.
- C. Pavement Wearing Course (Top Course) - Pavement wearing course construction shall be of the type described below and as shown on the Drawings. The wearing course shall be constructed to a width and depth as shown on the Drawings.
  1. This wearing course shall be NYSDOT Item 402.127304-12.5 F3. Final compacted thickness shall be as shown on the Drawings, but not more than 1.5- inch.
- D. Tack Coat
  1. NYSDOT - Tack coats of asphalt emulsions, Table 702 90, shall be furnished and applied in accordance with NYSDOT Specification Section "407 - Tack Coat." Prior to placing the next course, the asphalt shall be allowed to cure per manufacturer's recommendations.
- E. Painted Traffic Markings - Contractor shall replace all markings in accordance with state specifications.

### 2.2. ASPHALT CURB

- A. Materials shall conform to the requirements set forth in this section.

### 2.3. SOURCE QUALITY CONTROL

- A. Provide certification of state approved job mix formulas for types to be used on this project.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Permanent restoration of pavements shall not begin until 30 days after trench or structure backfill has been completed in accordance with the applicable specifications or until testing of the installed utility has been completed in accordance with the specifications (whichever is the longest period of time after completion of trench or structural backfill).
  - 1. Completion of backfill shall include compaction tests to ascertain compliance with degree of compaction required as described in Section 02228.
    - a. Verify base conditions under provisions of Section 01039.
    - b. Verify that compacted subgrade existing bituminous surface is dry and ready to support paving.
    - c. Verify gradients and elevations of base are correct.
- B. If painted traffic markings on the pavement are to be interrupted by the new pavement replacement, they are to be restored using an approved traffic paint.
- C. Driveway and Parking Areas
  - 1. Driveways and parking areas that are disturbed or damaged by the Contractor's operations shall be restored equal to a new condition.
  - 2. Driveway or parking area aprons which do not meet the elevation of the edge of new road pavement installed under this project shall be adjusted to meet the new pavement at a slope not to exceed 1 inch per foot with top course material of the new pavement, so that the apron conforms to the elevation of the road pavement at each location.
  - 3. New driveways or parking areas shall be constructed as described herein and as shown on the Drawings.
  - 4. Contractor shall completely replace driveway apron from trench to the road edge of pavement if trench is within 10 feet of road edge.
- D. Road shoulders to be constructed or reconstructed as described herein and as shown on the Drawings.
  - 1. Road shoulders that are disturbed or damaged by the Contractor's operations shall be restored equal to, or to conditions superior to that which existed prior to construction.
  - 2. Road shoulders that do not meet the elevation of the edge of new road pavement installed under this project shall be adjusted to meet the new pavement at a slope not to exceed 1-1/2 inches per foot. Paving materials shall match existing unless otherwise shown on the Drawings.
  - 3. New road shoulders shall be constructed as described herein and as shown on the Drawings.

### 3.2. PREPARATION

- A. Where project consists of reconstructing existing streets, lower valve boxes and existing manholes to subgrade level by removing frame and cover and brick masonry.
  - 1. Cover valve boxes and manholes with steel plates and locate with measured ties.

2. After constructing the subbases and pavement courses, and prior to placing the final top course, recover valve boxes and manholes and raise to finished grade.
- B. All existing and new manholes, frames and covers, valve boxes, curb boxes, etc., shall be raised or lowered to be 1/2 inch below the new pavement grade.
1. No manhole covers or valve box covers shall be covered with paving material, or be exposed in a depression in the pavement greater than 1/2 inch.
- C. Catch basin frames and grates shall be raised or lowered to be 1 inch below the new pavement finished grade.
- D. Pavement Cuts
1. Pavement cuts for final pavement replacement shall be made as described herein and in Section 02112.
  2. Pavement cuts shall be made parallel to the centerline of the trench, shall be located a minimum of 12 inches outside the backfilled trench on undisturbed subgrade and shall be in a straight line for minimum length of 100 feet between manholes or between those stations where changes in direction of the installed piping were made.
  3. Where a full street width overlay is to be installed the cutbacks may follow the backfilled trench alignment.
  4. Loose, torn, cut, marked up or damaged pavement outside the cutback areas shall be removed and replaced at the Contractor's expense and match the proposed permanent paving.
  5. Pavement cuts in driveways shall be cut back 12 inches and made in a straight alignment perpendicular or parallel to the driveway and for its full width.
  6. Pavement cuts in parking areas shall be cut back 12 inches and made in a straight alignment parallel to the centerline of trench.
- E. Preparation of Existing Surfaces
1. Prior to placing of hot mix asphalt, the existing pavement surfaces shall be cleaned including brooming, mechanical sweeping, and flushing with water such that no dust or foreign material remains on the existing surface and in accordance with NYSDOT Specification "402-3.05 Conditioning of Existing Surface" and "633 3.01 Cleaning Existing Pavement and/or Shoulders."
  2. After cleaning of surface, all unsealed or inadequately sealed cracks and joints shall be cleaned with compressed air and then sealed as required under NYSDOT Specification "633-3.02 Cleaning, Sealing and Filling Joints and Cracks."
  3. Prior to placing of hot mix asphalt, vertical faces of existing pavement, structures, curbs and gutters shall receive a tack coat as described in NYSDOT Specification "407 Tack Coat." Curbs and gutter faces to be sprayed only to the extent to be covered by the asphalt concrete.
- F. All new pavement where meeting existing pavement shall be butted up against a vertical face in the existing pavement.
1. This vertical face to be cut to the depth of the new pavement.

2. Where the new pavement is an overlay, the beginning and end of the top course shall be similarly butted against a vertical face.
3. The existing pavement shall be removed for a minimum length of 2 feet, as measured parallel to the direction of paving, or greater if required to eliminate any noticeable bump or to provide adequate drainage away from structures, and to the width of new pavement.

G. Removal of Existing Pavement

1. Where shown on the Contract Drawings, the Contractor shall remove a portion of an existing pavement including Portland cement concrete paving, hot mix asphalt pavement, or to remove an asphalt concrete overlay pavement from a Portland cement concrete pavement base course, to the limits and profile specified by grinding, milling, or planing methods.
2. This process shall yield a base upon which a final pavement course will be applied.
3. The Contractor shall employ equipment especially designed and manufactured for the grinding, milling or planing of pavements.
4. In general, grinding machines are designed for removing and profiling Portland cement concrete pavement surfaces while milling and planing machines are designed for the removing of asphalt concrete pavement surfaces.

H. The resulting ground, milled or planed surface shall be thoroughly cleaned and free from dust, loose pavement material or other material.

1. The surface shall be free from gouges, large cracks and unsound, soft or broken-up areas.
2. Gouges shall be made level and true by the use of a trueing and leveling course of asphalt concrete if allowed by the Engineer.
3. Cracks greater than 1/4-inch shall be cleaned and filled in accordance with Article 3.02.
4. Unsound, soft or broken-up areas shall be excavated and repaired.

3.3. PREPARATION - TACK COAT

- A. Apply tack coat in accordance with manufacturer's instructions.
- B. No traffic will be allowed on the freshly applied tack coat.

3.4. PREPARATION - RESET MANHOLE FRAMES

- A. Prior to placing wearing (top) course, make final adjustments of manhole frames, catch basin frames, valve boxes and any other utility structures located in the pavement in relation to finished grade.
  1. Manhole frames, valve boxes, etc. to set 1/2 inch below finished grade and parallel to finished crown.
  2. Catch basin frames to set 1 inch below finished grade and parallel to finished crown.

- a. Bevel slope of wearing course (for 6-inch width) around catch basin frame.

### 3.5. INSTALLATION

- A. Install Work in accordance with NYSDOT standards.
- B. Place asphalt within four hours of applying tack coat.
- C. Compact pavement by rolling. Do not displace or extrude pavement from position. Hand compact with vibratory pans and hand tamps in area inaccessible to rolling equipment.
- D. Develop rolling with consecutive passes to achieve even and smooth finish, without roller marks.

### 3.6. PLACING AND COMPACTING

- A. Placing mix in an appropriate ambient temperature and on a surface sufficiently warm to minimize the risk of excessive cooling before completion of rolling is of paramount importance. Holding the aggregate particles in place is solely the function of the film of asphalt. The asphalt cannot perform this function properly if the mix is too cool when rolled.
  1. A thin course compresses very little under the roller and, as it cools quickly, it must be rolled as soon as possible.
  2. The Contractor shall supply sufficient number of rollers to perform the required compaction while asphalt concrete is still hot and in a workable condition and coordinate speed of paver with rollers such that the degree of compaction required is obtained.
  3. A high degree of densification is not the goal with this type of mix -- the aim is firm seating and contact of the aggregate particles.
  4. One or two coverages (see Table 1) with a steel-wheeled roller weighing 8 to 10 tons is sufficient. Additional rolling may be excessive, causing a break in the bond of asphalt between aggregate particles, particularly after the mix has cooled.
  5. When overtaken by sudden storms, the Engineer may permit work to continue up to the amount which may be in transit from the plant at the time, provided the mixture is within temperature limits specified.
- B. Paving (NYSDOT) - All asphalt concrete shall be installed using self-powered units in accordance with the NYSDOT Specification "402-3.02 HMA Pavers and 402-3.06 Spreading and Finishing", except that the sixth paragraph of 402 3.06 beginning with the words "If there are less than 1,250 square meters . . ." is deleted and the following substituted:
  1. A self-powered paving unit shall be provided except where hand methods are permitted by the Engineer in small areas or areas inaccessible to a paving unit. For such areas, the mixture shall be dumped, spread, screened and compacted to give the required section and compaction thickness.
  2. Surface Treatment (NYSDOT) - Bituminous surface treatment to be constructed in accordance with NYSDOT "Section 410 Bituminous Surface Treatment - Single Course", Paragraphs 410-1 through 410-3.01 G.
- C. Placement of the surface course shall be carefully planned to assure that the longitudinal joints in the surface course will correspond with the edges of the proposed traffic lanes. They shall not be located within the normal wheel path of vehicular traffic.

1. When paving adjoining lanes, the asphalt concrete shall be laid such that it uniformly overlaps the adjacent lane 2 to 3 inches. The thickness of the overlap material shall be approximately 1/4 the compacted thickness of the course, so as to result in a smooth and well compacted joint after rolling. The overlapped material shall be broomed or raked back onto the adjacent hot lane so that the roller operator can crowd the small excess into the hot side of the joint. If the overlap is excessive, the excess material shall be trimmed off so that the material along the joint is uniform. The coarse particles of aggregate in the overlap material shall be removed and wasted if deemed necessary by the Engineer.
  2. Traverse joints shall be staggered a minimum of 10 feet from adjacent lanes.
- D. Compaction - Asphalt concrete shall be compacted in accordance with NYSDOT Specification "402-3.07 Compaction and 402-3.09 Joints" using either option as follows:
1. Option A - Three-roller compaction train.
  2. Option B - Vibratory compaction.
- E. The required number of passes for either vibratory or static rollers, listed in Table 1, are minimum and may be increased by the Engineer. One pass shall be defined as one movement of the roller over any point of the pavement in either direction. Static roller passes shall continue until all ruts, ridges, roller marks or other irregularities are removed from the surface. The Engineer may alter the compaction procedures for small areas where the specified procedures are not practical.

TABLE 1

REQUIRED NUMBER OF PASSES (MINIMUM)

PAVEMENT COURSES	VIBRATORY ROLLER		STEEL-WHEEL TANDEM FINISH ROLLER
	VIBRATING PASSES (1)	STATIC PASSES (2)	STATIC PASSES
Base (open graded each lift)	4	2	5
Base (dense graded)	4	2	5
Binder (dense graded)	4	Not required	5
Top (dense graded all types)	2	Not required	2

NOTES:

- (1) The required number of vibrating passes shall be reduced by 1/2 for dual vibrating drum rollers when the drums are tandem and are both in the vibrating mode.
  - (2) The required number of static passes may be completed by the vibratory roller operating in the static mode.
- F. Unless otherwise directed by the Engineer, vibratory rollers having pneumatic drive wheels shall compact the longitudinal joint by using one of the pneumatic drive wheels to overlap the joint in two passes with the drum operating static. Unless otherwise directed by the Engineer, dual vibrating drum rollers shall compact the joint by overlapping the joints in two passes with both drums operating static.
- G. To prevent adhesion of the mixture to the drum(s), the drum(s) shall be kept properly moistened with water, or water mixed with small quantities of detergent or other Department approved materials. If required to prevent pneumatic tire pickup, the pneumatic drive wheels may be coated with a fine mist spray of fuel oil or other similar material. In all instances, the



surface of the pavement shall be protected from drippings of fuel oil or any other solvents used in pavings, compaction or cleaning operations.

- H. If the Engineer determines that unsatisfactory compaction is being obtained or damage to highway components and/or adjacent property is occurring using vibratory compaction equipment, the Contractor shall immediately cease using this equipment and proceed with the work in accordance with the conventional static compaction procedures at no additional cost.
- I. The Contractor should note that if he elects to use vibratory compaction equipment, he assumes full responsibility for the cost of repairing all damage that may occur to highway components and adjacent property or underground utilities.
- J. Areas inaccessible to rollers shall be compacted using vibratory pans, making a minimum of two passes on each course. Hand tamps shall be used for small areas not otherwise compacted.
- K. At the end of each work day, when placing top course material, the face of each paving lane shall be ended by the placing of a 2-inch x 4-inch or suitable sized board perpendicular to the pavement and shimmed with asphalt concrete to provide a driving surface such that the board and shim material can be easily removed and a vertical face retained for butting the start of the new pavement on the following work day.

### 3.7. DRIVEWAYS AND PARKING AREAS

- A. Paving materials, type of paving, depth of various courses, etc., shall be as shown on the Drawings.
  - 1. The driveways and parking areas shall be cut back 12 inches from outside disturbed or damaged areas as described above and in Section 02112.
  - 2. The minimum depth of subbase shall be 12 inches.
  - 3. The work shall include proper compaction of any necessary subbase, base course and paving courses, in accordance with Section 02228.
- B. Bituminous surfaces shall be restored with asphalt concrete matching existing, but in no case shall be less than 2 inches of Type 3 binder and 1 inch of Type 7 top course as specified in the applicable Articles of this section.
- C. Non-Bituminous Surfaces - Where shown on the Drawings, construct new driveways and parking areas or restore existing driveways and parking areas as follows:
  - 1. Gravel surfaces shall be restored per the Contract Drawings, matching existing, but in no case shall be less than 6 inches thick. The gravel shall be graded, shaped and compacted. Loose stones shall be removed.
  - 2. Crushed stone surfaces shall be restored matching existing stone, but in no case shall be less than 1 inch thickness of stone. Stone to be compacted with a roller.

### 3.8. ASPHALT CURB

- A. Bituminous curb shall be constructed by use of a self-propelled automatic curber or curb machine or a paver with curbing attachments.
- B. The automatic curber or machine shall meet the following requirements and shall be approved prior to its use.

1. The automatic curber or machine shall be so constructed and so operated as to consolidate the mixture to produce a dense mass free of voids.
  2. The machine shall form the curb true to line and grade and to a uniform shape and texture.
  3. The Engineer may permit the construction of curb by means other than the automatic curber or machine, when short sections or sections with short radii are required, or for such other reasons as may seem to him to be warranted. The resulting curb shall conform in all respects to the curb produced by the use of the machine.
- C. When curb is to be placed on a bituminous pavement or other bases, they shall be thoroughly swept and cleaned using compressed air and/or other cleaning methods as necessary to provide a clean surface. The surface shall be thoroughly dried and, when directed by the Engineer, a tack coat of bituminous material as set forth in paragraph 2.02.D shall be applied. During application the Contractor shall prevent the spread of tack coat to areas outside of the area occupied by the curb.
- D. Backfilling, when required, shall be performed after the curb has reached ambient temperature and shall be performed promptly so as to afford support and protection. Backfilling shall be accomplished using such methods, equipment and compaction s directed to prevent damage to the curb and to obtain satisfactory results

### 3.9. SEAL COAT

- A. Apply seal coat to surface course in accordance New York State Department of Transportation standards.

### 3.10. TOLERANCES

- A. Surface Tolerance - The pavement surface shall be constructed to a 1/4-inch tolerance. If, in the opinion of the Engineer, the pavement surface is not being constructed or has not been constructed to this tolerance based upon visual observation or upon riding quality, he may test the surface with a 16-foot straight edge (furnished by the Contractor) or string line placed parallel to the centerline of the pavement and with a 10-foot straight edge or string line placed transversely to the centerline of the pavement on any portion of the pavement.
1. Variations exceeding 1/4-inch shall be satisfactorily corrected or the pavement relayed at no additional cost as ordered by the Engineer.
- B. Thickness Tolerance - The thickness indicated for each of the various courses of bituminous pavement is the nominal thickness. The pavement shall be so constructed that the final compacted thickness is as near to the nominal thickness as is practical, and within the tolerances specified below.
1. Material which is part of a trueing or leveling course or shim course will not be considered in pavement thickness determinations.
  2. A tolerance not to exceed 1/4-inch from the nominal thickness required for the course specified under one pay item will be acceptable where the required nominal thickness is 4 inches or less. A tolerance not to exceed 1/2-inch from the nominal thickness required for the course or courses specified under one pay item will be acceptable where the required nominal thickness is over 4 inches. In addition, the sum total thickness of all bituminous mixture courses shall not vary from the total of the nominal thickness indicated on the plans by more than 1/4 inch where the total

nominal thickness is 4 inches or less; or more than 1/2-inch where the total nominal thickness is over 4 inches but not more than 8 inches; and by not more than 5/8-inch where the total nominal thickness is more than 8 inches.

3.11. FIELD QUALITY CONTROL

- A. The required degree of compaction for wearing or top courses and shim course is a finished product having not more than 7 percent air voids.

3.12. PROTECTION

- A. Any pavement, constructed or reconstructed, which is subsequently damaged due to activity of work under this contract, shall be removed and replaced by the Contractor at no additional cost to the Owner.
- B. Protect pavement from vehicular traffic until compaction is completed.

END OF SECTION

SECTION 02601  
SANITARY SEWER WORK

Part 1 GENERAL

1.1 DESCRIPTION

A. Under this Section, the Contractor shall furnish and install sanitary sewers and appurtenances, and maintain flow in existing sewers.

1.2. SUBMITTALS

A. The Contractor shall provide manufacturer and/or supplier technical information, data on material of construction, dimensions, strength, etc. for the following items to the Engineer in accordance with the Standard Specifications:

1. Precast concrete manholes
2. Sewer pipe and fittings
3. Lateral pipe and fittings and plugs (NIC)
4. Manhole frames and covers
5. Manhole grade rings
6. Flexible connectors
7. Manhole waterproofing
8. Other items as required

Part 2 PRODUCTS

2.1 MATERIALS

A. Sanitary sewer pipelines and fittings shall be ASTM D 3034 PVC Sewer Pipe, SDR 26 heavy wall with push-on joints. Gaskets shall comply with ASTM 3212.

B. Service connections/laterals and fittings shall be ASTM D 1785 four-inch diameter SDR 26 PVC with solvent welded joints or ASTM D 3034 PVC SDR 26 sewer pipe. Cleanout plugs to be brass. End plugs/caps to be PVC.

C. Laterals shall be connected to new sewer pipe with a mainline pipe diameter by 4" tee fitting. Laterals shall be connected to existing sewer pipe us

- D. ing watertight connections, InsertaTee (as manufactured by Fowler Manufacturing Co., PO Box 767, Hillsboro, Oregon 97123), or equivalent. Note: all lateral connections shall be watertight.
- E. Flexible couplings to be Fernco or equal.
- F. Manholes shall be precast, reinforced concrete units. Precast shall receive two coats of bitumastic coating on the exterior surface. Pipe penetrations shall be watertight and shall be "A-LOK" Flexible Leak Proof connection or equal.
- G. Manhole frames and covers shall heavy-duty cast iron units (i.e., designed to withstand AASHTO HS20 highway loading) with round flange, 24" diameter clear opening and solid lid (i.e., no vent holes) as manufactured by Campbell Foundry Company (Pattern No. 1030) , Syracuse Castings (Pattern No. 1030), Neenah R-1556 or equal. Cover shall be imprinted "SANITARY".
- H. Materials for maintaining flow in existing sewers shall be as required to conduct the work.
- I. Backfill, pavement, site restoration, etc. as specified elsewhere.

