

CONTRACT DOCUMENTS

LEWIS COUNTY

Public Safety Building

Generator Replacement



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Bid Documents
January 2026

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REQUEST FOR PROPOSALS LEWIS COUNTY PUBLIC SAFETY BUILDING GENERATOR REPLACEMENT PROJECT CONTRACT NO. 1 - ELECTRICAL

Lewis County Board of Legislators is seeking sealed bids/proposals from interested and qualified vendors to provide construction of the Lewis County Public Safety Building Generator Replacement, Contract No. 1 – Electrical, located at 5252 Outer Stowe Street, Lowville, NY 13367, in accordance with the specifications and scope of work set forth in the RFP and Bid Documents, which can be found and are available electronically at the following:

plans@fourthcoast.com - Fourth Coast Inc., 745 Graves St, Clayton, NY
www.lewiscounty.org – Lewis County Website
www.nnybe.com – Northern NY Builder's Exchange
www.syrabex.com – Syracuse Builder's Exchange

A pre-bid conference will be held on **Thursday, January 22, 2026, at 9:00 am**, at the Public Safety Building, 5252 Outer Stowe St, Lowville, NY 13367. Any questions regarding the bidding documents or site access should be addressed to the issuing office and project engineer, Daniel Bernat, at deb@fourthcoast.com.

Bid Proposals must be received by mail or hand delivery to Cassandra Moser, Clerk of the Board, Courthouse Building, 7660 N. State Street, Rm. 225, Lowville, New York 13367, on or before 10:00 a.m. on Thursday, February 5, 2026, at which time the Bids received will be publicly opened and read. Late proposals will not be considered. Lewis County reserves the right to forego any formalities and reject any and all proposals. Lewis County is an Equal Opportunity Employer.

By Order of Lewis County Board of Legislators

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, Bidder shall submit with its Bid (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

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. Required Bidder Qualification Statement with supporting data; and

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 *Site Visit and Testing by Bidders*

- A. Bidder can conduct a 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.

4.03 *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.

4.04 *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 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, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or 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. 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.

- 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 the General Conditions.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 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 the following portions of the Work:

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.

- 12.02 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.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

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 partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership's address for receiving notices shall be shown.
- 13.04 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 firm's address for receiving notices shall be shown.
- 13.05 A Bid by an individual shall show the Bidder's name and address for receiving notices.
- 13.06 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 joint venture's address for receiving notices shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 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 Base Bid with Alternates
- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.
- 14.02 *Allowances*
- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

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 the address shown on the advertisement for bid.
- 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 the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 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 No charge will be allowed for federal, state, sales, and excise taxes from which the County is exempt. Exemption Certificates will be provided upon request. Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

ARTICLE 23 – WAGE RATE REQUIREMENT

23.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5(b) apply.

ARTICLE 24 – HAZARDOUS WASTES

24.01 It shall be the responsibility of all Contractors and subcontractors to strictly adhere to all Federal, State and Local Regulations pertaining to the use, transportation and disposal of hazardous wastes. These are to include, but not be limited to, the following:

- A. Asbestos-containing materials
- B. Contamination of the atmosphere
- C. Contamination of soil surface or subsurface
- D. Contamination of water or water courses
- E. Contamination of objects or any other intangible matter

ARTICLE 25 – ENVIRONMENTAL REGULATIONS

25.01 All Contractors shall comply with all requirements of the Federal Clean Water, Clean Air, and Pollution Control Acts.

ARTICLE 26 – HAZARDOUS MATERIALS

26.01 It shall be the responsibility of all contractors and subcontractors to furnish materials free of hazardous materials including but not limited to lead, asbestos, PCBs, and any and all material deemed hazardous by the EPA.

BID FORM

Lewis County, Public Safety Building Generator Replacement
Contract No. 1 Electrical

Work under this Contract may generally be described to include, but not be limited to the following:

Removal and replacement of the existing generator system, including associated electrical devices, conduit, and wiring as required for the execution of the work. The project will include paving, concrete work, trenching, installation of new electrical systems, generator installation, service rated transfer switch installation, infill of block, brick, and insulation, installation of new detention window and security glazing, setting of protective bollards, and site restoration. Work shall include providing electrical grounding and bonding, supports and hangers, conduits, raceways, cables, boxes, disconnects, control devices and wiring, electrical identification, load testing and balancing, and all other materials and labor necessary to complete the project in accordance with the Contract Drawings and Specifications.

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Lewis County, Attn: Cassandra Moser – Clerk of the Board, Courthouse Building, 7660 N State Street, Rm. 225, Lowville, NY 13367

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 anything 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):

BASE BID SUM of \$ _____

Bid Item No. 1 – Field Directive Allowance \$ 5,000.00

Five Thousand Dollars

TOTAL BASE BID (Base Bid & Bid Item No. 1) \$ _____

(use words)

All specified cash allowances are included in the price(s) set forth above and have been computed in accordance with Paragraph 13.02 of the General Conditions Time of Completion

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 in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided);
 - 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. Required Bidder Qualification Statement with supporting data; and

ARTICLE 8 – DEFINED TERMS

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: _____

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: _____

Address: _____

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

Sate 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

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:				
	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:				
	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:				
	Name: Address: Telephone:	Name: Company: Telephone:				

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]*

An Electronic copy of the unexecuted counterparts of the Agreement accompanies this Notice of Award. Contract Documents have been transmitted or made available to Bidder electronically.

an electronic 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 this Notice of Award:

1. Deliver to Owner (1) one counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the insurance documentation.

Failure to comply with these conditions within the time specified will entitle the 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, the 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

**AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between _____ Lewis County _____ (“Owner”) and
_____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Lewis County, Public Safety Building Generator Replacement.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by St Lawrence Engineering, DPC (“Engineer”).

3.02 *The Owner has retained St Lawrence Engineering, DPC (“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 November 30, 2026, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before December 31, 2026.

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 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 Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500 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.

4.04 Deleted

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 Work other than Unit Price Work, a lump sum of: \$ [REDACTED].

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

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 last day of each month 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 as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the maximum legal rate.

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 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 and drawings 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.
 - E. 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.
 - F. 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.
 - G. 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.
 - H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
 - I. 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 (pages 1 to █, inclusive).
 2. Performance bond (pages █ to █, inclusive).
 3. Payment bond (pages █ to █, inclusive).
 4. General Conditions (pages █ to █, inclusive).
 5. Supplementary Conditions (pages █ to █, inclusive).
 6. Specifications as listed in the table of contents of the Project Manual.
 7. Drawings (not attached but incorporated by reference) consisting of █ sheets with each sheet bearing the following general title: █.
 8. Addenda (numbers █ to █, inclusive).
 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages █ to █, inclusive).
 10. 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 anything 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.

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:

PERFORMANCE BOND

CONTRACTOR *(name and address):*

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

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

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

Amount:

Modifications to this Bond Form: None See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

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

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

By: _____
Signature

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

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

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

_____ *(seal)*

Surety's Name and Corporate Seal

By: _____

Signature

By: _____

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____

Signature

Attest: _____

Signature

Title

Title

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

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. **Definitions**
 - 16.1 **Claim:** A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 7. The total amount of previous payments received by the Claimant; and
 - 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.
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
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:

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 considered 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.

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.

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).

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 Commencement of Contract Times; Notice to Proceed

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 Delays in Contractor's Progress

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-5.06 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 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: Statutory

Federal, if applicable (e.g., Longshoreman's): Statutory

Jones Act coverage, if applicable:

Bodily injury by accident, each accident \$ 1,000,000

Bodily injury by disease, aggregate \$ 1,000,000

Employer's Liability:

Bodily injury, each accident \$ 2,000,000

Bodily injury by disease, each employee \$ 2,000,000

Bodily injury/disease aggregate \$ 2,000,000

Foreign voluntary worker compensation Statutory

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

General Aggregate \$ 2,000,000

Products - Completed Operations Aggregate \$ 1,000,000

Personal and Advertising Injury \$ 1,000,000

Each Occurrence (Bodily Injury and Property Damage) \$ 1,000,000

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

Bodily Injury:

Each person \$ 1,000,000

Each accident \$ 1,000,000

Property Damage:

Each accident	\$ <u>1,000,000</u>
[or]	
Combined Single Limit of	\$ <u>1,000,000</u>

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: *Fourth Coast, Inc.*

7. Contractor's Professional Liability:

Each Claim	\$ <u>1,000,000</u>
Annual Aggregate	\$ <u>2,000,000</u>

SC-6.05 Property Insurance

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

- 14. be subject to a deductible amount of no more than \$1,000 for direct physical loss in any one occurrence.

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

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

St. Lawrence Engineering, DPC, Fourth Coast, Inc.

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

- 15. 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.

SC-6.05.A. Delete Paragraph 6.05.A of the General Conditions and substitute the following in its place:

Contractor shall provide and maintain installation floater insurance for property under the care, custody, or control of Contractor. The installation floater insurance shall be a broad form or "all risk" policy providing coverage for all materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work. Coverage under the Contractor's installation floater will include:

1. any loss to property while in transit,
2. any loss at the Site, and
3. any loss while in storage, both on-site and off-site.

Coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable. The Contractor will be solely responsible for any deductible carried under this coverage and claims on materials, supplies, machinery, fixture, and equipment that will be incorporated into the Work while in transit or in storage. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

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 7:00 am to 4:00 pm.
2. Owner's legal holidays are all Federal holidays.

SC-7.02.B. Delete Paragraph 7.02 B. in its entirety, and insert the following:

- B. In the absence of any Laws or Regulations to the contrary, Contractor may perform the Work on holidays, during any or all hours of the day, and on any or all days of the week, pending owner approval.

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

Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if 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.

SC-7.04 "Or Equals"

SC 7.04.A Amend the third sentence of Paragraph 7.04.A 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 Concerning Subcontractors, Suppliers, and Others

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.

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

SC-11.06 Change Proposals

SC 11.06.A.1 Modify 11.06.A.1 inserting the following sentence after "within 15 days after the submittal of the Change Proposal.":

Include supporting data (name of manufacturer, city and state where the product was manufactured, description of product, signature of authorized manufacturer's representative) in the Manufacturer's Certification Letter, as applicable.

SC-11.07 Execution of Change Orders

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-13.01 Cost of the Work

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

- c. Construction Equipment and Machinery:
 - 1) Rentals of all construction equipment and machinery, and the parts thereof, 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.
 - 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the *[cite the rate book appropriate for the Project]*. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

SC-13.03 Allowances

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

[Deleted]

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

SC-15.01 Progress Payments

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.

SC 15.01.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 the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-15.02 Contractor's Warranty of Title

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 17 – FINAL RESOLUTION OF DISPUTES

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

SC-17.02 Arbitration

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of American Arbitration Association, subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.
- C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and

2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.
- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

SC-17.03 Attorneys' Fees

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

SC-17.03 Attorneys' Fees: For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.



Kathy Hochul, Governor

Roberta Reardon, Commissioner

Lewis County
Nichole Jobson
745 Graves Street
Clayton NY 13624

Schedule Year 2025 through 2026
Date Requested 12/05/2025
PRC# 2025014754

Location Public Safety Building
Project ID#
Project Type Generator Replacement at the Public Safety Building

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 Rate Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2025 through June 2026. 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. 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.

Contractor Registry

Effective December 30, 2024 all contractors and subcontractors submitting bids or performing construction work on public work projects, or private projects covered by Article 8 of the Labor Law, are required to register with the New York State Department of Labor (NYSDOL) under Labor Law Section 220-i. To register, contractors and subcontractors must submit an application through NYSDOL's Contractor Registry portal which is available through the agency's Management System for Protecting Worker Rights (MPWR) <https://mpwr-public.labor.ny.gov/en/login>.

For additional information, please visit [online](#).

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.

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 12226; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website 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.

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

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 NYS DOL 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 journeyworkers 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 journeyworker'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 12226 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.



Kathy Hochul, Governor

Roberta Reardon, Commissioner

Lewis County
Nichole Jobson
745 Graves Street
Clayton NY 13624

Schedule Year 2025 through 2026
Date Requested 12/05/2025
PRC# 2025014754

Location Public Safety Building
Project ID#
Project Type Generator Replacement at the Public Safety Building

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 12226

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, <https://dol.ny.gov/public-work-and-prevailing-wage>

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 .

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 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

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 12226

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. 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.

Your pay stub and wage notice received upon hire must clearly state your wage rate and supplement rate.

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:
<https://dol.ny.gov/bureau-public-work>



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) 568-5287		

* 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 – 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.

*Contractor Registry (LL 220-I): Effective December 30th, 2024

Labor Law Section 220-i(6) prohibits contractors from bidding on public work and prohibits both contractors and subcontractors from commencing work on private and public projects subject to prevailing wage requirements. This section requires contractors to submit their Certificate of Registration with their bid materials. Each Certificate of Registration will have a unique registration number. Failure to provide proof of registration, as required by Labor Law Section 220-i, as a minimum qualification will result in the bidder being deemed non-responsive. There is a public database of registered contractors and subcontractors available online at data.ny.gov to confirm registration validity. For additional information on how to register and the requirements, visit <https://dol.ny.gov/public-work-contractor-and-subcontractor-registry-landing>

*Electronic Certified Payroll (LL 220-J): Effective December 31st, 2025

Effective December 31, 2025, all contractors and subcontractors who perform public work, or covered private work subject to the prevailing wage, will be required to submit certified payrolls electronically to the Bureau of Public Work and Prevailing Wage Enforcement. Additional information about the electronic certified payroll submission system will be made available on the Department's Website at <https://dol.ny.gov/Electronic-Payroll>

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least three (3) years from the projects date of completion. Additionally, 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.

Payroll records and transcripts are required to be kept on site during all the time that work under that contract is being performed.

NOTE: For more detailed information regarding Article 9 prevailing wage contracts, please refer to "General Provisions of Laws Covering Workers on Article 9 Public Work Building Service Contracts".

If you have any questions concerning the attached schedule or would like additional information, please write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

OR

Contact the nearest BUREAU of PUBLIC WORK District Office

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

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) for current wage rate information.

Shift Work

If the timeline of the contract requires shift work be performed to meet deadlines, the BPWE will enforce the shift work rate as the required rate on the project whether or not shift work is specifically addressed in the contract.

Paid Prenatal Leave

Every employer shall be required to provide to its employees twenty hours of paid prenatal personal leave during any fifty-two week calendar period. Paid prenatal personal leave shall mean leave taken for the health care services received by an employee during their pregnancy or related to such pregnancy, including physical examinations, medical procedures, monitoring and testing, and discussions with a healthcare provider related to the pregnancy. Paid prenatal personal leave may be taken in hourly increments. Benefits for paid prenatal personal leave shall be paid in hourly installments. Employees shall receive compensation at the employee's regular rate of pay, or the applicable minimum wage established by the labor law, whichever is greater, for the use of Paid Prenatal leave.