### Part 3 EXECUTION

#### 3.1 INSTALLATION

- A. Install in accordance with manufacturer's recommendations and details shown on the Contract Drawings and in these Specifications.
- B. The Contractor shall support and protect all existing utilities within the work area.
- C. The Contractor shall maintain sanitary sewer service at all times during construction.
- D. All pipe shall be laid with full bearing and to true grade, as specified herein and in sections entitled "TRENCHING" and "COMPACTION". Pipe installation shall begin at the downstream end and progress towards the upstream manhole, with all laterals being installed as work progresses.
- E. For new construction (i.e., no existing sanitary sewer or sewer located in a new trench), new laterals shall be provided and connected to the sewer line by use of a mainline tee fitting with a 4" branch. All new laterals shall be end capped and leakage testing conducted in accordance with the section entitled "Leakage and Pressure Testing". Upon successful completion of the leakage tests, connect new laterals to existing or new services. Where a lateral is to be for a future connection, provide watertight end cap behind the existing curb or edge of pavement and stake the location.

- F. When replacing existing sewer lines with existing and functioning laterals, new laterals shall be tied in as work progresses and leakage tests shall not be conducted.
- G. Existing laterals shall be replaced when shown on the Contract Drawings, or when field conditions indicate that the existing lateral is not functioning properly as determined in the field by the Owner or Engineer. The lateral shall be replaced to the point of connection with the building sewer unless otherwise directed by the Owner or Engineer.
- H. When manholes are to be installed in existing lines, the Contractor shall remove a section of the existing sewer, install the new manhole and connect as required to maintain the specified grade and alignment. Alternatively, with prior approval of the Owner and Engineer, the Contractor may install a precast reinforced concrete "doghouse" manhole over top of the existing sewer. All manhole doghouses shall be repaired with non-shrink grout, hydraulic cement, etc., as required to provide a watertight seal.
- I. Contractor shall install benchwalls, etc. and ensure that the manhole structure is watertight. Manhole frames shall be secured to the top of the manhole structure to provide a watertight seal and eliminate lateral and vertical movement. Provide non-shrink grout seal and other means as required.
- J. Manhole covers shall be installed so that the top of the cover is one-quarter inch below final grade.
- K. The Contractor shall provide the Engineer with as-built information (location, elevation, etc.) for all pipelines, service connections (to main), lateral terminations, manhole rims and inverts.

END OF SECTION

## SECTION 02660

### SANITARY SEWER LEAKAGE AND PRESSURE TESTING

#### Part 1 GENERAL

##### 1.1 WORK INCLUDED

A. Testing of all hydraulic structures, non-pressure piping for leakage and pressure as specified.

1. The Contractor shall furnish all labor, equipment, test connections, vents, water and materials necessary for carrying out the pressure and leakage tests.

B. All testing shall be witnessed by the Engineer or Owner.

#### Part 2 PRODUCTS

##### 2.1 Not Used

#### Part 3 EXECUTION

##### 3.1 LEAKAGE TESTS FOR STRUCTURES

A. Tanks, vaults, wells and other fluid containing structures, (excluding manholes), shall be tested before backfilling by filling the structure with water to overflowing, or other level as may be directed by the Engineer, and observing the water surface level twenty-four hours thereafter.

1. When testing absorbent materials such as concrete, the structure shall be filled with water at least 24 hours before the test is started.

B. The exterior surface, especially at the construction joint, will be inspected for leakage during and upon completion of the 24-hour test.

1. Leakage will be considered to be within the allowable limits when there is no visible sign of leakage on the exterior surface and where the water surface does not drop except as associated with evaporation.
2. A slight dampness on the exterior wall surface during the test period will not be considered as leakage, except in the case of pre-stressed concrete structures.

##### 3.2. TESTS ON PRESSURE PIPING FOR TRANSPORT OF WATER OR SEWAGE

###### A. General

1. Pipelines designed to transport water or sewage under pressure shall be tested hydrostatically and for leakage prior to being placed in service.

2. The length of piping and sections included in the tests shall meet the approval of the Engineer, but shall not exceed 1,000 lineal feet.
3. Equipment in or attached to the pipes being tested shall be protected. Any damage to such equipment during the test shall be repaired by the Contractor at his expense.
4. When piping is to be insulated or concealed in a structure, tests shall be made before the pipe is covered. All fittings, hydrants and appurtenances must be properly braced and harnessed before the pressure is applied. Thrust restraining devices which will become a part of the system must also be tested at the test pressure.
5. When testing absorbent pipe materials such as asbestos cement or concrete, the pipeline shall be filled with water at least 24 hours before the test is made.
6. If the line fails the test, the Contractor shall explore for the cause of the excessive leakage and after repairs have been made the line shall be retested. This procedure shall be repeated until the pipe complies.

#### B. Hydrostatic Pressure Test

1. Test pressure shall be as scheduled in the Pipe Schedule of Sections entitled "Pipeline Installation" and "Process Piping" or, where no pressure is scheduled, at 2-1/2 times working pressure.
  - a Test Procedure A: 150 psig for 2 hours
  - b Test Procedure B: 75 psig for 30 minutes
2. Testing of ductile iron water mains shall be done in accordance with ANSI/AWWA C600-93. Test pressure shall be at least 150 psi, or not less than 1.25 times the working pressure at the highest point along the test section, whichever is greater.
3. Test pressure shall be held on the piping for a period of at least 2 hours, unless a longer period is requested by the Engineer.

#### C. Leakage Test

1. The leakage test shall be conducted concurrently with the pressure test.
2. The rate of leakage shall be determined at 15-minute intervals by means of volumetric measurement of the makeup water added to maintain the test pressure. The test



shall proceed until the rate of leakage has stabilized or is decreasing below an allowable value, for three (3) consecutive 15-minute intervals. After this, the test pressure shall be maintained for at least another 15 minutes.

- a At the completion of the test, the pressure shall be released at the furthestmost point from the point of application.
3. All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating tests.
4. The allowable leakage for pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per mile of pipe:

<u>Type of Pipe</u>	<u>Leakage</u>
Ductile iron	10*
Asbestos-cement	20
Polyvinyl chloride, thermal plastic or fiberglass w/gasketed joints	0
Polyvinyl chloride, thermal plastic or fiberglass with solvent-cemented joints	0
Concrete with steel and rubber joints	10
Steel with welded joints	0
Steel with harnesses joints	10
Wrought steel	0
Copper	0
All piping inside structures	0

\* This limit shall be reduced, when required, to conform to Equation 1 and Table 6A of ANSI/AWWA C600-93. For lines conveying anything but potable water (e.g., wastewater, sludge, etc.) allowable leakage shall be zero.

Regardless of the above allowables, any visible leaks shall be permanently stopped.

### 3.3. AIR, OIL AND GAS PIPING

- A. All pipelines for air, oil and gas shall be cleaned and tested with air at the pressure specified and no leakage will be allowed. After these tests are complete, fuel gas lines shall be flushed out with nitrogen or carbon dioxide before fuel gas is admitted.

### 3.4. TESTS ON NON-PRESSURE PIPING FOR TRANSPORT OF WATER OR SEWAGE

- A. General: Pipelines designed to carry water or sewage in open channel flow or at minimal pressures shall be tested for leakage prior to being placed in service.

1. The leakage shall be determined by exfiltration, infiltration or low pressure air. The testing method directed shall take into consideration the groundwater elevation of the section of pipe being tested. The maximum non-pressure pipeline to be tested for leakage shall be the section between manholes or 600 feet.
2. Intermediate leakage tests during construction shall be made at the Contractor's discretion. Upon completion of any pipeline, the entire system including manholes shall be tested for compliance to allowable leakage.
3. When testing absorbent pipe materials such as asbestos-cement or concrete, the pipeline shall be filled with water at least 24 hours before the test is made.
4. Groundwater level shall be determined by the Contractor prior to any testing by reading the water level at the observation pipe in the manholes.
5. If the line fails the test, the Contractor shall explore for the cause of the excessive leakage and after repairs have been made the line shall be retested. This procedure shall be repeated until the pipe complies.

#### B. Exfiltration Testing

1. Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.
2. The head of water at the beginning of the test shall be at least two feet above the highest pipe within the section being tested.

3. Should groundwater be present within the section being tested, the head of water for the test shall be two feet above the hydraulic gradient of the groundwater.
4. Should the requirement of two feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet another method of testing shall be employed.

#### C. Allowable Leakage for Non-Pressure Pipelines and Tanks

The allowable leakage (exfiltration or infiltration) for non-pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:

<u>Type of Pipe</u>	<u>Leakage</u>
Ductile iron - mechanical or push-on joints	0
Asbestos-cement "O" ring joints	20
Polyvinyl chloride, thermal plastic or fiberglass with push on or rubber joints	0
Polyvinyl chloride, thermal plastic or fiberglass with solvent-cemented joints	0
Concrete with rubber joints	10
Concrete with steel and rubber joints	10
Corrugated Steel	35
Clay with rubber gasket joints	10
Cast iron soil pipe	0
drains and vents	*
sewer laterals	0
All piping inside structures All structures **	0 + evaporation

\* The same allowable as pipe to which it is connected.

\*\* Plus 1 gpm for every hydraulic relief valve.

Regardless of the above allowable leakage any spurting leaks detected shall be permanently stopped.

#### D. Air Testing

1. Air testing for acceptance shall not be performed until the backfilling has been completed.
2. Low pressure air tests shall conform to ASTM C 828 except as specified herein and shall not be limited to type or size of pipe.
3. All sections of pipelines shall be cleaned and flushed prior to testing.
4. The air test shall be based on the average holding pressure of 3 psi gauge, a drop from 3.5 to 2.5 psi, within the period of time allowed for the size of pipe and the length of the test section. The time allowed for the 1 psi drop in pressure, measured in seconds, will be computed and will be based on the limits of ASTM C 828.
5. When groundwater is present the average test pressure of 3 psig shall be above any back pressure due to the groundwater level.
6. The maximum pressure allowed under any condition in air testing shall be 10 psig. The maximum groundwater level for air testing is 13 feet above the top of the pipe.
7. The equipment required for air testing shall be furnished by the Contractor and shall include the necessary compressor, valves and gauges to allow for the monitoring of the pressure, release of pressure and a separate test gauge.
8. The test gauge shall be sized to allow for the measuring of the one psig loss allowed during the test period and shall be on a separate line to the test section.

### 3.5. MANHOLE TESTING

#### A. General

1. Each manhole shall be tested by either exfiltration or infiltration.
2. A manhole will be acceptable if the leakage does not exceed an allowable of one gallon per vertical foot of depth for 24 hours. Regardless of the allowable leakage any leaks detected shall be permanently stopped.

B. Exfiltration test may be performed prior to or after backfilling. The test shall be made by filling the manhole with water and observing the level for a minimum of eight hours.

END OF SECTION

SECTION 02661  
WATER DISTRIBUTION PIPING

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Water main piping including fittings, accessories and materials.
- B. Connection of water mains to existing piping, hydrants, valves, and meters.
- C. Water services to serve domestic or fire protection.
- D. Installation.
- E. Installation schedule.

1.2. RELATED SECTIONS

- A. Section 01039 - COORDINATION AND MEETINGS
- B. Section 01300 - SUBMITTALS
- C. Section 01500 - TEMPORARY FACILITIES
- D. Section 01700 - CONTRACT CLOSEOUT
- E. Section 02205 - PROTECTION OF EXISTING FACILITIES
- F. Section 02225 - TRENCHING
- G. Section 02228 - COMPACTION
- H. Section 02662 - WATER VALVES AND HYDRANTS
- I. Section 02674 - PRESSURE TESTING OF WATER DISTRIBUTION SYSTEMS
- J. Section 02675 - DISINFECTION OF WATER DISTRIBUTION SYSTEMS
- K. Section 03001 - CONCRETE

1.3. REFERENCES

- A. National Sanitation Foundation - Standard 61.
- B. U.S. Environmental Protection Agency - Safe Drinking Water Act.
- C. American National Standard Institute (ANSI)
- D. American Water Works Association (AWWA)

E. American Society for Testing Materials (ASTM)

1. Ductile Iron and Gray Iron Pipe

- a. ANSI A21.4/AWWA C104 - Cement-Mortar Lining for Ductile Iron and Gray Iron Pipe and Fittings for Water
- b. ANSI A21.4/AWWA C105 - Polyethylene Encasement for Ductile Iron Piping for Water and Other Liquids
- c. ANSI A21.10/AWWA C110 - Ductile Iron and Gray Iron Fittings, 3-inch through 48-inch, for Water and Other Liquids
- d. ANSI A21.11/AWWA C111 - Rubber Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings
- e. ANSI A21.50/AWWA C150 - Thickness Design of Ductile Iron Pipes
- f. ANSI A21.51/AWWA C151 - Ductile Iron Pipe Centrifugally Cast in Metal Molds and Sand Lined Molds for Water and Other Liquids
- g. AWWA C600 - Installation of Ductile Iron Water Mains and Their Appurtenances
- h. ASTM A126- Gray Iron Castings for Valves, Flanges, and Pipe Fittings

2. Plastic Pipe and Fittings

- a. ANSI/AWWA C900 - Poly (Vinyl Chloride) (PVC) Pressure Pipe 4 inch through 12-inch for Water
- b. AWWA/C901 - Polyethylene (PE) Pressure Pipe and Tubing 1/2 inch through 3-inch for Water Service
- c. AWWA/C906 – Polyethylene (PE) Pressure Pipe and Fittings, 4 inch through 65 inch for Waterworks
- d. AWWA C902 - Polybutylene (PB) Pressure Pipe, Tubing and Fittings, 1/2-inch through 3-inch for Water
- e. ASTM D2464 - Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
- f. ASTM D2467 - Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
- g. ASTM D2564 - Solvents Cements for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
- h. ASTM D2672 - Solvent Cement Joint Sockets for Belled PVC Pressure Pipe
- i. ASTM F477- Elastomeric Seals, (Gaskets) for Joining Plastic Pipe
- j. ASTM D1785 - Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
- k. ASTM D2581 - Polybutylene (PB) Plastics Molding and Extrusions Materials

- I. ASTM D3139 - Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
  - m. ASTM D3350 - Polyethylene Plastics Pipe and Fittings Materials
  - n. ASTM D2774 - Underground Installation of Thermoplastic Pressure Piping
  - o. ASTM D1784 - Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (PVC) Plastic Pipe Schedule 80
- 3. Copper Pipe and Tubing
  - a. ASTM B88 - Copper Pipe Type K
  - b. AWWA C800 - Underground Service Line Valves and Fittings (with Type K Copper Pipe and Tubing)

#### 1.4. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data - Provide data describing conformance to ANSI/AWWA/ASTM codes, materials, sizes, class, dimensions, joint type, fittings, and pipe accessories.
- C. Manufacturer's Installation Instructions - Indicate special procedures required to install products specified.
- D. Results of shop tests, if required.
- E. Manufacturer's Certificate - Certify that products meet or exceed specified requirements.
- F. Manufacturer Certified - To certify lead-free components.

#### 1.5. PROJECT RECORD DOCUMENTS

- A. Submit documents under provisions of Section 01700.
- B. Submit marked-up record plans, including record location if different from plan, variations in specified depth of more than  $\pm 6$  inches, record a minimum of two ties on all hydrants, bends, valves, and service connections.
- C. Identify and locate on record drawings the exposed unmapped utilities or services.
- D. Submit "Checklist for Water Service Connection" (found at the end of this section) for each installed service connection.

#### 1.6. REGULATORY REQUIREMENTS

- A. Conform to requirements of regulatory agencies having jurisdiction over the work.
- B. Conform to permit requirements obtained by Owner and attached to these Specifications.



## 1.7. FIELD MEASUREMENTS

- A. Prior to start of construction, verify by field measurements that existing conditions and structures are as shown on Drawings, notify Engineer of specific discrepancies or potential interferences.
- B. Prior to start of construction where ordered, verify by exploratory excavations that existing underground utility locations and elevations are as shown on the Drawings or to confirm marked location and elevation of underground utilities by the organization identified in Section 02205.
- C. Where connections are to be made to existing pipes, confirm the type of material and the outside dimensions of pipes.

## 1.8. COORDINATION AND SHUTDOWNS

- A. Coordinate field work under provisions of Sections 01039 and 01500, including field engineering, maintenance of traffic, access to private driveways, and emergency vehicle access.
- B. Coordinate work with local utility companies (private and municipal), including the organization identified in Section 02205 for location of existing utilities and protection thereof.
- C. Coordinate shutdowns of existing systems with local authorities. Notify affected property owners and industries at least 24 hours prior to shutdown including duration of shutdown.

## PART 2 PRODUCTS

### 2.1. DUCTILE IRON PIPE

- A. Pipe material, sizes, classes, etc. shall be furnished and installed as listed herein or as shown on the Drawings.
- B. For potable water applications, all linings and sealers shall conform to all applicable local, state, and federal health codes.
- C. Pipe shall be ANSI A21.51/AWWA C151 - Ductile iron pipe material, thickness design conforming to ANSI A21.50/AWWA C150, Class 52, rubber gasket push-on joint and fittings with mechanical or push-on joint conforming to ANSI 21.11/AWWA C111 and ANSI A21.10/AWWA C110.
- D. Pipe for Rail Road crossing shall be ANSI A21.51/AWWA C151 - Ductile iron pipe material, thickness design conforming to ANSI A21.50/AWWA C150, Class 56, rubber gasket push-on joint and fittings with mechanical or push-on joint conforming to ANSI 21.11/AWWA C111 and ANSI A21.10/AWWA C110.
- E. Ductile iron pipe shall have cement mortar linings for potable water which shall conform to ANSI A21.4/AWWA C104 as follows:
  - 1. Double Thickness - Linings shall consist of cement mortar, centrifugally applied and shall not be less than 1/8 inch for 3 inches to 12 inches inclusive, 3/16 inch or 14 inches to 24 inches inclusive, and 1/4 inch for 30 inches to 54 inches inclusive. The inside shall be given a seal coat of asphalt material as described in ANSI A21.4/AWWA C104.

- F. Protective coatings for ductile iron pipe potable water pipes shall be an asphaltic coating approximately 1 mil thick and conform to requirements of ANSI 21.51/AWWA C151.
- G. All mechanical joint pipe and fittings shall be furnished with ductile iron retainer glands.
- H. Push-on joints shall provide the following maximum deflections:

PIPE SIZE	MAXIMUM DEFLECTION
4" through 12"	5°

- I. Manufacturers shall be:
  - 1. American Pipe Product.
  - 2. U.S. Pipe Product.
  - 3. Griffin Pipe Product.
  - 4. McWane Group (Clow or Atlantic States).
  - 5. Or equal.
- J. Where shown on the Drawings or described herein, provide ductile iron pipe with polyethylene sleeve encasement conforming to ANSI 21.5/AWWA C105.
  - 1. The encasement shall be a continuous 8-mil thick polyethylene sleeve.
  - 2. The joints in the sleeve shall be overlapped a minimum of 12 inches and taped with a 2-inch wide polyethylene adhesive tape wrapped a minimum of three times around the pipe to secure the tube of polyethylene to the pipe.
- K. Restrained joint pipe and fittings shall conform to ANSI 21.11/AWWA C111. Manufacturers shall be:
  - 1. American Pipe Product - Flex-Ring.
  - 2. U.S. Pipe Product - TR Flex.
  - 3. Griffin Pipe Product - SNAP-LOCK.
  - 4. McWane Group (Clow or Atlantic States).