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 12226

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

Lewis County General Construction

Boilermaker **12/01/2025**

JOB DESCRIPTION Boilermaker **DISTRICT 7**

ENTIRE COUNTIES
 Cayuga, Clinton, Cortland, Franklin, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Seneca, St. Lawrence, Tompkins

WAGES

Per hour:	07/01/2025	01/01/2026	01/01/2027
		Additional	Additional
Boilermaker	\$ 40.50	\$ 2.50*	\$ 2.50*

* To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 26.60*
	+ 1.49

*This portion of the benefits subject to the same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, E, Q) 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. When a holiday falls on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES

WAGES per hour: Six (6) month terms at the following percentage of Journeyworker's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

SUPPLEMENTAL BENEFITS per hour:

\$ 19.76*	\$ 19.76*	\$ 20.74*	\$ 21.71*	\$ 22.67*	\$ 23.66*	\$ 24.66*	\$ 25.62*
+ 1.49	+ 1.49	+ 1.49	+ 1.49	+ 1.49	+ 1.49	+ 1.49	+ 1.49

*This portion of the benefits subject to the same premium rate as shown for overtime wages.

7-175

Broadband **12/01/2025**

JOB DESCRIPTION Broadband **DISTRICT 4**

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, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: Only in the Village of Greenwood Lake, Village of Highland Falls, Town of Tuxedo, and Town of Patterson

WAGES

NOTE: Applies to all public work and covered private projects, including those receiving ConnectAll funding subject to New York State Labor Law §224-E, solicited on or after July 1,2025. For all other projects solicited prior to July 1,2025 please see LINEMAN ELECTRICIAN-TELEDATA

Per Hour:	07/01/2025	08/04/2025
Field Tech Install/Repair	\$ 51.31	\$ 52.85

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

"Broadband", "Broadband Service", or "Broadband Internet" means mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service.

Note: EXCLUDES work within ten (10) feet of High Voltage (600 Volts and over) transmission lines for this work, please see LINEMAN

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE
 * Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE
 Overtime: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist2

Carpenter - Building

12/01/2025

JOB DESCRIPTION Carpenter - Building

DISTRICT 2

ENTIRE COUNTIES

Jefferson, Lewis, Oswego, St. Lawrence

WAGES

Per hour:	07/01/2025	01/01/2026	07/01/2026 Additional	07/01/2027 Additional
Carpenter	\$ 32.59	\$ 33.09	\$ 5.00*	\$ 3.61*
Floor Coverer	32.59	33.09	5.00*	3.61*
Carpet Layer	32.59	33.09	5.00*	3.61*
Dry-Wall	32.59	33.09	5.00*	3.61*
Diver-Wet Day	57.59	58.09	5.00*	3.61*
Diver -Dry Day	33.59	34.09	5.00*	3.61*
Diver Tender	33.59	34.09	5.00*	3.61*

*To be allocated at a later date

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 journeyworker's rate of pay when performing piledriving/dock building work.
- Certified welders shall receive \$3.00 per hour over the journeyworker's rate of pay when the employee is required to be certified and performs AWS, 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 \$.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.

SHIFT WORK

On Agency/Owner mandated shift work, the following rates will be applicable:

- 1st Shift - Regular Rate
- 2nd Shift - Premium of 10% of base wage per hour
- 3rd Shift - Premium of 15% of base wage per hour

Shift work shall be defined as implementing at least two (2) shifts in a twenty-four (24) consecutive hour period. Shift work must be for a minimum of three (3) consecutive days.

SUPPLEMENTAL BENEFITS

Per hour:	07/01/2025	01/01/2026
Journeyworker	\$ 23.39*	\$ 23.39*

*NOTE: For work performed inside the secured area of Nuclear Power Plants, benefits calculated at same premium as shown for overtime (per hour paid).

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. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

Wages per hour (1300 hour terms at the following percentage of Journeyworker's base wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour:

\$ 13.05	\$ 13.05	\$ 15.65	\$ 15.65
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NOTE ADDITIONAL AMOUNTS PAID TO APPRENTICES FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- Pile Driving/Dock Builder apprentices shall receive an additional \$0.25 per hour worked when performing piledriving/dock building work.
- Certified Welders shall receive \$3.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs AWS, 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.

2-277B-JLOS

Carpenter - Building / Heavy&Highway

12/01/2025

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:	07/01/2025	07/01/2026	07/01/2027
		Additional	Additional

Carpenter - ONLY for
 Artificial Turf/Synthetic
 Sport Surface

\$ 37.94	\$ 2.25*	\$ 2.25*
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* To be allocated at a later date.

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyworker	\$ 27.34
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OVERTIME PAY

See (B, E, Q) 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 (1300 hour terms at the following percentage of Journeyworker's wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour worked:
 \$19.10 \$19.69 \$21.83 \$22.42

2-42AtSS

Carpenter - Heavy&Highway

12/01/2025

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Broome, Cayuga, Chemung, Cortland, Delaware, Jefferson, Lewis, Onondaga, Oswego, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Yates

WAGES

Per hour	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
Carpenter	\$ 39.52	\$ 2.00*	\$ 4.42*
Piledriver	39.52	2.00*	4.42*
Dockbuilder	39.52	2.00*	4.42*
Diver-Wet Day	64.52	2.00*	4.42*
Diver-Dry Day	40.52	2.00*	4.42*
Diver-Tender	40.52	2.00*	4.42*

*To be allocated at a later date.

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$5.00 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 \$0.50 per foot
 - 101' to 150' additional \$0.75 per foot
 - 151' to 200' additional \$1.25 per foot
 - 201' and deeper additional \$1.50 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 \$0.75 per foot
 - 101' to 200' additional \$1.00 per foot
 - Over 201' additional \$1.25 per foot
- Diver rates applies to all hours worked on dive day.

SHIFT WORK

When project owner mandates a single irregular work shift, the Journeyworkers and Apprentices will receive an additional \$4.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 27.31

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.

- The employee must work their scheduled workday before and their scheduled workday after the holiday to receive holiday pay.

REGISTERED APPRENTICES

CARPENTER/PILEDRIIVER/DOCKBUILDER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyworker's base wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour:

\$ 19.07 \$ 19.66 \$ 21.75 \$ 22.34

NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:
 - State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
 - Certified welders when required to perform welding work will receive an additional \$5.00 per hour.

2-277HH-Bro

Electrician **12/01/2025**

JOB DESCRIPTION Electrician **DISTRICT 6**

ENTIRE COUNTIES
 Clinton, Essex, Franklin, Jefferson, Lewis, St. Lawrence

WAGES

Per hour:	07/01/2025	04/01/2026
		Additional
Electrician	\$ 43.50	\$ 2.60*
Teledata	43.50	2.60*
Welder	45.50	2.60*

* To be allocated at a later date.

NOTE: Additional amounts, subject to overtime premiums, due for the following work (applicable to all employees):
 - 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 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%

SUPPLEMENTAL BENEFITS

Per hour:

	\$ 25.88 plus
Journeyworker	5.75% of hourly wage paid*

* 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

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 the Journeyworker's wage.

1-1000	to 2000	to 3500	to 5000	to 6500	to 8000
45%	50%	55%	60%	70%	80%

SUPPLEMENTAL BENEFITS per hour:

1st & 2nd term	\$ 12.17*
All other terms	\$ 25.88*

* PLUS 5.75% OF HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME RATE.

6-910

Elevator Constructor **12/01/2025**

JOB DESCRIPTION Elevator Constructor **DISTRICT 6**

ENTIRE COUNTIES

Broome, Cayuga, Chenango, Cortland, Franklin, Jefferson, Lewis, Onondaga, Oswego, St. Lawrence, Tioga, Tompkins

PARTIAL COUNTIES

Delaware: Only the towns of: Tompkins, Walton, Masonville, Sidney, Franklin and Deposit.

Madison: Only the towns of: Cazenovia, DeRuyter, Eaton, Fenner, Georgetown, Lebanon, Lenox, Nelson and Sullivan.

Oneida: Only the towns of: Camden, Florence and Vienna.