## 2.2. PVC PIPE

### 2.2.1 Below Grade

- A. PVC Pipe - ANSI/AWWA C900 PVC pipe material conforming to ASTM D1784 minimum Class 150 psi (DR 18), inside nominal diameter of 10 inches, push-on joint conforming to ASTM D3139 with elastomeric gaskets conforming to ASTM F477.
- B. Fittings for use on PVC pressure pipe of 4-inch nominal inside diameter or greater shall be ductile iron with mechanical joints as described in ANSI 21.10/AWWA C110. The coatings and linings of the fittings shall be as specified for ductile iron pipe.

- C. Mechanical joints for fittings shall be supplied with rubber gasket joints in conformance with ANSI 21.11/AWWA C111.
- D. If required, supply flange joints for use in meter pits or valve manholes in conformance with ANSI 21.11/AWWA C11.

#### 2.2.2 Above Grade Pressure Pipe

- A. PVC Pipe – Schedule 80 Pressure Pipe material conforming to ASTM D1784, D1785.
- B. PVC Fittings – Schedule 80 Injection molded fittings conforming to ASTM D2467.
- C. PVC Flanges – Injection molded Class 150 conforming to ANSI B16.5.
- D. All PVC Pressure Pipe shall be Certified for potable water use by ANSI/NSF-61.

#### 2.3. HDPE WATER MAINS/SERVICES & Fittings (3-Inch and Smaller)

- A. All polyethylene piping shall have a **minimum working pressure rating of 200 p.s.i.** Polyethylene pipe shall be made from a HDPE material having a minimum material designation code of PE 4710 or PE 3608. The material shall meet the requirements of ASTM D 3350 and shall have a minimum cell classification of PE445474C for PE 4710 and PE345464C for PE 3608. The raw material shall contain a minimum of 2% well dispersed, carbon black. Additives, which can be conclusively proven not to be detrimental to the pipe may also be used, provided that the pipe produced meets the requirements of the standards set forth in these specifications. In addition, the pipe shall be listed as meeting NSF-61 if used for potable drinking water.
- B. The pipe shall meet the requirement of AWWA C901.
- C. HDPE pipe shall be rated for use at a pressure class of 200 psi. The outside diameter of the pipe shall be based upon the IPS, CTS, or SIDR sizing system as detailed on the plans.
- D. Manufacturer: All HDPE pipe and fittings shall be from a single manufacturer, who is fully experienced, reputable and qualified in the manufacture of the HDPE pipe to be furnished. The pipe shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these specifications. Qualified manufacturers shall be: PLEXCO Division of Chevron Chemical Company, DRISCOPIPE as manufactured by Phillips Products Co., Inc., SCLAIRPIPE as manufactured by Dupont of Canada or equal as approved by the Engineer.
- E. Finished Product Evaluation: Production staff shall check each length of pipe produced for the items listed below. Manufacturer's Quality System shall be certified by an appropriate independent body to meet the requirements of the ISO 9001:2008 Quality Management Program.
  - 1. Pipe in process shall be checked visually, inside and out for cosmetic defects (grooves, pits, hollows, etc.).
  - 2. Pipe outside diameter shall be measured using a suitable periphery tape to ensure conformance with ASTM F714 or ASTM D3035, whichever is applicable.
  - 3. Pipe wall thickness shall be measured at 12 equally spaced locations around the circumference at both ends of the pipe to ensure conformance with ASTM F714 or ASTM D3035, whichever is applicable.
  - 4. Pipe length shall be measured.
  - 5. Pipe marking shall be examined and checked for accuracy.
  - 6. Pipe ends shall be checked to ensure they are cut square and clean.

- F. Stress Regression Testing: The polyethylene pipe manufacturer shall provide certification that stress regression testing has been performed on the specific polyethylene resin being utilized in the manufacture of this product. This stress regression testing shall have been done in accordance with ASTM D2837 and the manufacturer shall provide a product supplying a minimum Hydrostatic Design Basis (HDB) of 1,600 psi as determined in accordance with ASTM D2837, and shall be a Plastic Pipe Institute (PPI) TR4 listed compound.
- G. Warranty: The pipe MANUFACTURER shall provide a warranty against manufacturing defects of material and workmanship after the final acceptance of the project by the OWNER. The MANUFACTURER shall replace at no expense to the OWNER any defective pipe/fitting material including labor within the warranty period.
- H. HDPE Fittings (3-Inch and Smaller):
1. Butt Fusion Fittings – Fittings shall be made of either PE 4710 or PE 3608, with a minimum Cell Classification as noted in 2A.01A. Butt Fusion Fittings shall meet the requirements of ASTM D3261. Molded and fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified in the plans. Markings for molded fittings shall comply with the requirements of ASTM D 3261. Fabricated fittings shall be marked in accordance with ASTM F 2206. Socket fittings shall meet ASTM D 2683.
  2. Electrofusion Fittings – Fittings shall be PE 4710 or PE 3608, with a minimum Cell Classification as noted in 2A.01A. Electrofusion Fittings shall have a manufacturing standard of ASTM F1055. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans.
  3. Flanges and Mechanical Joint Adapters (MJ Adapters) – Flanges and Mechanical Joint Adapters shall be PE4710 or PE 3608, with a minimum Cell Classification as noted in 2A.01A. Flanged and Mechanical Joint Adapters can be made to ASTM D 3261 or if machined, must meet the requirements of ASTM F 2206. Flanges and MJ Adapters shall have a pressure rating equal to the pipe unless otherwise specified on the plans. Markings for molded or machined flange adapters or MJ Adapters shall be per ASTM D 3261. Fabricated (including machined) flange adapters shall be per ASTM F 2206. Van-Stone style, metallic (including stainless steel), convoluted or flat-plate, back-up rings and bolt materials shall follow the guidelines of Plastic Institute Technical Note # 38, and shall have the bolt-holes and bolt-circles conforming to one of these standards: ASME B-16.5 Class 150, ASME B-16.47 Series A Class 150, ASME B-16.1 Class 125, or AWWA C207 Class 150 Series B, D, or E. The back-up ring shall provide a long-term pressure rating equal to or greater than the pressure-class of the pipe with which the flange adapter assembly will be used, and such pressure rating shall be marked on the back-up ring. The back-up ring, bolts, and nuts shall be protected from corrosion by a system such as paint, coal-tar epoxy, galvanization, polyether or polyester fusion bonded epoxy coatings, anodes, or cathodic protection, as specified by the project engineer.
- I. HDPE Services:
1. All polyethylene piping shall have a **minimum working pressure rating of 200 p.s.i.** Service connections shall be electrofusion saddles with a brass or stainless-steel threaded outlet, electrofusion saddles, sidewall fusion branch saddles, tapping tees, or mechanical saddles
  2. For electrofusion saddles with threaded outlet the size of the outlet shall be one-inch IPS unless a larger size is shown on the plans. Electrofusion saddles shall be made from materials required in part 2A.02 B. Electrofusion Fittings.
  3. For sidewall fusion saddles, the size of the saddle shall be as indicated on the plans. The saddle can be made in accordance to ASTM D 3261 or ASTM F 2206. After installation, approximately ¼" of the PE pipe shall be visible beyond the saddle to confirm that proper surface preparation occurred. Saddle faces that do

not provide ¼ inch of area beyond the saddle are not acceptable.

4. Tapping tees shall be made to ASTM D3261 or D2683.
5. Mechanical strap-on saddles can only be used where their use on PE pipe is approved by the mechanical saddle manufacturer. The body of the saddle shall be stainless steel, epoxy coated cast iron or brass. The gasket material and design must be acceptable for PE pipe. The outlet shall be threaded for one-inch IPS unless a larger size is shown on the plans. Mechanical strap-on saddles will be installed per the manufacturer's instructions.

#### 2.4. HDPE WATER MAINS & Fittings (4-Inch and Larger)

- A. All polyethylene piping shall have a **minimum working pressure rating of 200 p.s.i.** HDPE pipe with 4" to 65" diameter shall be PE4710 conforming to the latest edition of ANSI/AWWA C906 and ANSI/NSF Standard 61. For potable water applications, PE4710 compound shall conform to ASTM D3350 minimum Cell classification PE445574C-CC3. Refer to PPI TN-44 for CC3 calculations. In addition, the pipe shall be listed as meeting NSF-61 if used for potable drinking water.
- B. The pipe shall meet the requirement of AWWA C906.
- C. HDPE Fittings (4-Inch and Larger):
  1. Butt Fusion Fittings: HDPE Fittings shall be made of PE4710 and with a minimum Cell Classification as shown in Section 2.1.A. All HDPE fittings shall meet the requirements of AWWA C906 and shall have a pressure rating equal to the pressure rating of the pipe to which the fitting is joined. Molded fittings shall be manufactured, tested and marked per ASTM D3261. Fabricated fittings shall be manufactured, tested and marked per ASTM F2206, or individual fittings standards.
  2. Electrofusion Fittings: Fittings shall be made of HDPE material with a minimum material designation code of PE 4710 and with a minimum Cell Classification as noted above. Electrofusion Fittings shall have a manufacturing standard of ASTM F1055. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans. Marking shall be according to ASTM F1055.
  3. Flanges and Mechanical Joint adapters (MJ adapters): Flanges and MJ adapters shall have a material designation code of PE4710 with a minimum Cell Classification as noted in Section 2.1.A. Flanges shall be made in accordance with ASTM F2880. MJ adapters shall be made to ASTM D3261. Flanges and MJ adapters shall have a pressure rating equal to the pipe to which it is joined unless otherwise specified on the plans. Markings for molded or machined flange adapters or MJ adapters shall be per ASTM D3261. MJ adapters are the preferred connection method over mechanical fittings. Flanges and MJ adapters should be double checked for butterfly valve clearance to allow full disc rotation and movement prior to installation in the trench.
  4. Mechanical Fittings for pipes: Three primary mechanical fittings or connections that can be used are Stab or insert type; compression type; and clamp ring. Per MAB-4, "Internal stiffeners should be used for all mechanical couplings". Mechanical fittings shall be designed to restrain and to prevent pull-out or rotation. Refer to Appendix D titled Degradation of Gaskets with Chlorine and Chloramine.

#### 2.5. COPPER SERVICE PIPE

- A. Copper Pipe - ASTM B-88, Type K material for underground service, nominal inside diameter 1 inch, 1-1/4 inch, 1-1/2 inch, and 2 inches.
- B. All service piping and fittings shall be lead-free.
- C. Fitting shall be flare-type fittings in conformance with AWWA C800.
- D. Joints - Copper joints shall be thoroughly cleaned and the end of pipe uniformly flared by a

suitable tool to the bevel of the fitting used. Wrenches shall be applied to the bodies of the fittings where the joint is being made and, in no case to a joint previously made.

## 2.6. PIPE ACCESSORIES

- A. Fittings - Same materials, class, coatings and linings as pipe unless under Article 2.01 it was specifically described otherwise. Fittings molded or formed to suit pipe size and end design and in required tee, bends, elbow, couplings, adapters, and other configurations.
- B. Where piping is to be installed, above ground or within structures provide adequate supports and bracing by means of hangers, brackets or concrete supports as may be required by the location.
- C. Hangers and supports shall be as manufactured by Anvil International, Providence, RI; Basic Engineering (BE), Pittsburgh, PA; or equal. They shall have stainless steel support rods, stainless steel mounting hardware, fasteners and beam clamps.
- D. Pipe openings in walls shall be precast or core drilled and completely sealed against water seepage with a mechanical type seal consisting of interlocking synthetic rubber links and nuts with pressure plates wider at ends, the seal shall be link seal manufactured by Thunderline Corporation, Wayne MI, or equal.

## 2.7. IDENTIFICATION

- A. Each pipe length and fitting shall be clearly marked with:
  - 1. Manufacturer's name and trademark.
  - 2. Nominal pipe size and class.
  - 3. Material designation.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Contractor shall verify all existing conditions.
- B. The drawings and specifications may contain information relating to conditions below the ground surface at the site of proposed work, but such information is furnished without guarantee as to it being complete or correct. The Contractor shall assume all risk and responsibilities and shall complete the work in whatever manner and under whatever conditions he may encounter or create without extra cost to the Owner. Location of existing underground facilities at or contiguous to the site is based upon information and data furnished to the Engineer by owners of such underground facilities or others, and Owner and Engineer do not assume responsibility for the accuracy or completeness thereof. The Contractor shall perform exploratory excavations in advance of this work to verify the location, depth, size, and material of existing utilities which may interfere with the work to be performed under this contract. All damage to existing utilities shall be the Contractor's cost to repair or replace.
- C. Verify that trench cut, excavated base and pipe bedding are ready to receive pipe and that excavations and pipe bedding dimensions and elevations are as shown on Drawings.
- D. All pipe or fittings which have been damaged in transit or which are obviously deformed or refinished in any way shall be rejected, marked, and removed from the site of the work. Any

pipe or fitting which the Engineer suspects is improper for the job shall be temporarily rejected, marked, and set aside for subsequent investigation to determine its conformity with the specifications.

- E. All pipe fittings and specials shall be carefully inspected in the field before lowering into the trench. Cracked, broken, warped, out-of-round, damaged pipe joints including damaged pipe lining or coatings or specials, as determined by the Engineer, shall be culled out and not installed. Such rejected pipe shall be clearly tagged in such manner as not to deface or damage it, and the pipe shall then be removed from the job site by the Contractor at his own expense.

### 3.2. PREPARATION

- A. The Contractor shall have on the job site with each pipe laying crew, all the proper tools, gauges, pipe cutters, lubricants, etc. to handle, cut and join the pipe.
- B. Flat-bottom trenches of required width shall be excavated to the necessary depth as required and maintained in accordance with Section 02225.
- C. Prior to installing the pipe foundation material, trenches shall have all water removed and all work performed in a dry trench.
- D. All pipes, fittings and specials which are to be installed in the open trench excavation shall be properly bedded in a uniformly supported on pipe foundations of the type specified in Section 02225 and shown on the Drawings. In particular, stones 2 inches and larger shall be removed from the bearing surface of the pipe foundation.
- E. Pipe foundation bedding material shall be spread in maximum 8-inch layers and each layer shall be compacted up to the spring line of the pipe.
- F. Compaction methods include hand tamping with T-bars, flat heads, shovel slicing as well as mechanical compactors.
- G. The Contractor shall perform his bedding operations with care to maintain line and grades.
- H. Suitable holes or depressions shall be provided in the pipe bedding to permit adequate bedding of bells, couplings, or similar pipe projections.

### 3.3. LINES AND GRADES

- A. The Contractor shall furnish all labor, materials, surveying instruments, and tools to establish and maintain all lines and grades. The Contractor shall have personnel on duty or on standby call, at all times, who are qualified to check line and grade of water mains as they are installed.
- B. Other control lines necessary for locating the work are shown on the Drawings.
- C. During construction, the Contractor shall provide the Engineer, at his request, all reasonable and necessary materials, opportunities, and assistance for setting stakes and making measurements, including the furnishing of one or two rodmen or chainmen as needed at intermittent times.
- D. The Contractor shall carefully preserve bench marks, reference points and stakes established by the Engineer or Owner, and in case of willful or careless destruction by his own operations he will be charged with the resulting expense to reestablish such destroyed control data and shall be responsible for any mistakes or delay that may be caused by the unnecessary loss or disturbance of such control data.

- E. The Contractor may use laser equipment to assist in setting the pipe provided he can demonstrate satisfactory skill in its use.
- F. The use of string levels, hand levels, carpenter's levels or other relatively crude devices for transferring grade or setting pipe are not to be permitted.

#### 3.4. TOLERANCES

- A. Pipes shall be laid to the lines and grades shown on the Drawings.
- B. Minimum depth of cover shall be maintained as shown on the Drawings or as described herein.

#### 3.5. INSTALLATION

- A. Installation of ductile iron pipe or plastic pipe to be in conformance with AWWA C600 or ASTM D2774, respectively, except as modified in this section or referenced sections or as shown on the Drawings.
- B. The Contractor shall furnish slings, straps and/or approved devices to provide satisfactory support of the pipe when it is lifted. Transportation from storage areas to the trench shall be restricted to operations which can cause no damaged to the pipe or lining or castings.
- C. The pipe shall not be dropped from trucks onto the ground or into the trench.
- D. Each pipe section shall be placed into position in the trench on the pipe bedding in such manner and by such means required to cause no injury to the pipe, persons or to any property.
- E. The method of laying and jointing the pipe shall be in accordance with the recommendations of the manufacturer and as approved by the Engineer. Each pipe shall be aligned with that already in place, forced home completely with horizontal axial movement and held securely in position. The bell of each pipe length to be laid in the same direction the installation is proceeding.
- F. At the joints, enough depth and width shall be provided to permit the pipe layer to reach entirely around the pipe so that the joints may be made in accordance with the manufacturer's recommendations. Mechanical type joints shall be tightened within the AWWA recommended torque range.
- G. Pipes, fittings, and specials shall be firmly bedded in the pipe foundation and shall have full bearing throughout their entire length, which shall be accomplished by combination of shaping the bedding and adequately compacting the pipe bedding and backfill under and around the pipe to the spring line of the pipe. The remaining backfill placed in 12 inch lifts to 1-foot above the crown of the pipe in accordance with Table 1 of Section 02228. The remaining backfill installed in accordance with Sections 02225 and 02228.
- H. When laid in tunnels, pipes shall be blocked in such a manner as to take the weight off the bells. Pipe laid in normal trench excavation shall not be laid on wood blocking.
- I. Backfill material within 12 inches of the pipe shall be free of stones greater than 2 inches in any dimension.
- J. Unless otherwise shown on the Drawings, the minimum total finished cover over the top of the pipe barrel of all pressure pipe shall be 4.5 feet.



- K. Refer to Section 02225 for other installation guidelines and requirements.
- L. To deflect a pipe joint, first join the pipe in the proper manner and then deflect the pipe within the allowable deflection recommended by the manufacturer.
- M. Installation of polyethylene sleeves to be performed in accordance with the manufacturer's instructions and ANSI A21.4/AWWA C105.
- N. Install magnetic locating tape, trace wire, minimum 2 inches wide with the words "Water Line Below" along the centerline of the installed water main for the entire length at a maximum depth of 2 feet 0 inches below finished grade.
- O. For each pipe entering or leaving a manhole or underground structure, at least one pipe joint shall be located within 4 feet of the outside face of the wall, and preferably at the 2-foot point.
- P. For ductile iron pipe installations, install three bronze wedges in each joint of pipe, fittings and specials.

### 3.6. CONNECTIONS TO EXISTING PIPES

- A. Connections to existing water mains shall be by dry connection by inserting a tee with coupling or wet connection by tapping sleeve and valve and where shown on the Drawings.
- B. Contractor to verify outside dimension of existing water main.
- C. Couplings to be ductile iron fittings, Smith Blair Model 441, or equal with stainless steel bolts and nuts. The couplings shall receive two coats of coal tar epoxy paint on all exterior surfaces prior to installation.