WAGES

Per hour:	07/01/2025	01/01/2026	01/01/2027
Mechanic	\$ 58.44	\$ 61.003	\$ 63.719
Helper	40.91	42.70	44.60

SUPPLEMENTAL BENEFITS

Per hour:			
Journeyworker	\$ 38.435*	\$ 38.985*	39.535*

*NOTE - add 6% of regular hourly rate for all hours worked. Add 8% of regular 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 holiday falls on a Saturday, it shall be observed on Friday. When a holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

WAGES per hour: 1 year terms at the following percentage of the Elevator Constructor wage.

0-6	6-12	2nd	3rd	4th
months	months	year	year	year
50%	55%	65%	70%	80%

SUPPLEMENTAL BENEFITS per hour:

0-6 months: 6% of the hourly apprentice rate paid, no additional supplemental benefits.

All other terms: Same as Journeyworker

6-62.1

Glazier **12/01/2025**

JOB DESCRIPTION Glazier

DISTRICT 5

ENTIRE COUNTIES

Jefferson, Lewis, Livingston, Monroe, Ontario, Seneca, St. Lawrence, Wayne, Yates

WAGES

Per hour:	07/01/2025
Glazier	\$ 31.05

SUPPLEMENTAL BENEFITS

Per hour:	
Journeyman	\$ 32.75

OVERTIME PAY

See (B, E, E2*, Q, Note) on OVERTIME PAGE.

*Note - Or circumstances beyond the control of the employer such as fire or natural disaster.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms

Appr. 1st term:	\$ 20.00
Appr. 2nd term:	21.00
Appr. 3rd term:	22.00
Appr. 4th term:	23.00

Appr. 5th term:	24.00
Appr. 6th term:	25.00
Appr. 7th term:	26.00
Appr. 8th term:	27.00

Supplemental Benefits per hour:

Appr. 1st term	\$ 14.30
Appr. 2nd term	14.30
Appr. 3rd term	20.30
Appr. 4th term	20.30
Appr. 5th term	21.30
Appr. 6th term	21.30
Appr. 7th term	22.30
Appr. 8th term	22.30

5-677.1

Insulator - Heat & Frost

12/01/2025

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 7

ENTIRE COUNTIES

Broome, Cayuga, Chemung, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Tioga, Tompkins

WAGES

Per hour: 07/01/2025

Asbestos Installer	\$ 43.25
Insulation Installer (On mechanical systems only)	43.25

SHIFT WORK

The following rates will apply on all contracting agency-mandated shifts worked:

1st Shift	\$ 43.25
2nd Shift	49.74
3rd Shift	51.90

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 27.34
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OVERTIME PAY

See (*B1, **K, P) on OVERTIME PAGE

*NOTE: First 10 hours on Saturday.

**NOTE: Holidays that fall on Sunday are subject to double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (2*,4,6,28) on HOLIDAY PAGE

*Triple time for Labor Day if worked.

REGISTERED APPRENTICES

WAGES per hour: One (1) year terms at the following percentage of Journeyworker's wage.

1st	2nd	3rd	4th
60%	70%	80%	90%

SUPPLEMENTAL BENEFITS per hour:

\$ 24.09	\$ 24.09	\$ 27.34	\$ 27.34
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7-30-Syracuse

Ironworker

12/01/2025

JOB DESCRIPTION Ironworker

DISTRICT 7

ENTIRE COUNTIES

Franklin, Herkimer, Lewis, Oneida, St. Lawrence

PARTIAL COUNTIES

Chenango: Only the Townships of Columbus, New Berlin, North Norwich, Plymouth, Sherburne and Smyrna.

Fulton: Only the Townships of Caroga, Ephratah, Oppenheim, and Stratford.
 Hamilton: Only the Townships of Arietta, Indian Lake, Inlet, Lake Pleasant, Long Lake and Morehouse.
 Jefferson: Only the Townships of Antwerp, Champion, Philadelphia and Wilna.
 Madison: Only the Townships of Brookfield, Eaton, Hamilton, Lebanon, Madison, Oneida and Stockbridge.
 Montgomery: Only the Townships of Canajoharie, Minden, Palatine and St. Johnsville.
 Otsego: Only the Townships of Burlington, Cherry Valley, Decatur, Edmeston, Exeter, Hartwick, Middlefield, New Lisbon, Otsego, Pittsfield, Plainfield, Richfield, Roseboom, Springfield and Westford, and the Village of Cooperstown.

WAGES

Per hour:	07/01/2025	07/01/2026 Additional
Structural/Reinforcing	\$ 35.50	\$ 2.74*
Mach. Mover/Ornamental	35.50	2.74*
Stone Derrickman	35.50	2.74*
Chain Link Fence	35.50	2.74*
Sheeter Ironworker	35.50	2.74*
Pre-Engineered Building	35.50	2.74*
Window Erector	35.50	2.74*
Precast Erector	35.50	2.74*
Welder	35.50	2.74*

* To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 32.91

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. Any holiday which occurs on Saturday shall be observed the previous Friday.

REGISTERED APPRENTICES

WAGES per hour: 1500 hour terms at the following wage.

1-1500hrs	\$ 21.50
1501-3000hrs	23.50
3001-4500hrs	25.50
4501-6000hrs	27.50

SUPPLEMENTAL BENEFITS per hour:

1-1500hrs	\$ 14.19
1501-3000hrs	22.67
3001-4500hrs	23.88
4501-6000hrs	25.09

7-440

Laborer - Building

12/01/2025

JOB DESCRIPTION Laborer - Building

DISTRICT 7

ENTIRE COUNTIES

Franklin, Jefferson, Lewis, St. Lawrence

WAGES

NOTE: Building Laborer rates also apply on any masonry-type construction (block or brick with mortar), and on parking garages.

Group # 1: All Laborers (except as otherwise noted below).

Group # 2: Hazardous Waste & Asbestos removal.

Group # 3: Wind & Solar Worker.**

Per hour:	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
Group # 1	\$ 30.78	\$ 3.85*	\$ 3.90*
Group # 2	33.78	3.85*	3.90*
Group # 3	33.78	3.85*	3.90*

* To be allocated at a later date.

** Applies when performing delivery handling and site readiness for all solar panels and wind turbines, whether on land or water. Not applicable to the installation/assembly of solar photovoltaic panels or racking.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 27.23

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: 1000 hour terms at the following percentages of Journeyworker's wage:

1-1000	70%
1001-2000	80%
2001-3000	90%
3001-4000	95%

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journeyworker

7-1822

Laborer - Heavy&Highway **12/01/2025**

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 7

ENTIRE COUNTIES

Franklin, Jefferson, Lewis, St. Lawrence

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:	07/01/2025	07/01/2026	07/01/2027
		Additional	Additional
GROUP A	\$ 35.32	\$ 3.40*	\$ 4.20*
GROUP B	35.52	3.40*	4.20*
GROUP C	35.72	3.40*	4.20*
GROUP D	35.92	3.40*	4.20*
GROUP E	40.52	3.40*	4.20*

* To be allocated at a later date.

SHIFT WORK

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 \$5.00 per hour. Night work, when mandated by DOT shall be paid an additional \$5.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 29.37

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 Saturday. Employees who work a Saturday holiday shall be paid double time plus the holiday pay. If a holiday falls on Sunday, it will be celebrated on Monday. Employees who work a Sunday holiday shall be paid double time. Employees who work on Monday shall be paid double time plus the holiday pay. Accordingly, the Monday following the Sunday is treated as the holiday.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of Journeyworker's GROUP B wage.

1st	2nd	3rd	4th
70%	80%	90%	95%

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journeyworker

7-1822/2h(2)

Laborer - Tunnel

12/01/2025

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 7

ENTIRE COUNTIES

Franklin, Jefferson, Lewis, St. Lawrence

WAGES

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 on a State and or Federally designated waste site, and where relevant regulations require employees to use personal protection.

Per hour:	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
GROUP A	\$ 38.50	\$ 3.40*	\$ 4.20*
GROUP B	38.70	3.40*	4.20*
GROUP C	43.50	3.40*	4.20*

* To be allocated at a later date.

SHIFT WORK

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 \$5.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 29.37

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 workers work on this Sunday holiday, they shall be paid double time. In the event that workers work on Monday, they shall be compensated at triple time. Accordingly, the Monday following the Sunday is treated as the holiday.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of Journeyworker's GROUP B wage:

1st	2nd	3rd	4th
70%	80%	90%	95%

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journeyworker

7-1822T(2)

Lineman Electrician

12/01/2025

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

A 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, assembly of all electrical materials, conduit, pipe, 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.

Crane Operators: Operation of any type of crane on line projects.

Crawler Backhoe: Operation of tracked excavator/crawler backhoe with 1/2 yard bucket or larger on line projects.

Digging Machine Operator: All other digging equipment and augering on line projects.

A 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/truck driver may assist in installing conduit, pipe, cables and equipment.

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines. Also includes digging of holes for poles, anchors, footer, and foundations for electrical equipment.

-----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. Includes access matting for line work.

Per hour:	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A:				
Lineman, Technician	\$ 61.56	\$ 64.37	\$ 66.84	\$ 69.47
Crane, Crawler Backhoe	61.56	64.37	66.84	69.47
Welder, Cable Splicer	61.56	64.37	66.84	69.47
Group B:				
Digging Mach. Operator	\$ 55.40	\$ 57.93	\$ 60.16	\$ 62.52
Group C:				
Tractor Trailer Driver	\$ 52.33	\$ 54.71	\$ 56.81	\$ 59.05
Groundman, Truck Driver	49.25	51.50	53.47	55.58
Equipment Mechanic	49.25	51.50	53.47	55.58
Group D:				
Flagger	\$ 33.86	\$ 35.40	\$ 36.76	\$ 38.21

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

-----Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work." Includes access matting for line work.

Group A:				
Lineman, Technician	\$ 61.56	\$ 64.37	\$ 66.84	\$ 69.47
Crane, Crawler Backhoe	61.56	64.37	66.84	69.47
Cable Splicer	67.72	70.81	73.52	76.42
Certified Welder, Pipe Type Cable	\$ 64.64	\$ 67.59	\$ 70.18	\$ 72.94
Group B:				
Digging Mach. Operator	\$ 55.40	\$ 57.93	\$ 60.16	\$ 62.52
Group C:				
Tractor Trailer Driver	\$ 52.33	\$ 54.71	\$ 56.81	\$ 59.05

Groundman, Truck Driver	49.25	51.50	53.47	55.58
Equipment Mechanic	49.25	51.50	53.47	55.58
Group D:				
Flagger	\$ 33.86	\$ 35.40	\$ 36.76	\$ 38.12

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

-----Below rates applicable on all switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. Includes access matting for line work.

Group A:				
Lineman, Tech, Welder	\$ 62.94	\$ 65.81	\$ 68.34	\$ 71.03
Crane, Crawler Backhoe	62.94	65.81	68.34	71.03
Cable Splicer	69.23	72.39	75.17	78.13
Certified Welder, Pipe Type Cable	66.09	69.10	71.76	74.58
Group B:				
Digging Mach. Operator	\$ 56.65	\$ 59.23	\$ 61.51	\$ 63.93
Group C:				
Tractor Trailer Driver	\$ 53.50	\$ 55.94	\$ 58.09	\$ 60.38
Groundman, Truck Driver	50.35	52.65	54.67	56.82
Equipment Mechanic	50.35	52.65	54.67	56.82
Group D:				
Flagger	\$ 34.62	\$ 36.20	\$ 37.59	\$ 39.07

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

-----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. Includes access matting for line work.

Group A:				
Lineman, Tech, Welder	\$ 64.18	\$ 67.10	\$ 69.68	\$ 72.43
Crane, Crawler Backhoe	64.18	67.10	69.68	72.43
Group B:				
Digging Mach. Operator	\$ 57.76	\$ 60.39	\$ 62.71	\$ 65.19
Group C:				
Tractor Trailer Driver	\$ 54.55	\$ 57.04	\$ 59.23	\$ 61.57
Groundman, Truck Driver	51.34	53.68	55.74	57.94
Equipment Mechanic	51.34	53.68	55.74	57.94
Group D:				
Flagger	\$ 35.30	\$ 36.91	\$ 38.32	\$ 39.84

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

SHIFT WORK

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 %

SUPPLEMENTAL BENEFITS

Per hour:	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A	\$ 31.90*	\$ 32.90*	\$ 34.40*	\$ 35.90*
Group B	\$ 27.90*	\$ 28.90*	\$ 30.40*	\$ 31.90*
Group C	\$ 27.70*	\$ 28.50*	\$ 29.70*	\$ 30.90*
Group D	\$ 27.65*	\$ 28.40*	\$ 29.53*	\$ 30.66*

*Plus 7 % of the hourly wage paid. The 7% is based on straight time or premium time.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Dept. of Jurisdiction.
 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, 25) on HOLIDAY PAGE
 Overtime See (5, 6, 8, 15, 25) on HOLIDAY PAGE

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 Journeyworker's Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

07/01/2025	05/04/2026	05/03/2027	05/01/2028
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All terms:	\$ 27.65*	\$ 28.40*	\$ 29.53*	\$ 30.66*
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*Plus 7% of the hourly wage paid. The 7% is based on straight time or premium time.

6-1249a

Lineman Electrician - Teledata **12/01/2025**

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

NOTE: Applies to all public work and covered private projects, including those receiving ConnectAll funding subject to LL 224-E, solicited prior to July 1, 2025. For all projects, excluding dial-up internet access service, solicited on or after July 1, 2025, please see BROADBAND

Per hour: 07/01/2025

Cable Splicer	\$ 40.81
Installer, Repairman	\$ 38.73
Teledata Lineman	\$ 38.73
Tech., Equip. Operator	\$ 38.73
Groundman/Flagger	\$ 20.53

For outside work, stopping at first point of attachment (demarcation).

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work, please see LINEMAN.

SHIFT WORK

THE FOLLOWING RATES APPLY WHEN THE CONTRACTING AGENCY MANDATES MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION ARE WORKED. WHEN TWO (2) OR THREE (3) SHIFTS ARE WORKED THE FOLLOWING RATES APPLY:

1ST SHIFT	REGULAR RATE
2ND SHIFT	REGULAR RATE PLUS 10%
3RD SHIFT	REGULAR RATE PLUS 15%

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 5.77
	*plus 3% of the hour 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

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 **12/01/2025**

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, Schuylar, 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.

Crane Operators: Operation of any type of crane on Traffic Signal/Lighting projects.

Crawler Backhoe: Operation of tracked excavator/crawler backhoe with 1/2 yard bucket or larger on Traffic Signal/Lighting projects.

Digging Machine Operator: All other digging equipment and augering on Traffic Signal/Lighting projects.

A 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/truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

Per hour:	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A:				
Lineman, Technician	\$ 52.86	\$ 55.31	\$ 57.40	\$ 59.64
Crane, Crawler Backhoe	52.86	55.31	57.40	59.64
Certified Welder	55.50	58.08	60.27	62.62
Group B:				
Digging Machine	\$ 47.57	\$ 49.78	\$ 51.66	\$ 53.68
Group C:				
Tractor Trailer Driver	\$ 44.93	\$ 47.01	\$ 48.79	\$ 50.69
Groundman, Truck Driver	42.29	44.25	45.92	47.71
Equipment Mechanic	42.29	44.25	45.92	47.71
Group D:				
Flagger	\$ 31.72	\$ 33.19	\$ 34.44	\$ 35.78

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.