### 3.7. BRACING AND BLOCKING

- A. All bends, tees, crosses, plugs, etc., shall be braced and blocked with wood and then anchored with concrete thrust blocks so that there will be no movement of the pipe in the joints due to the internal or external pressures.
- B. The concrete shall be placed around the fittings and completely fill the space between the fittings and walls of the trench, from 6 inches below the fittings of pipe to 12 inches above the fittings and in accordance with the dimensions and details shown on the Drawings.
- C. The anchor concrete shall be so placed that the bell and spigot joints or other joints may be tightened, if necessary.
- D. Steel ties to be used only where shown on the Drawings.
- E. Prior to installation of the concrete anchor, the Contractor shall wrap all fittings with a minimum of 8-mil thick polyethylene.
- F. Refer to details shown on the Drawings.
- G. Cast-in-place concrete used in constructing concrete thrust blocks shall conform to requirements specified in Section 03001.
- H. Measuring, mixing, transporting and placing of concrete shall conform to American Concrete Institute (ACI) Publication 304.
- I. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

- J. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

### 3.8. TEMPORARY PLUGGING

- A. At all times when pipe laying is not actually in progress, the open ends of the pipes shall be closed temporarily with pipe plugs or by other means such that there is no possibility of any water or foreign material entering the line. If water is in the trench when work is resumed, the plugs shall not be removed until the water has been removed and work can proceed in a dry stable trench.

### 3.9. CLEANING PIPELINE

- A. At the conclusion of the work, the Contractor shall thoroughly clean all new pipes by flushing with water or other means to remove all dirt, stones, pieces of wood, etc., which may have entered during the construction period.
  - 1. Pipes shall be flushed at a minimum rate of 2.5 feet per second for a suitable duration.
  - 2. If, after this cleaning, any obstructions remain, they shall be corrected to the satisfaction of the Engineer.
- B. Where required, the Contractor shall use mechanical methods to clean pipes when flushing does not remove all obstructions or material.

### 3.10. PRESSURE TESTING AND FLUSHING

- A. Pressure testing and flushing of the water mains shall be performed in accordance with Section 02674.
- B. Any section of pipe that fails the pressure test shall be dug up and replaced or permanently repaired as approved by the Engineer. All repairs and/or replacements shall be the Contractor's cost. The replaced or repaired section shall then be retested.

### 3.11. DISINFECTION

- A. Disinfection of water mains shall be performed in accordance with Section 02675.

### 3.12. ENCASEMENT

- A. Where shown on the Drawings, pipes shall be encased in concrete; details and requirements for encasement of pipes are described in Section 02225 and shown on the Drawings.
- B. Requirements for encasement of pipes 10 inches and smaller, shown under a base slab, are described in Section 02225.
- C. Where shown on the Drawings, pipes shall be encased in a polyethylene sleeve.
  - 1. Damage to wrapping during pipe laying or backfilling operations shall be repaired with additional sleeve material and adhesive tape.

### 3.13. SERVICE CONNECTIONS

- A. When shown on the Contract Drawings, or ordered by the Engineer, water services shall be furnished and installed, and to the extent shown or ordered by the Engineer.

- B. The Contractor shall verify location of each new water service with each property owner as follows. The Contractor shall coordinate with each property owner of the planned location of the water service and connection to the existing curb stop at least two weeks before installation. At that time, the Contractor shall also furnish to each property owner a stake with a card attached to read as follows:

#### IMPORTANT NOTICE

A water main will be constructed on your street shortly. A water service will be installed from the water main to the edge of the street right-of-way or permanent easement to serve your property or house as applicable.

Please drive this stake with attached card in the area where you want the new water service to be located. Consult your plumber should you require advice on this location.

While all service connections must be installed by the wet tap method after pipe testing and disinfection, the homeowner must designate a service location prior to pipe installation to permit proper scheduling.

Please be patient with the construction, as your street and property will be restored after the installation of the water main system

Thank you for your cooperation.

(Name, address and telephone number of Contractor)

- C. If curb stop is not located within the road right-of-way, Contractor, property owner, Town, and Engineer shall coordinate new curb stop location.
- D. Corporations shall be installed in the "run" of the water main at the required locations or, if the pipe is required to be tapped to receive special saddles, such fittings shall be located at the required locations and installed as specified, and in a manner satisfactory to the Engineer. The requirements for proper pipe foundation, bedding, joint assembly, etc., shall be observed when installing the water services. All corporation installations shall be "wet" taps.
- E. After installation, water services shall be thoroughly flushed and shall not be backfilled until the installation has been observed and approved by the Engineer and their location has been measured and recorded by the Contractor on a standard form (see the form at the end of this section) provided by the Engineer, and such record shall then be transmitted to the Engineer with the record drawings.

#### 3.14. VALVES AND HYDRANTS

- A. Valves and hydrants to be installed on this project are specified in Section 02662.
- B. Valve and hydrant details for connection to the water main are shown on the Drawings.
- C. Refer to Drawings for locations of valves and hydrants to be installed on this project.

#### 3.15. QUANTITY FACTORS

- A. The tables shown on the Contract Drawings shall be used as the basis for computing volumes of excavation below subgrade, trench lining material, special pipe foundation materials, and special backfill materials when such volumes constitute the basis for payment to the Contractor, as established elsewhere in the Contract Documents. No deviations from the factors shown shall be allowed because of variations between the several pipe materials and classes.
- B. No special computations of quantities shall be made for structures such as meter manholes, valve pits, etc., which may occur in the various pipelines but the quantities for payment noted above, where applicable to such structures, shall be computed by assuming that the appurtenant pipeline continues uninterrupted through such structure; such as from center-to-center of manholes.

### 3.16. INSTALLATION SCHEDULE

- A. See Contract Drawings for proposed installation schedule.

Job \_\_\_\_\_ No.

Contract \_\_\_\_\_ No.

Contractor: \_\_\_\_\_

**CHECKLIST FOR WATER SERVICE CONNECTION**

(To Be Completed by Contractor)

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

Street: \_\_\_\_\_

House No. \_\_\_\_\_

Name: \_\_\_\_\_

Describe Location if No House Number:

Item	Yes	No	Location Sketch
1. Connection to Water Main:			
(a) Tapped directly into pipe barrel			
(b) Saddle			
2. Service Pipe Installed:			
(a) Using copper pipe			
(b) Curb stop installed			
(c) Curb box installed			
3. Connection to House Line:			
4. Diameter of Service Connection:			
5. Diameter of Water Main:			
6. Depth of Curb Stop:			
7. Station of Tap:			

CHECKED AND APPROVED

\_\_\_\_\_  
Contractor's Representative

**INSTRUCTIONS:**

Complete every space accurately.  
Show house, street, and water main.  
Show two permanent radius ties to curb stop.  
Show North arrow.  
Show diameter of main.  
Copies for Owner, field and office.

END OF SECTION

## SECTION 02662

### WATER VALVES AND HYDRANTS

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Furnishing the several types of valves, stops, and backflow preventers.
- B. Hydrants.
- C. Valve operators.
- D. Valve boxes.
- E. Air Relief Valve assemblies.
- F. Sampling stations.
- G. Installation.
- H. Testing and disinfection.

##### 1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEMS (BID ITEM DESCRIPTIONS)
- B. Section 01039 - COORDINATION AND MEETINGS
- C. Section 01300 - SUBMITTALS
- D. Section 01500 - TEMPORARY FACILITIES
- E. Section 01700 - CONTRACT CLOSEOUT
- F. Section 02225 - TRENCHING
- G. Section 02661 - WATER DISTRIBUTION PIPING
- H. Section 02674 - PRESSURE TESTING OF WATER DISTRIBUTION SYSTEMS
- I. Section 02675 - DISINFECTION OF WATER DISTRIBUTION SYSTEM

##### 1.3. REFERENCES

- A. ANSI/AWWA C500 - Gate Valves for Water and Sewerage Systems
- B. ANSI/AWWA C502 - Dry Barrel Fire Hydrants
- C. ANSI/AWWA C504 - Rubber Seated Butterfly
- D. ANSI/AWWA C506 - Backflow Prevention Devices - Reduced Pressure Principle and Double Check Valve Types
- E. ANSI/AWWA C507 - Ball Valves 6 inches through 48 inches

- F. ANSI/AWWA C508 - Swing Check Valves for Waterworks Service 2 inches through 24 inches NPS
- G. ANSI/AWWA C509 - Resilient-Seated Gate Valves for Water and Sewerage Systems
- H. ANSI/AWWA C540 - Power-Activating Device for Valves and Sluice Gates
- I. ANSI/AWWA C550 - Protective Interior Coatings for Valves and Hydrants
- J. ASTM A126 - Gray Iron Castings
- K. ASTM A48 - Gray Iron Castings for Valves, Flanges and Pipe Fittings

#### 1.4. DESIGN REQUIREMENTS

- A. The design working pressure shall be 200 psig for valves 12 inches NPS in diameter and smaller.
- B. The design working pressure shall be 150 psig for valves 16 inches NPS in diameter and larger.
- C. Valves shall be designed for normal cold water use.
- D. Gate valves shall be designed to be leak-tight with full pressure on either face with no pressure on the opposite face.
- E. Resilient seated gate valves shall be designed to be leak-tight with full pressure on either face with no pressure on the opposite face.
- F. Hydrants shall be designed for a 300 psig test pressure and 150 psig working pressure.
- G. All service line valves, corporations, and curb stops shall be lead-free.

#### 1.5. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Submit shop drawings of types of valves, hydrants and appurtenances proposed for the project including conformance to ANSI/AWWA codes and related details for field assembly, operations and maintenance.
- C. Manufacturer's Installation Instructions - Indicate special procedures required to install Products specified.
- D. Results of shop tests, if required.
- E. Manufacturer's Certificate - Certify that products meet or exceed specified requirements.

#### 1.6. PROJECT RECORD DOCUMENTS

- A. Submit documents under provisions of Section 01700.
- B. Record location of valves and hydrants with a minimum of two ties to permanent objects.

- C. Record Drawings - Provide the pipe sizes and horizontal and vertical location of all valve boxes, ARVs, curb boxes, meter pits, fire hydrants, blowoffs, corporations, fittings, and other appurtenances. The information will be provided digitally and consistent with the plan datum and control as shown on the Drawings. The Contractor will employ the services of a registered professional surveyor licensed in the State of New York to provide the information.

#### 1.7. REGULATORY REQUIREMENTS

- A. Conform to applicable code for materials and installation of the work of this section.
- B. All sheeting and bracing including the use of mobile shields shall conform to Public Law 91-596 (Williams Steiger Act). Occupational Safety and Health Administration Act (OSHA) of 1970 and its amendments and regulations or to the New York State Industrial Code Rule 23, entitled, "Protection in Construction, Demolition and Excavation Operations" as issued by New York State Department of Labor, Board of Standards and Appeals, whichever is the most stringent.
- C. Conform to New York State Industrial Code Rule 53, entitled "Construction, Excavation and Demolition Operations at or Near Underground Facilities" as issued by the State of New York Department of Labor, Board of Standards and Appeals.
- D. Conform to requirements of permits obtained by Owner.

#### 1.8. FIELD MEASUREMENTS

- A. Verify by field measurements and exploratory excavations that existing pipe outside diameter (for tapping sleeve and valve installations) and facilities locations and elevations are as indicated and/or as shown on Drawings. Notify Engineer of specific differences.

#### 1.9. COORDINATION

- A. Coordinate work under provisions of Sections 01039 and 01500.

### PART 2 PRODUCTS

#### 2.1. MATERIALS

- A. Valve size, type of valve, joint type, class, lining, coatings shall be installed as listed herein or as shown on Drawings.
- B. Valves shall be of standard manufacturer and of highest quality, both as to material and workmanship, conforming to the latest edition of AWWA standards specified.
- C. All valves and hydrants shall have the manufacturer's name monogrammed or initialed by the manufacturer thereon and shall be identified by catalog numbers.
- D. All valves shall be provided with hub, spigot, mechanical joint, flange or screwed ends as described herein or shown on the drawings.
- E. Valves 2 inches in nominal diameter and smaller shall be all brass or bronze.
- F. Valves over 2 inches in nominal diameter shall be iron bodied, fully brass or bronze mounted.
- G. All surface forming joints or bearing surfaces shall be machined to a perfect fit.



- H. All disc and seat rings shall be carefully and thoroughly secured in place with the iron castings machined where the rings are bare and the backs of the rings machined all over.
- I. After the rings have been fastened securely in place, the front shall be machined all over to a perfectly true and smooth bearing surface.
- J. All valves with non-rising stems shall have valve position indicators.
- K. Valves shall open counterclockwise (left) unless otherwise specified.

## 2.2. RESILIENT SEATED GATE VALVES

- A. All underground gate valves shall be non-rising stems, 2 inch operating nuts, O-ring seal and shall open counterclockwise (left).
  - 1. Underground gate valves shall be of the iron body, bronze mounted type conforming to AWWA Standard C509.
  - 2. Mechanical joint type designed for underground use at 150 psi.
  - 3. Underground gate valves shall be Kennedy, Mueller or equal.
- B. All resilient seated gate valves shall provide a full pipe opening when fully opened.

## 2.3. BACKFLOW PREVENTER

- A. Reduced pressure zone backflow preventers shall be supplied where shown on the Contract Drawings.
- B. The backflow preventers shall be NSF/ANSI 61 certified for use with potable drinking water.
- C. The backflow preventers shall consist of two spring-loaded check valves and a spring-loaded diaphragm-actuated, differential pressure relief valve located in the zone between the check valves.
- D. The unit shall include properly located test cocks and operation shall be completely automatic. The total headloss shall not exceed 10 psi at AWWA rated flow.
- E. All parts shall be manufactured from corrosion-resistant materials.
- F. A continuous discharge from the relief valve opening shall provide a visual inspection of need of repair.
- G. Manufacturers - Reduced pressure zone backflow preventers shall be listed on approved list of New York State Department of Health Technical Reference PWS-14 latest edition.

## 2.4. CORPORATION STOPS

- A. Corporation stops shall be lead free and of brass or bronze construction and shall be installed by the wet method, connecting service line to water mains, with water main at or near operating pressure when corporation stops are installed.

- B. Corporation stops shall be installed by experienced tradesmen using the proper tools especially designed for a wet-tap connection.
- C. Corporation stops shall be installed in complete accordance with the pipe manufacturer's recommendations for tapping and installing corporation stops.
- D. Saddles shall be used where recommended by the pipe manufacturer or as ordered by the Engineer, and such saddles shall be approved for use with the pipe by the pipe manufacturer. Threads of service saddle shall be compatible with the corporation stop specified. Saddles shall be of double strap design. Contractor shall verify diameter and pipe material ahead of time. Saddles shall be made of either brass or bronze and shall be as manufactured by Mueller Company, Ford Meter Box Company, or equal. All saddles shall be field wrapped with a polyethylene sheet.
- E. Where saddles are used, or for other reasons the main cannot be tapped wet, the Engineer may approve visual inspection of such connections after they have been pressurized.
- F. Buried corporation stops shall be Model H-15008 ("AWWA CC" x Compression CTS) as manufactured by Mueller Company, or as manufactured by Ford Meter Box Company, or equal.

#### 2.5. CURB STOPS

- A. Curb stops shall be of brass or bronze construction and two rubberized O-ring seals to provide pressure-tight seal. Curb stops shall be Figure H-15209 as manufactured by Mueller, or equal, as manufactured by Ford Meter Box Company, Hayes, or Nuseal.
- B. Curb boxes shall be extension type curb box Mueller model H-10314, size as required. They shall be adjustable from 48-inch to 72-inch. Curb boxes shall be constructed of cast iron and thoroughly coated with two coats of asphaltum varnish.
- C. Curb box top section shall include a water cover which shall be of the "old style" with the word "Water" cast into it and shall include a brass pentagon screw.
- D. Curb box rods shall be supplied with a hole in the "U" portion for the insertion of a brass pin. Pins shall be supplied and shall be made of brass.
- E. Curb boxes shall be as manufactured by Mueller or equal.

#### 2.6. WRENCH OPERATOR

- A. Wrench for wrench-operated valves located above ground shall be of bronze or cast iron, and shall be of suitable size and length to facilitate an effortless operation. One such wrench shall be provided for each valve on the project requiring wrench operation.
- B. Wrenches for wrench-operated valves located underground shall be of tee handle type and shall be of suitable length to enable operation of all such valves on the project. Two wrenches compatible with each type of operating nut on all valves used throughout the project shall be provided.

#### 2.7. VALVE BOXES

- A. Valve boxes shall be provided for all buried valves unless they are housed in valve chambers.

- B. Valve boxes shall be made of good quality cast iron and shall be of the sectional adjustable type. The long section shall be a minimum of 5 inches in inside diameter and fit around the stuffing box of the valve; or over the valve operator, if a two-section box is used; or to fit a circular or oval-base section if a three-section box is used.
- C. The upper section shall be arranged to screw on over the adjoining long section and shall also be full diameter. Screw-type valve boxes shall be used unless otherwise specified. Valve boxes shall be provided with cast iron lids or covers.
- D. Lids or covers shall be marked for the service for which the valve is used by casting words such as "WATER" for potable water system, "GAS", etc. An arrow shall be provided on the cover to indicate the direction in which the valve is turned to open; this arrow shall be labeled with the word "OPEN".
- E. The overall length of each valve box shall be sufficient to permit the top of the box to be set flush with the established finished grade. In asphalt concrete pavements, the top of the box to be set 1/2-inch below finished grade. Asphalt concrete to be compacted 12 inches wide around the upper section for a depth of 12 inches below finished grade.
- F. Valve boxes shall be set truly vertical and fully supported until sufficient backfill has been placed and compacted to ensure vertical alignment of the box.

## 2.8. VALVE DIRECTORY

- A. A valve directory shall be provided listing all valve numbers, the valve function, and location. The directory shall be prepared and delivered to the Owner after approval by the Engineer in a digital spreadsheet able to be opened with Microsoft Excel.
  - 1. Buried valves shall be included in valve directory with a description of their functions and locations. Coordinates (Northings and Eastings) number of turns open/close and model number.

## 2.9. AIR RELIEF VALVE ASSEMBLIES

- A. All air relief valve assemblies shall be installed at high points in the main and as called out on the Contract Documents. The air relief valve assemblies shall meet or exceed the following specifications:
  - 1. Any air relief valving and appurtenances that come into contact with potable water shall be rated for use with potable water and certified to NSF ANSI 61 and 372. The air relief valve and inflow preventers shall be manufactured and tested in accordance with AWWA C512 and C514 standards.
  - 2. Air relief valves shall be the make and model as called out on the Contract Drawings or Engineer approved equal. For this project, air relief valves are Val-matic model 202C.2 with inflow preventer assembly installed on the outlet, or Engineer approved equal.
  - 3. An inflow preventer assembly will be required on air relief valve assemblies and shall be certified to AWWA C514 standards. The inflow preventer shall be installed to prevent the introduction of contaminated water through the air valve outlet. The inflow preventer shall allow the admittance and exhausting of air while preventing contaminated water from entering during normal operating conditions. The inflow preventer shall be flow tested by an independent third

party to certify performance. The third party shall be an approved testing lab of the American Society of Sanitary Engineers.

4. Air relief valve design shall ensure the cover will be bolted to the valve body and sealed with a flat gasket. Resilient seats shall be replaceable and provide drop tight shut off to the full valve pressure rating. Floats shall be unconditionally guaranteed against failure including pressure surges. Mechanical linkage shall provide sufficient mechanical advantage so that the valve will open under full operating pressure. Simple lever designs shall consist of a single pivot arm and a resilient orifice button. Compound lever designs shall consists of two levers and an adjustable threaded resilient orifice button.
5. The air relief valve body and cover shall be constructed of ASTM A126 Class B cast iron for working pressures up to 300 psig. Higher pressure rated valves shall be constructed of ASTM A536 Grade 65-45-12 ductile iron.
6. The orifice, float and linkage mechanism shall be constructed with Type 316 stainless steel. Non-metallic floats or linkage mechanisms are not acceptable. The orifice button shall be Viton for simple lever valves and Buna-N for compound lever designs.
7. A fully-ported brass ball valve shall be provided to isolate the air release valve from the piping system in accordance with the Contract Drawings.
8. Valve interiors and exteriors shall be coated with an NSF/ANSI 61 certified fusion bonded epoxy in accordance with AWWA C550.
9. In low-pressure situations, a low durometer orifice buttons shall be furnished. The submittals shall clearly show the working pressure ratings for the valve assemblies for the Engineer's review for each application.
10. The manufacturer of the air release valves and appurtenances shall demonstrate a minimum of five (5) years experience in the manufacture of air valves and provide all test certificates, dimensional drawings, parts list drawings and operation and maintenance manuals with the submittals.