SHIFT WORK

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%

SUPPLEMENTAL BENEFITS

Per hour worked:

	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A	\$ 31.90*	\$ 32.90*	\$ 34.40*	\$ 35.90*
Group B	\$ 27.90*	\$ 28.90*	\$ 30.40*	\$ 31.90*
Group C	\$ 27.70*	\$ 28.50*	\$ 29.70*	\$ 30.90*
Group D	\$ 27.65*	\$ 28.40*	\$ 29.53*	\$ 30.66*

* Plus 7% of the hourly wage paid. The 7% is based on straight time or premium time.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Dept. of Jurisdiction.
 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, 25) on HOLIDAY PAGE
 Overtime: See (5, 6, 8, 15, 25) on HOLIDAY PAGE
 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 Journeyworker's Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

	07/01/2025	05/04/2026	05/03/2027	05/01/2028
All terms:	\$ 27.65*	\$ 28.40*	\$ 29.53*	\$ 30.66*

* Plus 7% of the hourly wage paid. The 7% is based on straight time or premium time.

6-1249a-LT

Lineman Electrician - Tree Trimmer

12/01/2025

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 includes stump removal near underground energized electrical lines including telephone and CATV lines.

Per hour:	07/01/2025	01/01/2026	01/04/2026	01/03/2027
Tree Trimmer	\$ 33.18	\$ 33.18	\$ 34.67	\$ 36.23
Equipment Operator	29.35	29.35	30.67	32.05
Equipment Mechanic	29.35	29.35	30.67	32.05
Truck Driver	23.85	23.85	24.93	26.05
Groundman	19.64	19.64	20.53	21.45
Flagger	15.50	16.00	16.20	16.93

SUPPLEMENTAL BENEFITS

Per hour:

	07/01/2025	01/01/2026	01/04/2026	01/03/2027
Journeyworker	\$ 10.98*	\$ 10.98*	\$ 11.23*	\$ 11.48*

* Plus 4.5% of the hourly wage paid. The 4.5% is based on straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE
 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

12/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Herkimer, Jefferson, Lewis, Oneida, St. Lawrence

PARTIAL COUNTIES

Madison: Entire County except the Townships of Sullivan & Cazenovia

WAGES

Per hour 07/01/2025

Tile/Marble/Terrazzo

Setter \$ 37.10

Finisher 29.52

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setters \$ 20.31

Journeyman Finishers 19.54

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 500 hours 60%

2nd term 1000 hours 70%

3rd term 1000 hours 80%

4th term 1000 hours 85%

5th term 1000 hours 90%

6th term 1500 hours 95%

Finisher:

1st term 500 HOURS 70%

2ND term 1000 HOURS 80%

3RD term 1000 HOURS 90%

4TH term 1200 HOURS 95%

Supplemental Benefits per hour worked

Setter:

1st & 2nd Term \$ 12.66

3rd & 4th Term 16.49

5th Term 18.40

6th Term 20.31

Finishers:

1st & 2nd Term \$ 11.95

All others 15.74

12-2TS.2

Mason - Building

12/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Herkimer, Oneida

PARTIAL COUNTIES

Lewis: The townships of Lewis, Leyden, Osceola, Turin and West Turin
 Madison: Entire County except the Townships of Sullivan and Cazenovia

WAGES

Per hour 07/01/2025

Bricklayer/Blocker	\$ 39.99
Cement Mason(Bldg)	39.99
Plasterer/Fireproofing*	39.99
Stone Mason	39.99
Concrete Cutter	39.99
Pointer/Caulker/Cleaner	39.99

Additional \$.25 per hr. for work in restricted radiation area of atomic plant.

Additional \$5.00 per day more for employees working on a two-point suspension scaffold (Pointer, Caulker, and Cleaner are excluded).

(*Fireproofer on Structural only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.13

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

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked:

All Terms \$ 22.13

12-2b.2

Mason - Building

12/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Jefferson

PARTIAL COUNTIES

Lewis: The townships of Diana, Croghan, Denmark, Pickney, Harrisburg, Lowville, New Breman, Watson, Martinsburg, Montague, Highmarket, & Greig

WAGES

Per hour 07/01/2025

Bricklayer/Blocker	\$39.44
Cement Mason(Bldg)	39.44
Plasterer/Fireproofing*	39.44
Stone Mason	39.44
Concrete Cutter	39.44
Pointer/Caulker/Cleaner	39.44

Additional \$.25 per hr. for work in restricted radiation area of atomic plant.

Additional \$5.00 per day more for employees working on a two-point suspension scaffold (Pointer, Caulker, and Cleaner are excluded).

(*Fireproofer on Structural only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 24.10

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

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

All Terms \$ 24.10

12-2b.5

Mason - Heavy&Highway

12/01/2025

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 12-2h/h on.

WAGES

Per hour

07/01/2025

Mason &
 Bricklayer

\$ 43.01

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

\$ 22.93

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

750 HR TERMS at the following percent of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0 to 500 Hours \$ 14.13
 All Other 22.93

12-2hh.1

Millwright

12/01/2025

JOB DESCRIPTION Millwright

DISTRICT 6

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

WAGES

THE FOLLOWING RATE APPLIES TO ANY GAS/STEAM TURBINE AND OR RELATED COMPONENT WORK, INCLUDING NEW INSTALLATIONS OR MAINTENANCE AND ANY/ALL WORK PERFORMED WITHIN THE PROPERTY LIMITS OF A NUCLEAR FACILITY.

Per hour: 07/01/2025

Millwright - \$ 47.00
Power Generation

NOTE: ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

- Certified Welders shall receive an additional \$1.75 per hour provided they are directed to perform Certified Welding.
- 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) is required, then that employee shall receive an additional \$1.50 per hour.
- An employee performing the work of a machinist shall receive an additional \$2.00 per hour. 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 per hour.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker \$ 28.45*

*NOTE: Subject to OT premium

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

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: One year terms at the following percentage of Journeyworker's wage:

Appr. 1st year	65%*
Appr. 2nd year	75%*
Appr. 3rd year	80%*
Appr. 4th year	90%*

*NOTE: Additional premium for the following work listed below:

Certified Welder	\$ 1.75
Hazardous Waste Work	1.50
Machinist	2.00
Underground (500' and below)	1.00

SUPPLEMENTAL BENEFITS per hour:

Appr. 1st year	\$ 11.95
Appr. 2nd year	23.50
Appr. 3rd year	25.15
Appr. 4th year	26.80

6-1163Power

Millwright

12/01/2025

JOB DESCRIPTION Millwright

DISTRICT 2

ENTIRE COUNTIES

Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, Oneida, Onondaga, Oswego, St. Lawrence, Warren, Washington

WAGES

Per hour: 07/01/2025

Building \$ 38.41

Heavy & Highway 41.91

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:

Journeyworker \$ 27.50

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 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 Journeyworker's rate.

1st	2nd	3rd	4th
65%	75%	80%	90%

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 Benefits per hour:

Apprentices:

1st term	\$ 11.95
2nd term	22.84
3rd term	24.39
4th term	25.95

2-1163.2

Operating Engineer - Building

12/01/2025

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 6

ENTIRE COUNTIES

Cayuga, Cortland, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Seneca, St. Lawrence, Tompkins

WAGES

NOTE:

---If a prime contract is let for site work only, meaning no buildings are involved in their site contract, the Heavy/Highway rates would be applicable. When a prime contract is let for site work and building excavation is part of that contract, the Building rates would be applicable for the Operators classification.

---In the event that equipment listed below is operated by robotic control, the classification covering the operation will be the same as if manually operated.

---If a second employee is required by the employer for operation of any covered machine, they shall be an Engineer Class C.

CLASS A1*: All Cranes (A1 Includes Boom Trucks over 5 tons, Cableway, Cherry Picker, Derrick, Dragline, Dredge, Overhead Crane, Pile Driver, Tower Crane**, Truck Crane, Whirlies).