## 2.10. HYDRANTS

- A. All hydrants shall be of the compression or gate type conforming to the latest specifications of the ANSI/AWWA C502, and shall be of a make that has been adopted by the Owner as a standard.
- B. Hydrants shall be of heavy, anti-freeze compression action type with positive automatic type drain.
- C. All hydrants shall breakaway at ground level upon severe impact without flooding the area.
- D. Hydrants shall be supplied with 6-inch mechanical joint inlet connection.
- E. Hydrants shall have a minimum 4-1/2-inch diameter valve opening. They shall be equipped with two 2-1/2-inch hose nozzles and one 4-1/2-inch pumper nozzle. The pipe threads shall be National Standard Thread.
- F. Operating nuts shall be 1-1/2-inch 5-sided.

- G. Hydrant barrels shall be painted in accordance with the Town standards.
- H. Hydrants designated with plugged drain hole shall be factory yellow with a red cap.
- I. Caps shall be furnished with non-kinking chains.
- J. Hydrants shall open counter-clockwise.
- K. Hydrants shall be designed for 300-lb. test pressure and 150-lb. working pressure.
- L. Hydrants shall be Mueller Super Centurion 250 model A-421 with 4" Storz hydrant converter nozzles, or approved equal, in accordance with the Town standards.
- M. If flushing hydrants are called out on plans, use specification listed on flushing hydrant detail drawing.

#### 2.11. TAPPING SLEEVES AND VALVES

- A. Tapping sleeves and valves shall be provided where shown on the Contract Drawings.
- B. Tapping sleeves shall be compatible with the pipe encountered so that a watertight connection will be made.
- C. The sleeve shall be adequate to provide reinforcement of the pipe being tapped and protect this pipe against all strains resulting from either tapping the pipe or connecting to the pipe.
- D. Tapping sleeves and tapping valves for this project shall be manufactured by Mueller Company or equal.
- E. The tapping contractor shall have a minimum of five years' experience in performing taps.
- F. After the sleeve has been installed, but prior to making the tap, the sleeve shall be subjected to a hydrostatic test equal to the maximum line pressure. There shall be no observed leakage from the sleeve.

#### 2.12. SAMPLING STATIONS

- A. Sampling stations shall be with a 1-inch FIP inlet and a 3/4-inch hose or unthreaded nozzle.
- B. All stations shall be enclosed in a lockable, non-removable, aluminum-cast housing. When opened, the station shall require no key for operation, and the water will flow in an all-brass waterway.
- C. All working parts will also be of brass and be removable from above ground with no digging. A copper vent tube will enable each station to be pumped free of standing water to prevent freezing and to minimize bacteria growth.
- D. The exterior piping will be galvanized.
- E. Sampling Stations shall be model Eclipse 88, as manufactured by Kupferle Foundry, St. Louis, MO.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Verify that trench cut, excavated base and valve bedding is ready to receive work and valve bedding dimensions and elevations are as indicated on Drawings.
- B. All valves, hydrants, stops and appurtenances shall be carefully inspected in the field before lowering into the trench. Cracked, broken, warped, out-of-round, damaged joints, including damaged linings or coatings, or otherwise defective valves, hydrants and stops, as determined by the Engineer, shall be culled out and not installed. Such rejected material shall be clearly tagged in such manner as not to deface or damage it, and the material shall then be removed from the job site by the Contractor at his own expense.
- C. For tapping sleeve and valve connections, the Contractor, prior to making any connections, shall verify the material and outside diameter of the existing water main.
- D. The Contractor shall have on the job site all the proper tools, gauges, pipe cutters, lubricants, etc., to properly install valves, hydrants, etc.

### 3.2. PREPARATION

- A. Prior to installing the foundation, trenches shall have all water moved and all work performed in a dry stable trench.
- B. All valves, hydrants, etc. which are to be installed in the open trench excavation shall be properly bedded in, and uniformly supported on pipe foundations of the various types specified in Section 02225 and shown on the Contract Drawings.
- C. Flat-bottom trenches of required width shall be excavated to the necessary depth as required and maintained in accordance with Section 02225.
- D. Bedding material shall be spread in maximum of 8-inch layers for the pipe foundation and each layer shall be compacted until the required total depth of bedding has been built up.
- E. Suitable holes or depressions shall be provided in the bedding to permit adequate bedding of bells, couplings or similar joint projections.
- F. Compaction methods include hand tamping with T-bars, flat heads, shovel slicing, as well as mechanical compactors.
- G. The Contractor shall perform his bedding operations with care to maintain line grade and proper depth of valve and hydrants.

### 3.3. LINES AND GRADES

- A. Easement and property line and other control lines necessary for locating the work are shown on the Drawings.

### 3.4. TOLERANCES

- A. Valves and hydrants shall be laid to the lines and grades shown on the Drawings.

### 3.5. INSTALLATION

- A. The Contractor shall furnish slings, straps, and/or approved devices to provide satisfactory support of the valves or hydrants when lifted. Transportation from storage areas to the trench shall be restricted to operations which can cause no damaged to the coating or lining or castings.
- B. The valves or hydrants shall not be dropped from trucks onto the ground or into the trench.
- C. All valves shall be installed in accordance with the specifications for the pipe to which they are to be connected and as previously described for individual types of valves.
- D. Joints of valves shall be made up in accordance with the Contract Drawings and/or as described under the appropriate pipe joint descriptions found in other sections of these specifications.
- E. The valves shall be so located that they are accessible for operating purposes and shall bear no stresses due to loads from the adjacent pipe.
- F. All valves shall be inspected before installation, and they shall be cleaned and well lubricated before being installed in the line.
- G. Hydrants shall be set at locations specified on the Contract Drawings and shall be of such length that, with the frost ring at the ground surface grade, there shall be 6 feet of cover over the connecting pipe.
- H. Hydrants shall be set so that the barrel is truly vertical, and shall be properly backfilled so that the barrel will remain truly vertical.
- I. They shall be placed with 3 cubic feet of crushed stone pocket to provide drainage for the hydrant.

### 3.6. PRESSURE AND LEAKAGE TEST

- A. All installed valves, hydrants and appurtenances shall be subjected to the pressure and leakage test as described under Section 02674.

### 3.7. DISINFECTION OF WATER VALVES AND HYDRANTS

- A. All installed valves, hydrants and appurtenances shall be subjected to the flushing, sterilization and coliform tests described under Section 02675.

END OF SECTION

SECTION 02665  
SEWER BYPASS PUMPING

PART 1 - GENERAL

1.01 SUMMARY

- A. Contractor shall determine where bypass pumping is required. The Contractor shall maintain sewer flows through the existing system at all times during construction. Sewage shall not be allowed to back up and surcharge within the system. To accomplish this, bypass pumping of sewage may be required by the Contractor. The requirements of this action shall apply if bypass pumping is required.
  - 1. Design, furnish, install, operate, maintain, and remove all temporary bypass pumping and piping system(s) necessary for the construction of structures and piping as shown on the drawings.
- B. The Contractor shall be responsible for any and all violation notices, fines and remediation measures as a result of wastewater spillage or discharge associated with bypass pumping and piping activities and/or modifications and removal of existing structures and piping. The Contractor shall be responsible for all jobsite, motor vehicle traffic, and general public safety and protection during all work.
- C. The Contractor shall provide all trained and experienced labor and supervision for operating and maintaining the pumping and piping systems during the entire bypass pumping operation.
- D. The actual duration of bypass pumping and piping times depends on the Contractor's time required to perform the necessary pipe and structure removals, replacements, testing and connections. The actual bypass times may vary depending on the Contractor's plan of work. The Contractor will not be granted additional monies for bypasses which extend beyond the approved plan of work time frame. The ENGINEER makes no estimations of the time required or need to bypass pump and provide temporary bypass piping.
- E. It is the intent for the bypass pumping system to operate and be controlled by a series of wastewater floats to automatically start and stop pumps, depending on water levels in the manhole(s). The system shall include an autodialer to alert and alarm the CONTRACTOR's and Owner's designated staff by cell phone communication of potential failures and prior to any high-water alarms. The Contractor shall be responsible for ensuring proper operation and maintenance of the bypass pumping system.
- F. Any required Maintenance of Traffic Plan (MOT) to conduct the bypass pumping and piping work shall be approved by the Owner, Engineer and installed and maintained by the Contractor.
- G. The location and security of the bypass pumps and piping shall be provided by the Contractor. Secured fencing, as a minimum, shall be provided around the pumping system.



- H. Should the existing manhole frame and cover, or top riser sections of the suction and/or discharge manholes need modification to install said piping, the CONTRACTOR shall include this work in its bid. All repairs after the work is complete shall be performed in accordance with latest standards.

## 1.02 SUBMITTALS

Submit the following:

1. List of equipment for bypass pumping and bypass plans. Separate bypass plans will be required for each proposed bypass setup.
  - a. Plans shall include, but not be limited to the following:
    - i. Verification of all bypass piping sizes.
    - ii. Location of bypass pumping system(s).
    - iii. Narrative on any MOT requirements.
    - iv. Methods for protecting and securing the piping.
2. List of equipment for spill containment and cleanup.
3. Contractor's emergency response plan.

## 1.03 QUALITY ASSURANCE

- A. The design, installation, operation, and maintenance of the temporary pumping and piping systems shall be the Contractor's responsibility. The Contractor shall employ the services of a vendor who can demonstrate to Owner and Engineer that it specializes in the design and operation of temporary raw sewage bypass pumping and piping systems. The vendor shall provide at least five (5) references of projects of a similar size and complexity as this project performed by this firm within the past three (3) years.
- B. The proposed bypass systems shall meet the requirements of all codes and regulatory agencies having jurisdiction.
- C. The bypass pumping and piping specialty vendor shall have been in business for a minimum of 10 years. They shall have a major service center within 150 miles of the project site, with on-call maintenance and service staff available to respond onsite within 2 hours of notification.

## PART 2 - PRODUCTS

### 2.01 BYPASS PUMP ASSEMBLY

- A. Contractor shall maintain a minimum of two bypass pump assemblies for each pump location at the site in sound operating condition to ensure uninterrupted performance of the bypassing operation. Bypass pumps and equipment shall be mobilized to each work site as required for the sewer construction or reconstruction.

- B. Contractor shall provide a minimum of two trailer-mounted bypass pump assemblies for use during the Project. The assembly shall include the pump, engine drive, starters, battery starter, valving, suction hose and appurtenances, such that the equipment is fully functional and equipped for use as a bypass pump station. Muffler shall be hospital grade with regard to noise suppression. Equipment shall meet air quality exhaust criteria meeting all local, state and federal regulations/guidelines as applicable.
- C. Contractor shall submit a bypass pumping/piping plan and an emergency plan. The bypass pumping/piping plans are required for mainline bypass and shall include:
  - 1. A site plan showing dimensions and layout of equipment on each site and how the facilities will be protected from public access during use.
  - 2. Calculations showing the performance of pumps (where used) against friction and minor losses in each bypass system.
  - 3. Detailed description of each bypass system including connection, testing, operation, alarm and control functions, and disconnection. Contingency plans for power or equipment failure shall also be included where pumps are used.
  - 4. Schematic Map showing route of discharge, discharge locations, areas to be fenced, and where and how discharge piping will be hardened to allow traffic access.
- D. The bypass operation shall include all necessary controls and instruments to operate the system in automatic mode, adjust the number of pumps and provide alarms.
- E. Bypass pumping system design including friction and minor losses and the appropriate size and number of pumps shall be determined by the bypass pumping contractor's New York State licensed Professional Engineer in order to achieve the required flows. Bypass pumping plan shall be stamped by the licensed Engineer upon submission for review by the Owner and Engineer.
- F. The bypass pumping vendor shall provide an onsite diesel fuel storage tank(s) and containment for the pumps. Contractor is responsible for providing fuel throughout the bypass pumping operations. The onsite fuel storage tank(s) shall be sized to store enough fuel for running the entire system (all pumps) for a minimum of 3 days continuously, under full load.
- G. It is essential to the operation of the existing sewer system that there will be no interruption in the flow of sewage throughout the duration of the project. The Contractor shall provide, maintain, and operate all temporary facilities such as dams, plugs, pumping equipment, conduits, all necessary power, and all other labor and equipment necessary to intercept the sewage flow before it reaches the point where it would interface with the work, carry it past the work and return it to the existing sewer downstream of the work without causing a spill or discharge of the sewage to the environment.
- H. The Contractor shall provide all necessary means to safely convey the sewage past the work area. The Contractor will not be permitted to stop or impede the main flows under any circumstances.

- I. The Contractor shall maintain sewer flow around the work area in a manner that will not cause surcharging of sewers, damage to sewers and that will protect public and private property from damage and flooding.
- J. The Contractor shall protect water resources, wetlands, and other natural resources.

## 2.01 PUMP SYSTEM

- A. All pumps used shall be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system. The pumps shall be diesel powered. Equipment including pumps shall minimize noise disturbances and shall be "residential silenced" equipped. If necessary, to achieve this limitation, sound enclosures shall be provided. Work is within residential streets.
- B. Pump shall be capable of handling raw, unscreened, sanitary sewage containing solids and fibrous materials. Pumps shall be non-clog and shall be capable of passing 3-inch solids.
- C. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of influent flows.
- D. Spare parts for the pumps and piping shall be kept on site as required. Adequate hoisting equipment for each pump and accessories shall be maintained on site.
- E. The vendor shall provide the necessary stop/start controls and alarms for each pump. Autodialers shall be used to alert of problems, if a header system is used to manifold the pumps, each pump shall include an autodialer.
- F. The total bypass pumping capability shall be a minimum as described above. All units shall be fully operational. Any unit which fails to operate at its rated capacity shall be repaired or replaced immediately. The Contractor is advised that the Owner and Engineer have no control over the maximum flows that will occur in the sewer.
- G. The maximum allowable water level in the local collection system manhole serving the temporary bypass pumping system suction lines shall not exceed 4.0 feet.

## PART 3 - EXECUTION

### 3.01 BYPASS PUMPING/PIPING

- A. Bypass pumping/piping may be required. Submittals under this section shall address all bypass pumping/piping.
- B. Anticipated flow in the existing sewers varies depending on upstream discharge, the time of day, the day of the week, and whether or not there has been recent rainfall. Flow rates in the sewers

are affected by rainfall, and sewer bypass operations should be avoided whenever possible during and immediately following rainfall events. Connections that can be made in less than 8 hours can be coordinated with the Town to coincide with the lowest flows over a 24-hour period. Bypass sewer facilities that will remain in service over periods longer than 8 hours must be sized to handle the peak flow rate. The Town will determine the anticipated peak flows once the Contractor advises the Town where bypass is required. The anticipated dry weather peak hourly flow is approximately 25 gpm.

- C. The Contractor is responsible for the operation and maintenance of the bypass systems. These systems will operate 24-hours a day for 7 days a week for as long as bypassing is necessary.

- 1. The Contractor shall be responsible and liable for any wastewater spills and overflows resulting from improper operation or inadequacy of the bypass system, including reporting to regulatory agencies and paying the resulting fines and penalties.

- D. Bypass Pumping:

- 1. Two pumps, at a minimum, are required, each of which will handle the entire anticipated peak hourly flow. Pumps will operate in lead-lag mode with both operating if flow greater than anticipated is encountered.
  - 2. The Contractor shall construct and maintain all temporary piping and electrical connections. All temporary piping and electrical must be placed below ground.
  - 3. All lateral connections will be treated in the same manner as mainline sewers. Each will have a temporary sump, pump and stand-by pump to transfer flows to a mainline manhole as necessary.

- E. The Contractor shall perform all work associated with bypass pumping without causing damage to existing improvements to remain, and without causing a spill of sewage outside the sewer system. Any damage resulting from the Contractor's work shall be repaired or replaced to the satisfaction of the property owner at the Contractor's expense, and at no cost to the Town. All fines, and cost associated with the cleanup of spills, shall be the responsibility of the Contractor.

- F. The Contractor shall employ the services of a New York State licensed Professional Engineer to design the temporary piping, pumping and control systems. The design shall be submitted for approval. The temporary piping, pumping and control system plan and layout shall be approved by Owner and Engineer before bypassing may begin.

- G. Approval of the design shall not relieve the Contractor from full responsibility for performance of the system.

- H. No debris of any type shall be allowed in the piping system. Protective barriers and covers shall be installed in this regard. Any debris inadvertently allowed into the system shall be immediately removed. Any damage caused to the temporary bypass system that may occur as a result of debris, or Contractor Operations, shall be the responsibility of the Contractor, and no additional costs will be incurred to the Owner.

- I. The Contractor shall be responsible for furnishing the necessary material, equipment, labor and supervision to set up and operate the pumping and bypass piping systems. The bypass piping and pumping systems shall be fully inspected at least three times a day by the Contractor to ensure that the system is working correctly. Daily inspection reports shall be kept on-site in a Contractor logbook to be furnished to Owner and Engineer upon project completion.
- J. The Contractor shall pressure & leakage test the piping prior to use.

- END OF SECTION -

## SECTION 02674

### PRESSURE TESTING OF WATER DISTRIBUTION SYSTEMS

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Pressure testing of all water systems installed under this project.
- B. Test requirements.
- C. Required replacement or repair if test fails.
- D. Project records.

##### 1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEMS: Requirements applicable to unit prices for the work of this section.
- B. Section 01700 - CONTRACT CLOSEOUT
- C. Section 02661 - WATER DISTRIBUTION PIPING
- D. Section 02662 - VALVES AND HYDRANTS
- E. Section 02675 - DISINFECTION OF WATER DISTRIBUTION SYSTEMS

##### 1.3. REFERENCES

- A. AWWA C600 - Installation of Ductile Iron Water Mains and Their Appurtenances.
- B. AWWA C151 - Ductile Iron Pipe.

##### 1.4. TEST REQUIREMENTS

- A. All ductile iron and pvc water mains shall be tested in accordance with AWWA Standard C600. The following procedure shall be used:
  - 1. All newly laid pipe or any valved section thereof, shall be subjected to a hydrostatic pressure 50 percent in excess of the working pressure at any point on the section being tested, but in no case less than 150 lbs per square inch for a period of 2 hours.
  - 2. The Contractor shall accomplish the required tests on the pipeline by individually testing each component section of the installed main. The maximum length of section permitted to be tested at any one time will be approximately 1 mile, and normally will be less.
- B. **All HDPE water mains shall be tested in accordance with ASTM F2164-18.**
- C. Test Pressure Restrictions - Test pressure shall:
  - 1. Not be less than 150 psi at the highest point along the test section.
  - 2. Not exceed pipe or thrust restraint design pressures.

3. Be of at least two-hour duration.
4. Not vary by more than  $\pm 5$  psi.
5. Not exceed twice the rated pressure of the valves when the pressure boundary of the test section includes closed gate valves.

D. Leakage Test

1. All leakage test shall be conducted concurrently with the pressure test.
2. Leakage Defined - Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure throughout the duration of the test after the pipe has been filled with water.
3. The rate of leakage shall not exceed 11.65 gallons per day, per mile of pipe, per inch of nominal pipe diameter based on a test pressure of 150 psi. For the allowable leakage in gallons per hour (gph) for other test pressures refer to Table 4.A of AWWA C600, a copy of which is at the end of this section, including the basic formula for calculating the allowable leakage.

1.5. PROJECT RECORD DOCUMENTS

- A. Submit documents under provisions of Section 01700.
- B. Attached to the end of this section is a "Flushing and Testing of Water Lines Tabulation Sheet" for recording data for flushing and testing of water mains. Engineer shall fill out form at the time of testing and both Contractor and Engineer shall sign upon completion.
- C. Attached to the end of this section is a "Water Pressure Test" form (Form WPT-1) for recording data for pressure testing. Engineer shall fill out the form and submit to the Department of Health.

1.6. REGULATORY REQUIREMENTS

- A. Submit proof of testing as required by local, county, or state agencies.

1.7. FIELD MEASUREMENTS

- A. Measure length of test section.
- B. Measure quantity of water used to maintain test pressure during test period.
- C. Measurements required to complete the Flushing and Testing of Water Lines Tabulation Sheet.

1.8. COORDINATION

- A. Provide 48-hour notice to the Owner of local water department and the Department of Health when water for flushing, testing and disinfection is required.
- B. Owner of existing water system to operate all valves and hydrants unless Contractor has been specifically authorized to operate systems valves and hydrants by Owner.

## PART 2 PRODUCTS

### 2.1. WATER SUPPLY

- A. Owner shall supply water at no cost to the Contractor for initial tests. Additional water needed due to failure of test shall be Contractor's responsibility.
- B. All water for flushing and disinfection shall be furnished and disposed of in accordance with all federal, state, and local requirements by the Contractor at his expense.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Backfilling of the water main trench to ground surface or road surface shall be in place and completed except for final paving for seven calendar days or as approved by the Engineer prior to start of testing of each section of water main.

### 3.2. PREPARATION

- A. The Contractor shall supply all plugs, pumps, weirs, gauges, etc., necessary to conduct the tests, including means to accurately measure the quantity of water used to maintain test pressure during the test period.
- B. Flush all piping systems with water prior to testing.

### 3.3. TESTING

- A. Pressure and leakage tests shall be conducted on all water main pipes.
- B. The Engineer shall witness all tests.
- C. All test results shall be recorded on the Flushing and Testing of Water Lines Tabulation Sheet and Form WPT-1 attached at the end of this section.
- D. Pressurization - Each valved section of pipe shall be filled with water slowly and the specified test pressure, based on the elevation of the lowest point of the line or section under test and corrected to the elevation of the test gauge, shall be applied by means of a pump connected to the pipe.
- E. Air Removal - Before applying the specified test pressure, air shall be expelled completely from the pipe and valves.
- F. All pressure testing results shall be recorded on Form WPT-1.
- G. Examination - All exposed pipe, fittings, valves, and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, or valves that are discovered following the pressure test shall be repaired or replaced with sound material and the test shall be repeated.
- H. All visible leaks, regardless of the amount, shall be repaired.
- I. If the section being tested fails to pass the pressure or leakage test, the Contractor shall determine the source or sources of leakage, and he shall permanently repair or replace all defective materials and/or workmanship at his own expense. The extent and type of repair



as well as results, shall be subject to the approval of the Engineer. The completed pipe installation shall then be retested and required to meet the pressure and leakage requirements of the test.

- J. Testing and retesting shall be completed prior to final paving and prior to disinfection of the water main system.

#### 3.4. WATER SERVICES

- A. Water services to be installed after completion of disinfection of the water mains.
- B. Services to be tested, prior to backfilling by flushing the service pipe thoroughly and by observing for any leaks along the pipe, or at corporation and curb stops.

(continued)

## FLUSHING AND TESTING OF WATER LINES TABULATION SHEET

Job No. \_\_\_\_\_ Location \_\_\_\_\_

Contract No. \_\_\_\_\_ Contractor \_\_\_\_\_

Project \_\_\_\_\_

### FLUSHING

Date \_\_\_\_\_ Weather \_\_\_\_\_ Temperature \_\_\_\_\_

Section Flushed \_\_\_\_\_ ft. of \_\_\_\_\_-inch diameter pipe

Line Flushed \_\_\_\_\_ hrs. \_\_\_\_ min. @ \_\_\_\_\_ gal/min

Line Flushed Through \_\_\_\_\_ Hydrant \_\_\_\_\_-inch tap

Method of Measuring Flow \_\_\_\_\_

### PRESSURE AND LEAKAGE TESTING

Date \_\_\_\_\_ Weather \_\_\_\_\_ Temperature \_\_\_\_\_

Section Tested \_\_\_\_\_

\_\_\_\_ ft. of \_\_\_\_\_-inch diameter \_\_\_\_\_ pipe in \_\_\_\_\_-ft. laying lengths

Time Started \_\_\_\_\_ Time Finished \_\_\_\_\_ Elapsed Time \_\_\_\_\_

Test Pressure: Start \_\_\_\_\_ psi Finish \_\_\_\_\_ psi

Allowable leakage, as calculated \_\_\_\_\_ gallons Actual leakage \_\_\_\_\_ gallons

Pass \_\_\_\_\_ Fail \_\_\_\_\_

$$L = \frac{SD \sqrt{P}}{133,200^*}$$

where:

L = Allowable leakage in gallons/hour  
S = Length of pipe tested (linear feet)  
D = Nominal diameter of pipe (inches)  
P = Average pressure during test, psi

\*Refer to C600 for additional allowance leakage against closed metal-seated valves.

Owner's Representative \_\_\_\_\_

Contractor's Representative \_\_\_\_\_

**Table 4.A Hydrostatic testing allowance per 1,000 ft of pipeline\*—*gph*†**

Avg. Test Pressure <i>psi</i>	Nominal Pipe Diameter— <i>in.</i>																	
	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48	54	60	64
450	0.43	0.57	0.86	1.15	1.43	1.72	2.01	2.29	2.58	2.87	3.44	4.30	5.16	6.02	6.88	7.74	8.60	9.17
400	0.41	0.54	0.81	1.08	1.35	1.62	1.89	2.16	2.43	2.70	3.24	4.05	4.86	5.68	6.49	7.30	8.11	8.65
350	0.38	0.51	0.76	1.01	1.26	1.52	1.77	2.02	2.28	2.53	3.03	3.79	4.55	5.31	6.07	6.83	7.58	8.09
300	0.35	0.47	0.70	0.94	1.17	1.40	1.64	1.87	2.11	2.34	2.81	3.51	4.21	4.92	5.62	6.32	7.02	7.49
275	0.34	0.45	0.67	0.90	1.12	1.34	1.57	1.79	2.02	2.24	2.69	3.36	4.03	4.71	5.38	6.05	6.72	7.17
250	0.32	0.43	0.64	0.85	1.07	1.28	1.50	1.71	1.92	2.14	2.56	3.21	3.85	4.49	5.13	5.77	6.41	6.84
225	0.30	0.41	0.61	0.81	1.01	1.22	1.42	1.62	1.82	2.03	2.43	3.04	3.65	4.26	4.86	5.47	6.08	6.49
200	0.29	0.38	0.57	0.76	0.96	1.15	1.34	1.53	1.72	1.91	2.29	2.87	3.44	4.01	4.59	5.16	5.73	6.12
175	0.27	0.36	0.54	0.72	0.89	1.07	1.25	1.43	1.61	1.79	2.15	2.68	3.22	3.75	4.29	4.83	5.36	5.72
150	0.25	0.33	0.50	0.66	0.83	0.99	1.16	1.32	1.49	1.66	1.99	2.48	2.98	3.48	3.97	4.47	4.97	5.30
125	0.23	0.30	0.45	0.60	0.76	0.91	1.06	1.21	1.36	1.51	1.81	2.27	2.72	3.17	3.63	4.08	4.53	4.83
100	0.20	0.27	0.41	0.54	0.68	0.81	0.95	1.08	1.22	1.35	1.62	2.03	2.43	2.84	3.24	3.65	4.05	4.32

\*If the pipeline under test contains sections of various diameters, the testing allowance will be the sum of the testing allowance for each size.

†Calculated on the basis of Eq 1.

END OF SECTION

## WATER PRESSURE TEST

DATE:

LOCATION: \_\_\_\_\_

DESCRIPTION:

CONTRACTOR: \_\_\_\_\_

SECTION TESTED: FROM \_\_\_\_\_ TO \_\_\_\_\_  
(sta) \_\_\_\_\_

LENGTH TESTED: \_\_\_\_\_ LF

TYPE PIPE: \_\_\_\_\_

DURATION OF TEST: \_\_\_\_\_

PIPE DIAMETER:\_\_\_\_\_

TYPE JOINTS: \_\_\_\_\_

\*MINIMUM OF 2 HOURS

TYPE OF APPURTENANCES ON TESTED SECTION (list) :

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W = \_\_\_\_\_ WHERE W = WORKING PRESSURE (LB/IN<sup>2</sup>)

$$L = \frac{\text{ALLOWABLE LOSS IN (GA/HR)}}{\text{ALLOWABLE LOSS IN (GA/HR)}}$$

N = WHERE N = LENGTH OF PIPE BEING TESTED (FT)

WHERE D= DIAMETER OF PIPE IN (INCHES)

P=\_\_\_\_\_ P= AVERAGE TEST PRESSURE IN (LB/IN<sup>2</sup>)

FORMULA:  $L = \frac{NDJ}{P}$

148,000

$$p = 1.25 \times W$$

*TEST	TIME	PRESSURE (PSI)
START		
STOP		

PRESSURE DROP LB/IN<sup>1</sup> \_\_\_\_\_

WATER ADDED GAUHR \_\_\_\_\_

ALLOWABLE LOSS GAUHR

[illegible]

## I REMARKS

**Certified**

Initials: \_\_\_\_\_

Professional Engineer

---

Date

## SECTION 02675

### DISINFECTION OF WATER DISTRIBUTION SYSTEMS

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. Disinfection of all pipes, fittings, valves and hydrants.
- B. Sampling tests of residual chlorine content.
- C. Flushing of water distribution system and its disposal of spent chlorine solutions.
- D. Sampling tests of total coliform.
- E. Project records.

##### 1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEM: Requirements applicable to Unit Prices for the work of this section.
- B. Section 01700 - CONTRACT CLOSEOUT
- C. Section 02661 - WATER DISTRIBUTION PIPING
- D. Section 02662 - WATER VALVES AND HYDRANTS
- E. Section 02674 – PRESSURE TESTING OF WATER DISTRIBUTION SYSTEMS

##### 1.3. REFERENCES

- A. AWWA C651 - Disinfecting Water Mains.
- B. New York State Department of Health regulations.

##### 1.4. DISINFECTION

- A. All pipe and fittings, valves and hydrants connected to and forming part of a potable water supply system shall be disinfected in full accordance with both the requirements of AWWA Standard C651 and the State (or County) Department of Health having jurisdiction over project and as modified herein.
- B. Disinfection shall be done by the continuous feed method (per AWWA C651).
- C. The Contractor shall bear all costs of flushing, disinfection and coliform testing.

##### 1.5. SUBMITTALS

- A. Disinfection plan, which shall include location of taps, sampling points, and schedule. Plan shall describe the method and rate of chlorine addition and the anticipated flow through the main being disinfected.

## 1.6. PROJECT RECORD DOCUMENTS

- A. Submit documents under provisions of Section 01700.
- B. Attached to the end of this section is a Disinfection, Testing, and Flushing of Water Mains Tabulation Sheet. Engineer shall fill out form at the time of testing and both Contractor and Engineer shall sign upon completion.

## 1.7. REGULATORY REQUIREMENTS

- A. Submit proof of testing and disinfection as required by county and/or state Health Departments.
- B. Dispose of chlorinated water in accordance with the requirements of the state and local agencies with jurisdiction over the release of potential contaminants to the environment.

## 1.8. FIELD MEASUREMENTS

- A. Measurements required to complete the tabulation sheet.
- B. Measurements required by county and/or state Health Departments.

## 1.9. COORDINATION

- A. Provide 48-hour notice to local Water Department (Owner) and the Department of Health when water for flushing and disinfection is required.
- B. Owner of existing water system to operate all valves and hydrants unless Contractor has been specifically authorized to operate water system valves and hydrants.

## PART 2 PRODUCTS

### 2.1. WATER SUPPLY

- A. Owner shall supply water at no cost to the Contractor for initial tests. Additional water needed due to failure of test shall be Contractor's responsibility.
- B. All water for flushing and disinfection shall be furnished and disposed of in accordance with all federal, state, and local requirements by the Contractor at his expense.

## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. All pressure and leakage tests of the water system shall be completed prior to start of disinfection. See Section 02674.

### 3.2. PREPARATION

- A. Contractor to employ methods to prevent contaminating materials from entering the water mains during storage, construction, or repair.

- B. All piping systems, valves and hydrants shall be thoroughly flushed of any dirt or contaminating materials that may have entered the water system.
- C. Mechanical methods shall be used to clean the mains if the dirt or debris will not be removed by the flushing operations.

### 3.3. DISINFECTION

- A. The continuous feed method shall be used for chlorine application.
- B. The introduction of solid hypochlorite (granules) directly into the system is prohibited.
- C. Injection point shall be within 10 feet of the water source.
- D. The new water main shall be filled with not less than 50 mg/L nor more than 100 mg/L of available chlorine and retained in the system for not less than 24 hours.
  - 1. When filling water main with chlorinated water, each hydrant (in consecutive order) shall be flushed until the required residual is measured.
- E. At the end of the 24-hour period, the disinfected water shall contain no less than 25 mg/L available chlorine throughout the system.
- F. Disinfection shall be repeated as often as necessary at the Contractor's cost until the minimum residual chlorine of 25 mg/L has been maintained.

### 3.4. FLUSHING AND DISPOSAL

- A. The chlorine solution shall be thoroughly flushed out prior to testing for total coliform.
- B. The Contractor shall dispose of the spent chlorine solutions in a manner acceptable to the Owner and regulatory agencies and where its effects will not be detrimental to animal, plant or fish life. Dechlorination shall be utilized when discharging to the environment.

### 3.5. TOTAL COLIFORM TESTING

- A. After final flushing and before the water main is placed in service, a water sample or samples shall be collected from the new main. At least one set of samples shall be collected from every 1,200 feet of the new water main, plus one set from the end of the line, and at least one set from each branch. All samples shall be tested for bacteriological quality, showing the absence of coliform organisms, in accordance with the local and/or state Health Department procedures.
- B. Analyses shall be performed by state-certified laboratories.
  - 1. Engineer shall accompany Contractor and witness delivery of all samples to the laboratory.
- C. If the initial disinfection fails to produce satisfactory bacteriological results, the new main may be refushed and shall be resampled at Contractor's cost. If check samples also fail to produce acceptable results, the Contractor shall repeat all disinfection procedures until satisfactory results are obtained.
- D. After approval from the Health Department and the Owner, the water mains shall be placed in service.

### 3.6. SERVICES

- A. After construction of services but prior to connection to home or commercial service line, the service shall be thoroughly flushed to remove any contaminant and to disinfect the new service.

(continued)



# DISINFECTION, TESTING, AND FLUSHING OF WATER MAINS TABULATION SHEET

Date \_\_\_\_\_ Weather \_\_\_\_\_ Temperature \_\_\_\_\_

Section Tested \_\_\_\_\_ ft. of \_\_\_\_\_-inch diameter pipe

Discharge Rate \_\_\_\_\_ gal/min; Application of \_\_\_\_\_% hypochlorite solution @ gal/min

\_\_\_\_\_mg/L initial total chlorine residual @ end of line at \_\_\_\_\_(time)

\_\_\_\_\_mg/L initial total chlorine residual @ end of 24 hours at \_\_\_\_\_(time)

Method of measuring chlorine residual \_\_\_\_\_

Line flushed at \_\_\_\_\_gal/min for \_\_\_\_\_hours \_\_\_\_\_min. on \_\_\_\_\_(date)

Bacteria sample collected at \_\_\_\_\_(location) at \_\_\_\_\_(time/date)

Bacteria sample results \_\_\_\_\_meet \_\_\_\_\_do not meet state and/or county drinking water standards for total coliform.

Line Ready for Service on \_\_\_\_\_(date) \_\_\_\_\_(time)

Line Put Into Service on \_\_\_\_\_(date) \_\_\_\_\_(time)

Owner's Representative \_\_\_\_\_

Contractor's Representative \_\_\_\_\_

END OF SECTION

## SECTION 02732

### POLYVINYL CHLORIDE SEWER PIPE

#### Part 1 GENERAL

##### 1.1 Work Specified

- A. SDR-35-26 polyvinyl chloride piping to be situated in the work in the sizes shown on the Contract Drawings and as specified herein.

##### 1.2. Related Work Specified Elsewhere

- A. Trenching, backfilling and compacting
- B. Pipeline installations
- C. Leakage tests
- D. Wall castings and sleeves

##### 1.3. STANDARDS

###### A. Pipe

- 1. ASTM Des: D3034
- 2. Heavy wall
- 3. SDR-35-26-21, unless otherwise specified

###### B. Fittings and couplings

- 1. Fittings and couplings shall be injection molded of the same material as the pipe and shall be free from visible cracks, indentations, blisters, wrinkles and foreign inclusions.
- 2. Joints on fittings shall be adhesive bonded, flanged or screwed to conform to the pipeline joints as scheduled or as required to connect to other piping and appurtenances.

##### 1.4. SUBMITTALS

###### A. General

- 1. PVC pipe shall be installed in accordance with the applicable provisions of the Sections entitled "TRENCHING" and "COMPACTION".

2. Adhesive bonded type joints shall be made up in strict accordance with the manufacturer's recommendations using solvent cement as supplied by the manufacturer of the pipe and fittings.
3. Flanged joints shall be made up using 1/8-inch soft synthetic rubber gaskets.
4. Flanges shall be drilled in accordance with ASW B16.1 standard.
5. Steel bolts and nuts shall be cadmium plated with good sound, well-fitting threads so that the nuts can be turned by hand.
6. Cadmium plating shall be by an approved process with a plate thickness of .0003 to .0005 inches.
7. Stainless steel bolts and nuts shall be used where pipe is to be buried or submerged.
8. Polyvinyl chloride pipe shall be handled in accordance with the manufacturer's recommendations.

## Part 2 PRODUCTS

### 2.1 MATERIALS

#### A. Acceptable Manufacturers:

1. B.F. Goodrich (Koroseal)
2. Ethyl Corporation (Ethyl)
3. Tube Turns Plastics, Inc. (Type 1, UPVC)
4. Cleanese Piping Systems, Inc.
5. Raven Industries
6. Plastic Piping Systems
7. Other approved

### 2.2. SPECIAL FITTINGS

- A. Special fittings, where required, shall be of an approved design, and shall have the same diameters and thicknesses as standard fittings.

## Part 3 EXECUTION

### 3.1 TESTING

- A. Leakage tests and deflection tests shall be performed in accordance with the requirements of Technical Specification Section 02660 "SEWER LEAKAGE & PRESSURE TESTING".
- B. Deflection testing shall be performed on all flexible mainline sewer pipe for the maximum allowable deflection of five (5%) percent of the inside diameter – by passing a sled or mandrel (with an outside diameter 1/16 inch smaller than 95% of the pipe's inside diameter) through its interior.
- C. All sewers shall be thoroughly cleaned prior to deflection testing. Testing of any section of pipe for deflection shall not be done sooner than 30 days after the dates of backfill of that pipe section.
- D. Deflection testing of flexible pipe will be in addition to the low pressure air testing and/or hydraulic testing and in accordance with the following table:

ASTM BASE INSIDE DIAMETERS		
5% Deflection Mandrel Dimensions		
Nominal Size Inches	Inside Diameters Inches	5% Deflection Mandrel
6	5.74	5.45
8	7.665	7.28
10	9.563	9.08
12	11.36	10.79
15	13.89	13.20

END OF SECTION

SECTION 02980  
SITE REHABILITATION

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Site rehabilitation of lawns, existing cultivated or landscape items such as trees, shrubs, hedges, saplings, vines, ground cover vegetation, gardens, etc.
- B. Restoration of uncultivated lands.
- C. Topsoil, fertilizer, seeding, mulching and planting.
- D. Site rehabilitation of walls, terraces, fences, ditches, drains, culverts, drives, posts, patios, outdoor recreational equipment, garden decorations and appurtenances, small structures, and all other artificial features.
- E. Site modifications and development to meet new conditions.
- F. Removal and disposal of all excess materials, equipment, trash and debris used for, or resulting from, the work included in this section.