CLASS A: Air Plako, Asphalt & Blacktop Roller, Automated Concrete Spreader (CMI or equivalent), Automated Fine Grade Machine (CMI), Backhoe, Barrel Shredder, Belt Placer, Blacktop Spreader (such as Barber-Greene & Blaw Knox), Blacktop Plant (automated), Blast or Rotary Drill (Truck or Cat mounted), Boom Trucks (5 ton and under), Burning Plant Operator, Caisson Auger, Central Mix Plant (automated), Concrete Pump, Crusher (Rock), De-watering Press, Diesel Power Unit, Dirt Filter Press with Operation Equipment, Dredge, Dual Drum Paver, Elevating Grader (self-propelled or towed), Elevator Hoist - Two Cage, Excavator - all purpose hydraulically operated, Forklift (Loed/Lull and other rough terrain type), Front End Loader (4 c.y. and over), Gradall, Grader (Power), Head Tower (Saurman or equal), Hoist (2 or 3 Drum), Hydroblaster (Laser Pump), Light Plants - Compressors and Generators, Locomotive, Maintenance Engineer, Maintenance Welder, Mine Hoist, Mucking Machine or Mole, Quarry Master or Equivalent, Refrigeration Equipment (for soil stabilization), Scraper, Sea Mule, Shovel, Side Boom, Slip Form Paver, Straddle Buggy (Ross Carrier, Lumber Carrier), Tractor Drawn Belt Type Loader (Euclid Loader), Trenching Machine (digging capacity of over 4ft. depth), Truck or Trailer Mounted Log Chipper (self-feeder), Tug Operator (Manned, rented equipment excluded), Tunnel Shovel, Vibro or Sonic Hammer Controls (when not mounted in proximity to Rig Operator), Work Boat Operator including LCM's.

CLASS B: "A" Frame Truck, Back Dumps, Blacktop Plant (non-automatic), Boring Machine, Bulldozer, Cage-Hoist, Central Mix Plant (non-automated), Compressor, Pump, Generator or Welding machine (when used in battery of not more than five (5)), Concrete Paver (single drum over 16'), Core boring machine, Drill Rigs - tractor mounted, Elevator - as material hoist, Farm Tractor (with or without accessories), Forklift (over 10 ton with or without attachments), Front End Loader (under 4 c.y.), Grout Pump, Gunite Machine, High Pressure Boiler (15 lbs. & over), Hoist (one drum), Hydraulic Breaking Hammer (Drop Hammer), Kolman Plant Loader (screening gravel), Maintenance Grease Man, Mixer for stabilized base - self-propelled (Seaman Mixer), Monorail Machine, Parapet Concrete or Pavement Grinder, Parts Man, Post Driver (truck or tractor mounted), Post Hole Digger (truck or tractor mounted), Power Sweeper (Wayne or similar), Pump-Crete or Squeeze-Crete, Road Widener (front end of Grader or self-propelled), Roller, Self-contained hydraulic bench drill, Shell Winder (motorized), Skid steer (Bobcat type loader), Snorkel (overhead arms), Snowblower control man, Tractor (with or without accessories), Trenching Machine (digging capacity of 4 ft. or less), Tugger Hoist, Vacuum Machine (self-propelled or mounted), Vibro Tamp, Well Drill / Well Point System (Submersible pumps when used in lieu of Well Point System), Winch (Motor driven), Winch Cat, Winch Truck.

CLASS C: Compressor (up to 500 cfm), Concrete Paver or Mixer (under 16'), Concrete Pavement Spreaders & Finishers (not automated), Conveyor (over 12 ft), Electric Submersible Pump (4" and over), Fine Grade Machine (not automated), Fireman, Forklift ("with or without" attachments, 10 ton and under), Form Tamper, Generator (2,500 watts and over), Hydraulic Pump, Mechanical Heaters (More than two (2) Mechanical Heaters or any Mechanical Heater or Heaters whose combined output exceeds 640,000 BTU per hour (manufacturer's rating) plus one self-contained heating unit - i.e. Sundog or Air Heat type - New Holland Hay Dryer type excluded), Mulching Machine, Oiler, Power Driven Welding Machine (300 amp and over, other than all electric. One Welding Machine under 300 amp will not require an engineer unless in a battery), Power Heaterman (hay dryer), Pumps (water and trash), Revinus Widener (road widener), Single Light Plant, Steam Cleaner or Jenny.

Per hour: 07/01/2025

Building	
Class A1*	\$ 49.61
Class A	48.11
Class B	45.99
Class C	41.77

Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

(*) TONNAGE PREMIUMS:

All cranes up to 64 ton capacity - A1 rate
All cranes 65 ton to 110 ton capacity - A1 rate plus \$ 1.50
All cranes 111 ton to 199 ton capacity - A1 rate plus \$ 2.00
All cranes 200 ton to 399 ton capacity - A1 rate plus \$ 3.00
All cranes 400 ton to 599 ton capacity - A1 rate plus \$ 4.00
All cranes 600 ton to 799 ton capacity - A1 rate plus \$ 5.00
All cranes 800 ton to 999 ton capacity - A1 rate plus \$ 6.00
All cranes 1000 ton capacity and over - A1 rate plus \$ 7.00

(**) Tower Cranes - A1 rate plus \$2.50 (no tonnage premiums apply)

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 32.12

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.

REGISTERED APPRENTICES

WAGES per hour: One thousand hour terms at the following percentage of Journeyworker's CLASS A wage:

- 1st: 60%
- 2nd: 65%
- 3rd: 70%
- 4th: 80%

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:

07/01/2025

All terms: \$ 32.05

6-158-545b.s

Operating Engineer - Heavy&Highway

12/01/2025

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 6

ENTIRE COUNTIES

Cayuga, Cortland, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Seneca, St. Lawrence, Tompkins

WAGES

NOTE:

---In the event that equipment listed below is operated by robotic control, the classification covering the operation will be the same as if manually operated.

---If a second employee is required by the employer for operation of any covered machine, they shall be an Engineer Class C.

CLASS A1*: All Cranes that require a NYS Crane License (Boom Truck, Cherry Picker, Derrick, Dragline, Overhead Crane (Gantry or Straddle Type), Pile Driver, Tower Cranes (including self-erecting)**, Truck Crane).

CLASS 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); Blacktop Roller; Bull Dozer being operated with active GPS; Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Concrete Curb Machine (self-propelled, slipform); Concrete Pump; Cranes - listed in A1 that do not require a NYS Crane License; Directional Boring/Drilling Machine; Dredge; Dual Drum Paver; Excavator (all purpose-hydraulic, Gradall or similar); Front End Loader (4 cu. yd. & 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); Profiler/Milling Machine (over 105 h.p.); Power Grader; Quad 9; Quarry Master (or equivalent); Rotating Telehandler; Scraper (including challenger type); Shovel; Side Boom; Slip Form Paver; Tractor Drawn Belt-Type Loader; Truck or Trailer Mounted Chipper (self-feeder); Tug Operator (manned rented equipment excluded); Tunnel Shovel.

CLASS B: Backhoe (tractor mounted, rubber tired); Bituminous Recycler Machine; Bituminous Spreader and Mixer; Blacktop Plant (non-automated); Blast or Rotary Drill (truck or tractor mounted); Boring Machine; Bridge Deck Finishing Machine; Brokk; Cage Hoist; Central Mix Plant (non-automated) and All Concrete Batching Plants; Concrete Paver (over 16'); Crawler Drill (self-contained); Crusher; Diesel Power Unit; Drill Rigs (truck or tractor mounted); Front End Loader (under 4 cu. yd.); Greaseman - Lubrication Engineer; HiPressure Boiler (15 lbs & over); Hoist (one drum); Hydro-Axe; Kolman Plant Loader & similar type loaders; Locomotive; Material Handling Knuckle Boom; Mini Excavators (under 18,000 lbs.); Mixer (for stabilized base, self-propelled); Monorail Machine; Profiler/Milling Machine (105 h.p. and under); Plant Engineer; Prentice Loader; Pug Mill; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above subgrade, See Class A for Blacktop Roller); 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 Saws (ride-on, any size or type); Welder; Winch and Winch Cat; Work Boat Operator including L.C.M.'s.