1.2. RELATED SECTIONS

- A. Section 01025 - UNIT PRICE ITEM: Requirements applicable to unit prices for work of this section.
- B. Section 01039 - COORDINATION AND MEETINGS
- C. Section 01300 - SUBMITTALS
- D. Section 02110 - SITE CLEARING
- E. Section 02225 - TRENCHING: Basic site restoration.
- F. Section 02510 - HOT MIX ASPHALT PAVING

1.3. REFERENCES

- A. The American Association of Nurserymen Standards - ANSI Standard 2-60.1, "Nursery Stock."
- B. Soil Conservation District of the Department of Agriculture.

1.4. QUALITY ASSURANCE

- A. Areas and Features to be Restored
  - 1. All areas, including natural features occurring thereon, which are damaged or disturbed by the Contractor's operations, shall be restored, repaired or replaced to the same or superior condition which existed prior to construction or as modified herein or as shown on the Drawings.

2. Artificial features shall be restored equal to a new condition or as modified herein or as shown on the Drawings.

#### 1.5. SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Submit the source nursery for all plantings.
- C. Topsoil - Submit sieve analysis and characteristics of topsoil as listed in Part 2.
- D. Seed mixture data.

#### 1.6. QUALIFICATIONS

- A. All planting material to be furnished from a nursery which meets the requirements of the American Association of Nurserymen.

#### 1.7. PACKING AND SHIPPING

- A. All seed furnished for this project shall be delivered in standard size unopened bags of the vendor, showing weight, mixture, vendor's name and guaranteed analysis.

#### 1.8. STORAGE

- A. Seed shall be properly stored in dry conditions at the site of the work.
  1. Any seed damaged or spoiled during storage shall be replaced by the Contractor.

#### 1.9. ENVIRONMENTAL CONDITIONS

- A. Topsoil shall not be delivered or placed in a frozen or muddy condition.
- B. Seeding is to be done on dry or moderately dry soil.
  1. Seeding is to be done when the wind velocity does not exceed 5 miles per hour.

#### 1.10. SCHEDULE

- A. The Contractor is advised to do all seeding during the periods of May 1st to June 15th, or August 15th to October 1st.
  1. Seeding may be conducted under unseasonable conditions without additional compensation, and at the option and full responsibility of the Contractor.

#### 1.11. GUARANTEE

- A. Any new, reestablished, replaced or disturbed plant material that fails to respond properly within the one-year guarantee period shall be replaced as specified above at the Contractor's expense.

## PART 2 PRODUCTS

### 2.1. MATERIAL

#### A. Topsoil

1. Topsoil shall be natural, fertile, friable agricultural soil capable of sustaining healthy vegetative growth.
2. Topsoil shall meet the following gradation requirements free of stones, roots, sticks and other foreign substances:

GRAIN DIAMETER	SIEVE SIZE	PERCENT PASSING BY WEIGHT
6.3 mm	6.3 mm	100
4.75 mm	No. 4	60-85
.075 mm	No. 200	20-45
.002 mm	--	7-27

- a. Topsoil shall contain less than 52 percent sand.
3. The pH of topsoil shall be between 5.0 and 7.0.
4. Topsoil shall contain no less than 6.0 percent organic matter.
5. Topsoil may be from previously excavated, stockpiled and protected materials, provided the materials meet the requirements for topsoil.

#### B. Fertilizer

1. General Fertilizer
  - a. Fertilizer shall be a complete, partially organic, commercial 10-6-4 fertilizer.
  - b. All fertilizer shall contain a minimum of 10 percent nitrogen, 6 percent available phosphorous and 4 percent potash.
  - c. Other commercially available fertilizers, such as 20 10-10 and 12-6-6, may be utilized provided that spreading rates are adjusted to provide the aforementioned minimum requirements for nitrogen.
2. Plant Fertilizer - As recommended by local Soil Conservation District of the Department of Agriculture for the type(s) of soil(s) and plant(s).

#### C. Seed

1. All seed shall be fresh, recleaned and of the latest crop year.
2. Each component shall meet or exceed the minimum state and federal requirements for purity and germination for that component.
3. The weed content of each component shall not exceed 0.1 percent.
4. The following seed mixture is suggested for lawns or cultivated (landscape) areas:

PERCENT BY WEIGHT	VARIETY	PURITY	GERMINATION
50	Kentucky Blue Grass	85%	80%
20	Red or Chewing Fescue	97%	80%
30	Red Top	92%	90%

- a. Variations may be recommended by qualified personnel, but shall not be used without approval by the Engineer.
5. For uncultivated areas furnish perennial rye grass seed.
- D. Mulch for Tree or Shrub Plantings - Mulch shall consist of dry, clean, hardwood chips.
  - E. Mulch for Seeded Areas - Mulch shall be oat, wheat or rye straw, or hay, free from noxious weeds and other materials which may interfere with the establishment of a healthy stand of grass.
  - F. Plantings - Trees, shrubs, vines, ground cover and other vegetation to be replaced or installed new as specified which meet the requirements of the American Association of Nurserymen.
    1. Classifications of plants, dimensions, planting procedures, etc., shall conform to ANSI Standard Z 60.1, "Nursery Stock."
  - G. Peat Moss - As recommended by the supplier of nursery stock.
  - H. Metal Edging
    1. Edging shall be 3/16-inch thick by 4-inches high steel in 16- and 20-foot lengths.
      - a. Secure edging with 16-inch long tapered steel stakes at 30 inches on center.
      - b. All steel materials shall be painted with one coat of epoxy primer and two coats of epoxy finish.
  - I. Weed Barrier - Weed barriers shall consist of two plies of 6-mil thick black polyethylene film.
  - J. Stones
    1. All stones used for landscape surfacings shall be between 2 and 4 inches in maximum dimension and average to about 3 inches.
      - a. Stones shall be well-rounded.
    2. All stones used for mowing strips shall be a washed crushed stone, size 1/2-inch to 1-inch size.
  - K. Tree Wrapping - Wrapping for trees shall be 8-ounce first quality burlap.
  - L. Asphalt Paving - Shall be furnished and installed in accordance with Section 02510.



## PART 3 EXECUTION

### 3.1. EXAMINATION

- A. Determine that surface area is ready for fine grading and/or to receive topsoil and seeding or plantings.
  - 1. Remove trash, debris, large stones and other foreign materials from surface areas to be restored or rehabilitated.
  - 2. Topsoil shall be free of frozen fragments, debris, large stones, and other foreign materials.

### 3.2. PREPARATION

- A. Fine Grading - Areas requiring topsoil shall be fine graded to within 4 inches of finished grade to provide a minimum compacted thickness of 4 inches of topsoil at all locations.
  - 1. All such areas, whether in cut or fill, shall be raked to a depth of 1 inch, be parallel to finished grade as shown or required and shall be free of all stones, larger than 1 inch, roots, rubbish and other deleterious material.

### 3.3. INSTALLATION

- A. Areas to be Developed
  - 1. When the project site is to be modified and developed to meet new conditions, the Contractor shall perform all required grading, topsoiling, fertilizing, seeding, planting, mulching and maintenance of areas, all in accordance with the Drawings and as specified herein.
  - 2. Unless shown otherwise on the Drawings, the entire unpaved area within the grading limits and within the overall areas excavated and backfilled shall be so developed.
  - 3. New landscaping work and artificial features, if any, are shown on the Drawings and specified elsewhere.
- B. The Contractor shall reestablish all existing cultivated or landscape items, trees, shrubs, vines and ground covers as practicable.
  - 1. He shall provide additional or modify existing vegetation, as shown on the Drawings.
  - 2. Existing trees, plants, shrubs, saplings, ground cover, vines, etc., which are disturbed or damaged by the Contractor's operations shall be replaced with new plant materials.

### 3.4. TOPSOILING

- A. Topsoil shall be furnished and spread in the required areas to a depth of approximately 4 inches.
  - 1. Stockpiled topsoil may be used if it is acceptable to the Engineer.

2. In the event this topsoil is not satisfactory, or is inadequate to cover the required areas, the Contractor shall furnish the required amount of satisfactory topsoil from approved sources off the site.
- B. The soil shall be uniformly compacted with a light hand roller to a final depth of not less than 2 inches.
1. When finished, the surface shall conform to the finished grades shown or required and shall have a smooth pulverized surface at the time of seeding.
  2. Any irregularities shall be corrected before the fertilizer and seed are placed.
  3. Any subsequent settlement or displacement of the topsoil shall be restored to an acceptable condition at the Contractor's expense.

### 3.5. FERTILIZING

- A. The fertilizer shall be uniformly spread by a mechanical spreader at the rate of 25 lbs. per 1,000 square feet.
1. The fertilizer shall be incorporated into the upper 2 inches of topsoil immediately after spreading.
  2. Other commercial fertilizers, such as 20-10-10 or 12 6-6 may be used at rates adjusted to provide the same quantity of nitrogen per 1,000 square feet.

### 3.6. SEEDING

- A. Seed shall be applied at a rate of not less than 5 lbs. per 1,000 square feet using a mechanical spreader.
1. Upon completion of the seeding, the area shall be raked lightly and rolled with a light hand roller.
- B. The process of spraying grass seeds, water, fertilizer and mulch known as hydro-seeding or hydro-mulching may be utilized provided that water hazards are minimized.
1. Presoaking, the spraying of the materials and watering after spraying shall be in strict accordance with the manufacturer's instructions.
  2. All materials, protection, maintenance, etc., shall be in conformance with this specification.
  3. The mulch may be a wood fiber material compatible with the spray equipment.

### 3.7. PLANTING

- A. All new plant materials which are to replace existing plant materials shall be of the same genus and species as the original, and shall be placed in the same location as the item being replaced.
1. The size of the new plant materials shall, if practical, match that of the item being replaced, consistent with normally available sizes from nursery stock.

2. Depending on the size and type of material, and when ordered by the Engineer, guy wires, stakes, anchors and wrappings shall be furnished and installed in a proper manner to brace and protect the plant.
  3. The Contractor shall, as soon as practicable, water and maintain all reestablished, replaced or disturbed plant materials until final acceptance of total.
- B. Plant shall be set plumb and true.
1. Shape area around saucer to form drainage grades as shown on the Drawings.
- C. Install wooden posts, guy wires and hose section for protection as shown on the Drawings.
1. Provide three guy wires per planted item.
- D. For all trees of 2-inch caliber or larger, wrap with tree wrap.
1. Begin at base of tree and work upward to the first branches.
  2. Tie the burlap wrap with cord (no synthetic cord nor wire) at 2-foot intervals and at the bottom and top.
- E. Place weed barriers on prepared subgrade at depth shown on the Drawings.
1. Turn up weed barrier at all edges and corners.
- F. Place washed stone over weed barriers to the specified depths.
1. Rake stone to produce a smooth, uniform surface.
- G. Install metal edging such that the top edge projects 1/4 inch above surrounding soil and stone.

### 3.8. MULCHING AND PROTECTION

- A. The Contractor shall protect and maintain seeded areas to assure a full even stand of grass.
1. Immediately after seeding and rolling, the Contractor shall apply oat, wheat or rye straw, or hay, free from noxious weeds, as a mulch, to a loose depth of about 1 inch.
  2. The Contractor shall perform all watering and reseeding as necessary for a minimum of 30 days and until final acceptance of the Contract, to ensure the establishment of a uniform stand of specified grasses.

### 3.9. MAINTENANCE

- A. Any portion of seeded areas failing to produce a full uniform stand of grass from any cause, shall be reseeded at full rate and refertilized at one-half rate and protected and maintained until such a full stand has been obtained.
- B. Plantings to be maintained for one year.

### 3.10. RESTORATION OF UNCULTIVATED LANDS

- A. Areas of uncultivated land shall be restored as follows:

1. The disturbed surfaces shall be rough-graded to the original elevations ( $\pm 1$  inch) and general appearance which existed prior to construction (or to the new elevations and grades which are required), all debris, loose stones over 1 inch, boulders, etc., being removed in the process.
2. The surface shall then be seeded with perennial rye grass, being spread at the rate of 1 lb. per 800 square feet.
3. The area need not be raked or rolled after completion of seeding.

3.11. SPECIAL CONDITIONS

- A. Damaged Trees - Vegetation which has been damaged by site preparation activities and deemed non-functional by the Owner or engineer, shall be replaced by the Contractor with vegetation of the same caliper, genus and species at no additional compensation to the Contractor.

END OF SECTION

## SECTION 03001

### CONCRETE

#### PART 1 GENERAL

##### 1.1. SECTION INCLUDES

- A. All concrete structures.
- B. Sidewalks.
- C. Concrete mixes.
- D. Concrete testing.
- E. Concrete curing and protection.
- F. Bonding agent.
- G. Concrete slab sealer.
- H. Saw cutting concrete and repair to exposed steel reinforcement.
- I. Leakage testing.
- J. Non-shrink grout.
- K. Chemical adhesive system to install dowels and bolts.
- L. Foundation dampproofing.
- M. Waterstops.
- N. Joint filler and sealant.
- O. Restrictions regarding embedments in concrete.

##### 1.2. REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

ACI 201.1	Guide for Conducting a Visual Inspection of Concrete in Service
ACI 211.1	Selecting Proportions for Normal, Heavyweight, and Mass Concrete
ACI 301	Specifications for Structural Concrete
ACI 302.1	Guide for Concrete Floor and Slab Construction
ACI 304	Measuring, Mixing, Transporting and Placing Concrete
ACI 305	Hot Weather Concreting
ACI 306	Cold Weather Concreting
ACI 308	Guide to Curing Concrete

ACI 309	Guide for Consolidation of Concrete
ACI 315	Details and Detailing of Concrete Reinforcement
ACI 315R	Manual of Engineering and Placing Drawings for Reinforced Concrete Structures
ACI 318	Building Code Requirements for Structural Concrete
ACI 347	Recommended Practice for Concrete Formwork
ACI 350	Code Requirements for Environmental Engineering Concrete Structures

B. American Society for Testing and Materials (ASTM)

ASTM A185	Steel Welded Wire Reinforcement, Plain, for Concrete
ASTM A497	Steel Welded Wire Reinforcement, Deformed, for Concrete
ASTM A615	Deformed and Plain Billet Steel Bars for Concrete Reinforcement
ASTM C31	Making and Curing Concrete Test Specimens in the Field
ASTM C33	Concrete Aggregates
ASTM C39	Compressive Strength of Cylindrical Concrete Specimens
ASTM C88	Soundness of Aggregates
ASTM C94	Ready-Mixed Concrete
ASTM C136	Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Portland Cement
ASTM C172	Sampling Freshly Mixed concrete
ASTM C231	Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Air-Entraining Admixtures for Concrete
ASTM C309	Liquid Membrane Forming Compounds for Curing Concrete
ASTM C494	Chemical Admixtures for Concrete
ASTM C595	Specification for Blended Hydraulic Cements
ASTM C618	Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C989	Ground Granulated Blast-Furnace Slag for Use in Concrete

1.3. SUBMITTALS

- A. Submit Concrete Mix Designs - Concrete mixes used on this project shall be either established mixes verified by "Field Test Data" or new custom laboratory designed "Trial Mixtures." Requirements for either option are as follows.

All data shall be dated within the last 12 months. Partial submittal will not be reviewed.

1. List amount and sources of mix ingredients:
  - a. Cement.
  - b. Pozzolans (fly ash and slag).

- c. Fine aggregate.
  - d. Coarse aggregate.
  - e. Water.
  - f. Admixtures (including fibers).
2. Strength Test Reports - The average strengths shall be higher than the required average compressive strengths ( $f'_{cr}$ ) as per ACI 301, paragraph 4.2.3.3.
  3. Typed letter signed by an official from concrete supplier stating that all ingredients for proposed mix(es) are identical and from the same source as ingredients used for concrete in provided strength test reports.
  4. Certified tests of fine and coarse aggregates meeting requirements in Part 2 of this specification.
  5. Certified statement from source of fine and coarse aggregates pertaining to history of alkali-aggregate reactivity (ASR) or State DOT confirmation that ASR issues are not evident at the aggregate source.
  6. Certified mill test of cement and fly ash or slag.
  7. Certified test for amount of water-soluble chloride ion (CL-) in concrete.
  8. One-page admixture catalog cuts.
- B. Submit one-page catalog cut for bonding agent.
  - C. Submit one-page catalog cut for retarding admixture.
  - D. Submit one-page catalog cut for surface-applied hot weather evaporation reducer.
  - E. Submit a written statement regarding Contractor's anticipated curing procedures.
  - F. Reinforcing Steel - Submit shop drawings in accordance with ACI 301, ACI 315 and ACI 315R, as modified below.
    1. Drawings shall be clearly drawn and show enough details to locate every bar without the need to refer to the Contract Drawings. All construction and control joints must be shown. Photocopies of Contract Drawings, in whole or in part, will not be acceptable.
    2. No fabrication shall commence until shop drawings are approved. All bars shall be shop fabricated.
  - G. Submit catalog cuts for non-shrink grout.
  - H. Submit catalog cuts for chemical adhesive system used to install dowels and bolts into hardened concrete and masonry.
  - I. Submit catalog cuts for joint filler and sealant.
  - J. Submit catalog cut for slab sealer.

- K. Submit catalog cuts for waterstops and waterstop accessories, clearly indicating which item(s) are to be used.
- L. If concrete repairs are needed, the Contractor shall submit proposed repair products and procedures specified in Part 3 of this specification.
- M. Submit special requests for embedment of conduit, etc. Reference restrictions in Part 3 of this specification.

#### 1.4. COORDINATION

- A. Coordinate all concrete placements with work (general, civil, architectural, structural, mechanical, electrical, plumbing, HVAC, etc.) indicated in all specifications and on all Contract Drawings.
- B. Coordinate the installation of all cast-in (embedded) items (i.e., grating frames, access hatches, anchor rods, etc.) prior to start of concrete placement. Post-installation of cast-in (embedded) items will not be allowed.
- C. Contractor shall receive approval on anticipated curing and protection procedures prior to placement of all concrete.
- D. Coordinate all concrete placements with testing and inspection requirements specified herein.

#### 1.5. QUALITY ASSURANCE

- A. The concrete batch plant providing concrete to this project shall be certified by the NYSDOT.
- B. Bar Identification and Mill Test Reports - All reinforcing bars shall have the manufacturer's mill marking rolled into the bar which shall indicate the producer, size, type, and grade.
- C. Concrete testing shall be performed prior to and during placement.

### PART 2 PRODUCTS

#### 2.1. CONCRETE

- A. Concrete Classes and Their Use
  - 1. Mix A - All general uses not otherwise specified or provided for below.
  - 2. Mix C - Concrete fill topping (not exposed to flowing water) and pipe supports and encasements.
  - 3. Mix D - Concrete thrust blocks (below grade).
  - 4. Mix E - Sidewalks, curbs, bench walls, exterior slabs.



Mix	28-Day Compressive Strength (psi)	Coarse Aggregate Size per ASTM C33	Minimum Total Cementitious Content (lbs/CY)	Maximum Water/ Cement Ratio (w/c) <sup>(1)</sup>	Air Content % <sup>(2)</sup>	Maximum Water-Soluble Chloride Ion (CL <sup>-</sup> )
A	4,000	#57	550	0.44	6.0	0.30
C	4,000	#7	550	0.44	7.0	0.30
D	3,000	#57	450	0.50	--	--
E	5,000	#57	600	0.40	6.0	0.15

(1) These maximum water/cement ratios shall be considered for selection of supplier's mix designs. The water/cement ratio specified in the approved mix designs shall be the maximum used in production.

(2) Tolerance for air content is +1-1/2 percent.

B. All concrete exposed to weather or freezing temperatures shall be air-entrained as specified in the above chart.

C. Without plasticizers, concrete slump for flatwork shall not exceed 3 inches. Wall concrete, columns, deep beams, and other vertical placements (without plasticizers) shall be placed with a maximum slump of 4 inches.

## 2.2. MATERIALS

A. Cement shall be Portland cement Type I or Type II and shall conform to ASTM C150.

B. Pozzolans

1. Fly ash shall meet the requirements of ASTM C618 Class F, except as modified below:

a. Loss of Ignition, Maximum - 5.0 percent.

b. Maximum Retained on #325 Sieve - 30 percent.

A blend of Portland cement and fly ash shall be between 15 to 25 percent of total cementitious content.

2. Blastfurnace slag shall meet the requirements of ASTM C989 and be specifically manufactured to produce higher concrete strengths and provide greater resistance to chloride penetration and sulfate attack.

A blend of Portland cement and ground iron blastfurnace slag shall contain no more than 50 percent slag. The resulting blend of cementitious material shall meet the requirements of ASTM C595.

C. Aggregates

1. Fine Aggregate (Sand)

a. Natural or manufactured siliceous sand.

- b. Quantity of deleterious substances as approved by State DOT or as limited by Table 1 of ASTM C33.
  - c. Graded within the limits of ASTM C33.
- 2. Coarse Aggregate
  - a. Crushed stone or crushed gravel.
  - b. Quantity of deleterious substances as approved by State DOT or as limited by Table 3 of ASTM C33 for Class 3S aggregates.
  - c. Graded within the limits of ASTM C33.
- 3. Five cycle soundness tests for fine and coarse aggregates shall meet the requirements of ASTM C33.

PERCENT LOSS

	MAGNESIUM SULFATE	SODIUM SULFATE
Fine aggregate <sup>(1)</sup>	15	10
Coarse aggregate <sup>(2)</sup>	18	12

- (1) If provided, results of soundness tests exceed these limits, it would be acceptable to provide a certified letter attesting to the favorable performance of the fine aggregates as outlined in ASTM C33, Article 8.
- (2) Soundness tests for coarse aggregates do not need to be provided if they are approved by State DOT for use with concrete. Submit verification of such.

- 4. Source of fine and coarse aggregates shall not have a history pertaining to alkali-aggregate reactivity. In the event that aggregate source with potential alkali-aggregate reactivity is unavoidable, at least two of the following measures shall be taken to minimize this reaction:
  - a. Provide low alkali cement (<0.60 percent alkalies).
  - b. Use lithium-based additives.
  - c. Test aggregates to show non-reactive.
  - d. Use fly ash or slag.
- D. Mixing Water - Clear and potable.
- E. Acceleration admixtures are only allowed to shorten cold weather protection periods.

2.3. ADMIXTURES

- A. General - Admixtures other than those specified may only be used after written approval by the Engineer.
- B. Admixtures shall be as manufactured by BASF Chemical Company; Sika Corporation; The Euclid Chemical Company; W.R. Grace, Inc.; or equal.

- C. Air Entrainment Admixture - All concrete requiring air entrainment shall contain an air entrainment admixture meeting the requirements of ASTM C260.
- D. Water Reducing Admixture - All concrete shall contain a water reducing admixture that meets the requirements of ASTM C494 Type A (water reducing) or Type F (superplasticizer). This admixture shall not contain chlorides.
- E. Retarding Admixture - If air temperatures are expected to exceed 85 degrees F during the placement and/or finishing of any flatwork, a retarding admixture shall be used that meets the requirements of ASTM C494 Type D.
- F. Evaporation Reducer - For all concrete flatwork during hot and/or windy weather conditions, apply to freshly placed concrete prior to finishing. Use BASF Chemical Company "Confilm," L&M Construction Chemicals "E-Con," Conspec (by Dayton Superior) "Aquafilm," or equal.

#### 2.4. OTHER PRODUCTS

- A. Bonding Agent - When placing freshly-mixed concrete against existing hardened concrete, use a corrosion inhibiting, non-vapor barrier, extended open time bonding compound.  
  
Use Sika Corporation "Armatec 110 EpoCem," The Euclid Chemical Company "Duralprep A.C.," Larsen Products Corporation "Weld-Crete," or equal.
- B. Liquid curing compound shall only be used during cold weather conditions and curing of foundation wall strip footings. When allowed, use a dissipating, VOC-compliant, water-based membrane forming with fugitive dye, conforming to ASTM C309, Type 1-D. Curing compound shall be applied at twice the manufacturer's recommended application rate.
- C. Slab sealer shall be Sika Corporation "Sikagard 701W," Euclid Chemical Company "Super Aqua Cure Vox," V-Seal "Industra-Seal 100+," or equal.
- D. Waterstop material shall be PVC 6-inch x 3/8-inch ribbed center bulb waterstop No. CR-6380 by "Wirestop" of Paul Murphy Plastics Company; No. RB6-38 by "Vinylex;" No. 705 by "Greenstreak;" or equal.  
  
For expansion joints, use PVC 9-inch by 3/8-inch ribbed center bulb (nominal 1 inch in diameter) waterstop.
- E. Where shown on the Drawings and where new concrete is cast against existing concrete, use a premolded 1-inch by 3/4 inch bentonite self-adhering waterstop strip which expands on contact with water, applied with primer adhesive. The bentonite waterstop material shall meet the requirements of ASTM D217. Waterstop and adhesive shall be "Waterstop-RX" and "CetSeal" by CETCO Building Materials Group; "Swellstop" and "Swellstop Primer" by Greenstreak; or equal.
- F. Expansion and isolation joint filler shall be performed, closed cell, high grade polyethylene or non-extruding PVC, such as "Expansion Joint Filler" by BASF Chemical Company; "Plastic Expansion Board" by Westec Barrier Technologies; "Deck-O-Foam" by W.R. Meadows, Inc.; or equal.
  - 1. Joint fillers shall be held back for sealants.
  - 2. The joint filler shall be compatible as a back-up material, with regard to the sealant not bonding to or being stained by the backup.

- G. Sealant for expansion joints in concrete structures designed for submerged conditions to either contain or hold out liquids (including groundwater) such as tankage, basements, flow channels, galleries, etc. shall be a two-component NSF approved polyurethane material.
- Use Sika Corporation "Sikaflex-2c," The Euclid Chemical Company "Eucolastic II," or equal.
- H. Wall dampproofing shall be a heavy duty fibrated asphalt emulsion per ASTM D1227, Type II applied over an asphalt primer per ASTM D41.
- I. Non-Shrink Grout shall be a fluid or flowable non gas liberating cement base product which is manufactured premixed, requiring only the addition of water at the job site. All components shall be inorganic.
- Non-shrink grout (mixed as a plastic state) shall have a minimum compressive strength of 5000 psi in 7 days and 7000 psi in 28 days.
- J. After material sources have been established and approved, these sources shall not be changed for the duration of the project.

### PART 3 EXECUTION

#### 3.1. CONCRETE COVER

- A. Clear concrete cover not indicated on Drawings shall conform to ACI 318 and ACI 350, as applicable. However, in no case shall the clear cover be less than 1-1/2 inches.
- B. Contrary to the practice permitted by CRSI, the use of brick or CMU block supports for reinforcement shall not be permitted. Only special made wire bar supports or special cast, precast concrete blocks shall be allowed.
- C. All metal and plastic bar supports bearing on grade shall have continuous runners to prevent settlement during construction activities.

#### 3.2. PREPARATION, MIXING, AND HANDLING OF CONCRETE

- A. Batch Plant Requirements - Measurement of materials at the batch plant shall be in accordance with ASTM C94.
- B. Mixing Methods - All concrete shall be ready mixed to meet the requirements of ASTM C94.

A written delivery slip or ticket, prepared and signed by the plant operator shall be made out at the proportioning plant for each truck load batch. Each slip shall show the following information:

1. Truck number
2. Date and time truck is batched
3. Ticket number
4. Mix designation of concrete (per paragraph 2.01.A)
5. Cubic yards of concrete

6. Cement brand, type and weight in pounds
7. Weight in pounds of each size and type of aggregate
8. Admixtures, brand and weight in pounds and ounces
9. Moisture content of fine and coarse aggregates
10. Water added to the batch at the plant
11. Water added to the batch during transport
12. Water added to the batch at the job site

The driver shall record the number of gallons of water added during transport and at the job site. In no case shall the w/c ratio be exceeded.

Any truck delivering concrete to the job site without a delivery slip will be rejected and shall immediately depart from the job site.

- C. Heating and Cooling of Materials - The batch plant shall be equipped to heat aggregates and water, or cool water with ice, and cool aggregates by shading and/or spraying with cool water to obtain acceptable concrete delivery temperatures in the range of 55 to 85 degrees F. Aggregates shall not contain ice or have frozen lumps nor shall they be heated to a temperature over 120 degrees F.

### 3.3. EMBEDMENTS IN CONCRETE

- A. Install and secure all cast-in components in accordance with manufacturer's recommendations, prior to concrete placement.
- B. Embed no pipes other than electrical conduit in structural concrete.

Obtain approval from Engineer for any variation from the following requirements unless shown on the Drawings. Make request in writing accompanied by suitable sketch.

1. Do not cut or displace any reinforcement.
2. Do not place conduit between concrete surfaces and reinforcement.
3. Restrict O.D. of conduit to 1/4 of slab thickness. Keep within middle half of that thickness.
4. Place parallel conduits apart at least six times O.D. of conduit being used.
5. Conduits that cross must be bent such that they cross between 45 and 90 degrees from each other.
6. Conduits that cross can touch each other, but no more than three conduits can cross at any given location.
7. Do not embed conduit in beams.

### 3.4. CONCRETE PLACEMENT

- A. The Contractor shall notify the Engineer (and Special Inspector when required) a minimum of 48 hours in advance of placement to allow sufficient time for inspection and for any corrective measures which are subsequently required.
- B. Concrete shall be placed in accordance with ACI 304 and ACI 318.
- C. Concrete shall be placed and vibrated in lifts not exceeding 30 inches.
- D. Curing and protection of the concrete shall begin immediately after completion of the finishing operation.
- E. Adjacent concrete placements (sections) shall not be placed any sooner than three days since newly cast sections.

### 3.5. CURING AND PROTECTION

- A. All freshly placed concrete shall be protected from adverse weather elements, and from defacement. As soon as the concrete has been placed and horizontal top surfaces have received their required finish, provision shall be made for providing sufficient water for hydration and preventing loss of moisture from the concrete for at least a seven day period.
- B. For the first 24 hours after concrete finishing, no work shall commence nor shall any material be placed on the newly cast concrete. The exposed concrete surfaces shall be protected from any potential damage with plywood or other means for the remaining six days of the curing period.
- C. Interruptions, not to exceed a total of four hours are permitted for the purpose of layout or other required construction needs as long as the surface is not allowed to completely dry. Be prepared to spray the exposed surface every 15 to 30 minutes.
- D. Slabs and Other Flatwork
  - 1. After finishing and immediately after the concrete surface has hardened enough to prevent dilution of the cement paste, spray the surface with water to provide continuous moist curing for at least the first 24 hours.
  - 2. After the initial 24 hour period, soak with water and cover for an additional six days with waterproof paper or white polyethylene blankets. Wet burlap coverings may be used if the burlap is kept wet by continuous sprinkling with water. Lap the cover material at least 12 inches, covering the top and sides of the concrete.
  - 3. If cover material is not used, the concrete surfaces shall be kept continuously wet by spraying or other approved methods.?
- E. Strip Footings (Note: Strip footings include footings of foundation frost walls.)
  - 1. After finishing, apply curing compound at twice the manufacturer's recommended application rate.
  - 2. Curing compound shall be applied to and seamlessly cover all exposed surfaces.
- F. In hot weather conditions (defined in ACI 305), provide curing procedures as outlined above along with additional provisions required by ACI 305.

- G. In cold weather conditions (defined in ACI 306) where heated enclosures are provided and when continuous moist curing of walls and slabs is not practical, use liquid membrane forming curing compounds with fugitive dye, applied at twice the manufacturer's standard rate of application.
- H. For the first 24 hours after concrete finishing, no work shall commence nor shall any material be placed on newly cast concrete. The exposed concrete surfaces shall be protected from any potential damage with plywood or other means for the remaining six days of the curing period.

### 3.6. SEALING OF CONCRETE

- A. The concrete surfaces identified in the Finish Schedule shall be sealed as follows:
  - 1. The first coating shall be applied as soon as possible after finishing and curing, and the second coating shall be applied near project completion after installation of all equipment and piping and after completion of other related construction activities.
  - 2. Apply sealer in accordance with manufacturer's recommendations.

### 3.7. BITUMINOUS WALL DAMPPROOFING

- A. Comply with manufacturer's printed recommendations for preparation of wall surface.
- B. Clean surfaces of soil, debris, and all foreign matter. Allow cleaned surfaces to dry.
- C. Apply a uniform coating of asphalt primer per manufacturer's recommendations.
- D. Provide continuous uniform dampproofing coating, 3/32 inch minimum dry thickness. Apply dampproofing by brush.
- E. Dampproof vertical wall surfaces to within 4 inches of finished grade at top of walls. At bottom of walls, extend dampproofing across horizontal projection of footing and down face of footing approximately 2 inches.
- F. Apply bituminous primer and dampproofing.

### 3.8. TESTING FOR QUALITY ASSURANCE

- A. The Contractor shall hire and pay for the services of an independent testing laboratory to perform the testing for quality assurance.
- B. This testing shall consist of calculation of w/c ratio; measuring slump; air content; and tests for the compressive strength. Four 6-inch by 12-inch cylinders shall be made with 1 cylinder to be tested at 7 days, 2 cylinders to be tested at 28 days, and 1 cylinder to be tested at 56 days if the 28-day strengths are inadequate. These test results will be used by the Contractor to assist his control of quality.
- C. The Contractor shall schedule and provide 48 hours' notice to the independent testing laboratory. The Contractor shall provide free access to work and cooperate with the testing laboratory.
- D. In general, testing shall be required for each placement in excess of 5 cubic yards.

- E. Copies of all test reports shall be mailed directly to the Owner and Engineer by the testing laboratory as soon as they become available.
- F. The Contractor shall accept all test results reported by the testing laboratory. Any disputed results shall be validated by an independent testing laboratory hired by the Contractor at their expense.

3.9. REPAIR AT SAW CUTS TO CONCRETE

- A. After saw cutting concrete, repair exposed rebar as follows:
  - 1. Chip back concrete around rebar end with maximum 20-lb. chipping hammer.
  - 2. Cut off exposed rebar minimum 1-1/2 inches past concrete surface.
  - 3. Coat area with bonding agent and patch hole with non-shrink grout.

END OF SECTION



## SECTION 03350

### PRECAST CONCRETE STRUCTURES

#### Part 1 GENERAL

##### 1.1 WORK INCLUDED

A. Contractor shall provide precast concrete structures as specified below or on the Contract Drawings.

##### 1.2. SUBMITTALS

A. Contractor shall provide submittals in accordance with the specifications including, manufacturer, dimensional information, verification of concrete mix and reinforcement, design loading (i.e., traffic or non-traffic), and weight information.

#### Part 2 PRODUCTS

##### 2.1 MATERIALS/REQUIREMENTS

###### A. Precast Concrete Manholes

1. Concrete and reinforcement per ASTM C478-85a
2. Design Case: AASHTO H20-44 Live Load traffic loading
3. Concrete: 4000 psi
4. Reinforcement: ASTM A615 Grade 60 and ASTM A185 Grade 65
5. Entrained air: 5.5 to 9.5 %
6. Base Unit: monolithic
7. Joint Sealants: o-ring or butyl joints
8. Pipe-to-manhole connections: Watertight; A-LOK, KOR-N-SEAL, or equal. For core bores, use Link Seal flexible connectors
9. Standard Sanitary Frame & Cover: AASHTO H20 loading, cast iron with round flange, 24" diameter clear opening with cover imprinted "SANITARY", as manufactured by Campbell Foundry Company (Pattern 1030), Syracuse Castings (Pattern 1030), Neenah R-155, or equal.
10. Acceptable precast manufacturers; The Fort Miller Company, Inc., or equal.

## Part 3 EXECUTION

### 3.1 INSTALLATION

- A. Handle and install in accordance with manufacturer's recommendations, these specifications and Contract Drawings.
- B. Precast structures to receive two coats of bitumastic coating on the exterior surface.

END OF SECTION

SECTION 04070  
NON-SHRINK GROUT

Part 1 GENERAL

1.1 SUMMARY

A. Work specified in this section shall include all labor, materials, equipment and services necessary for furnishing and installing non-shrink grout. It shall also include the grouting of columns, base plates, grillages, anchors, bearings, machinery foundations, equipment base plates, openings in new or existing concrete, precast work and other areas as shown and where required.

1.2. QUALITY ASSURANCE

A. Acceptable Manufacturers:

1. U.S. Grout Corporation
2. Master Builders
3. USM Corporation
4. W.R. Meadows
5. Sonneborn-Contech
6. Euclid Chemical Company

B. Applicable Codes, Standards and Specifications:

1. American Society for Testing and Materials (ASTM)
2. Corps of Engineers (CRD)

1.3. SUBMITTALS

A. Furnish recent independent laboratory tests showing compliance with requirements specified. Certifications or affidavits will not be acceptable.

B. Furnish manufacturer's literature describing product and instructions for use.

1.4. PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver grout in moisture proof bags with the manufacturer, product name and general instructions for placement printed on the bag. Store on pallets, and protect from damage.

## Part 2 PRODUCTS

### 2.1 MATERIALS

A. All Grout shall be non-metallic, non-shrink, non-gas forming preblended and ready-for-use requiring only the addition of water.

1. Grout shall contain no metals nor rust or corrosion promoting agents, or gypsums.
2. The addition of set control agents or water reducers will not be allowed.
3. Grout shall conform to the following properties:

<u>Property</u>	<u>Test Method</u>	<u>Requirements</u>
Shrinkage below Placement Volume	ASTM C827	0
Drying Shrinkage	CRD 588-76	0
Expansion	CRD 588-76	0.40% max.
Compressive Strength*	ASTM C109	
24 hours		3,000 psi min
7 days		6,000 psi min
Initial Set Time	#5 bar grouted	Min 45 minutes
Pull-Out Strength	6" deep in a 7/8" dia. hole in saturated surface dried concrete	

\*Flowable mix

Water shall be clean and free from injurious chemicals and deleterious materials.

## Part 3 EXECUTION

### 3.1 PREPARATION

A. Prepare all contact surfaces in accordance with the manufacturer's recommendations. Grout contact surfaces must be cleaned of all oil, grease, scale, and other foreign matter. Remove unsound concrete leaving surface level but rough. Saturate concrete contact area with water 12-24 hours prior to grouting. Before placing grout, remove all excess or free standing water.

### 3.2. MIXING

- A. Mix in strict accordance with the manufacturer's written instruction. Amount of water used should be a minimum quantity to produce the desired grout consistency. Mix only that quantity of grout that can be placed within 30 minutes after mixing.

### 3.3. GROUTING

- A. All work shall be done in strict accordance with the manufacturer's recommendations, including special procedures for hot and cold weather grouting. At the request of the Engineer, the manufacturer's representative shall be called to the job site for consultation regarding detailed use of the grout.
- B. The grout shall be placed using the most practical method, completely filling the space to be grouted and shall be thoroughly compacted and free of air pockets. Do not remove forms until after the grout has taken an initial set and will not slump. After removal, cut off excess grout and finish to a smooth surface. Prevent rapid loss of water from the grout during first 48 hours with the use of an approved membrane curing compound, or with the wetted burlap method.

END OF SECTION