CLASS C: "A" Frame Winch Hoist (On Truck); Aggregate Plant; Articulated Heavy Hauler; Asphalt or Concrete Grooving Machine (ride-on); Ballast Regulator (ride-on); Bituminous Heater (self-propelled); Boat (powered); Boiler (used in conjunction with production); Cement & Bin Operator; Compressors***; Concrete Pavement Spreader and Finisher; Concrete Paver or Mixer (16' & under); Concrete Saw (self-propelled); Conveyor; Deck Hand; Directional Boring/Drilling Machine Locator; Drill (Core); Drill (Well); Dust Collectors***; Electric Pump When Used in Conjunction with Well Point System; Farm Tractor with accessories; Fine Grade Machine; Fireman; Forklift; Form Tamper; Generators***; Grout Pump; Gunite Machine; Hammers (hydraulic self-propelled); Heaters***; Hydra-Spiker (ride-on); Hydraulic Pump (jacking system); Hydro-Blaster (water); Light Plants***; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Post Hole Digger (excluding hand-held); Post Driver; Power Broom (towed); Power Heaterman; Power Sweeper; Pumps***; Revinius Widener; Roller (subgrade & fill); Scarifier (ride-on); Shell Winder; Skid Steer Loader (Bobcat or similar, including all attachments); Span Saw (ride-on); Steam Cleaner; Tamper (ride-on); Tie Extractor (ride-on); Tie Handlers (ride-on); Tie Inserters (ride-on); Tie Spacers (ride-on); Tire Repair; Track Liner (ride-on); Tractor; Tractor (with towed accessories); Vacuum Machine (self-propelled); Vibratory Compactor; Vibro Tamp; Welding Machines***; Well Point.

***CLASS C NOTE: Considered Hands-Off (unmanned). Includes only operation and maintenance of the equipment.

Per hour: 07/01/2025

H/H	
CLASS A1*	\$ 58.85
CLASS A	55.85
CLASS B	54.97
CLASS C	51.69

(*) TONNAGE PREMIUMS:

- All cranes up to 64 ton capacity - A1 rate
- All cranes 65 ton to 110 ton capacity - A1 rate plus \$ 1.50
- All cranes 111 ton to 199 ton capacity- A1 rate plus \$ 2.00
- All cranes 200 ton to 399 ton capacity - A1 rate plus \$ 3.00
- All cranes 400 ton to 599 ton capacity - A1 rate plus \$ 4.00
- All cranes 600 ton to 799 ton capacity - A1 rate plus \$ 5.00
- All cranes 800 ton to 999 ton capacity - A1 rate plus \$ 6.00
- All cranes 1000 ton capacity and over - A1 rate plus \$ 7.00

(**) Tower Cranes - A1 rate plus \$3.00 (no tonnage premiums apply)

- Cranes in Luffer Configuration - A1 rate plus \$ 5.00
- Cranes with external ballast (Tray or Wagon) - A1 rate plus \$ 5.00

Additional \$2.50 per hour for hazardous waste removal work on a State and/or Federally designated waste site which requires employees to wear Level C or above forms of personal protection.

SHIFT WORK

SINGLE IRREGULAR WORK SHIFT: 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.

SUPPLEMENTAL BENEFITS

Per hour: 07/01/2025

Journeyworker \$ 33.55

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. If an employee works on this Monday, they shall be compensated at double time plus the holiday pay (triple time). If a holiday falls on a Saturday, employees who work a Saturday Holiday shall be paid double time plus the holiday pay.

REGISTERED APPRENTICES

WAGES per hour: One thousand hour terms at the following percentage of Journeyworker's CLASS B wage.

- 1st: 60%
- 2nd: 70%
- 3rd: 80%
- 4th: 90%

Additional \$2.50 per hour for hazardous waste removal work on a State and/or Federally designated waste site which requires employees to wear Level C or above forms of personal protection.

SUPPLEMENTAL BENEFITS per hour: Same as Journeyworker

6-158-545h

Operating Engineer - Survey Crew

12/01/2025

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, 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.

07/01/2025

Party Chief	\$ 52.91
Instrument Person	48.67
Rod Person	36.29
Additional \$3.00/hr. for Tunnel Work	
Additional \$2.50/hr. for Hazardous Work Site	

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 30.10
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OVERTIME PAY

See (B, E, P, *X) on OVERTIME PAGE

*Note: \$25.10/Hr. Only for "ALL" premium hours paid when worked.

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:

07/01/2025

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 21.88 / PHP \$18.03
1001-2000	24.90 / " 20.45
2001-3000	27.93/ " 22.93

NOTE: PHP is premium hours paid when worked.

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer

12/01/2025

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, 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 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.

07/01/2025

Party Chief	\$ 52.91
Instrument Person	48.67
Rod Person	36.29

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	\$ 30.10
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OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE
 *Note: \$25.10/Hr. Only for "ALL" premium hours paid when worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
 Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms based on percentage of Rod Persons Wage:

07/01/2025

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 21.88 / PHP \$18.03
1001-2000	\$ 24.90 / " 20.45
2001-3000	\$ 27.93 / " 22.93

NOTE: PHP is premium hours paid when worked.

12-158-545 DCE

Operating Engineer - Tunnel

12/01/2025

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, Schoenectady, 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 Poughkeepsie, 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; Vacuum Machine (mounted or towed); 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 Inserter (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); Revinus Widener; Shell Winder; Steam Cleaner; Tractor.

Per hour: 07/01/2025

CLASS A	\$ 58.44
CLASS B	57.22
CLASS C	54.43
CLASS D	51.42

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.

CRANES:

Crane 1: All cranes, including self-erecting.

Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks.

Crane 1	\$ 62.44
Crane 2	61.44
Crane 3	60.44

SUPPLEMENTAL BENEFITS

Per hour:	\$ 25.90
	+ 10.10*

* This portion of the benefits subject to SAME PREMIUM 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

NOTE: If a holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

WAGES:(1000) hours terms at the following percentage of Journeyworker's Class B wage.

1st term	60%
2nd term	65%
3rd term	70%
4th term	75%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyworker

7-158-832TL.

Painter

12/01/2025

JOB DESCRIPTION Painter

DISTRICT 6

ENTIRE COUNTIES

Jefferson, St. Lawrence

PARTIAL COUNTIES

Lewis: Only the townships of Diana, Croghan, New Bremen, Watson, Greig, Martinsburg, Lowville, Denmark, Harrisburg, Montague, and Pinckney.

WAGES

Per hour:	07/01/2025	05/01/2026
		Additional
Painter/Decorator**	\$ 29.90	\$ 2.00*
Taper/Drywall Finisher Paper Hanging/Wallcoverings	\$ 30.90	2.00*

* To be allocated at a later date.

**Steel, hazardous work, working with picks, bosun chair, window jacks, swing stage, safety belts, spray painting, parking lot and highway striping, steam cleaning, sandblasting, safe-way staging over fifteen (15) feet in height, any chemicals or epoxy applications, hydro water blasting, steeplejack work, two (2) component block filler, encapsulation or abatement of lead or asbestos, and metalizing.

NOTE - SEE BRIDGE PAINTER RATES FOR BRIDGES, TANKS, OR TUNNELS.

SHIFT WORK

FOR ANY SHIFT WHICH STARTS PRIOR TO 6:00 AM OR AFTER 3:00 PM, ALL EMPLOYEES WHO WORK A SINGLE IRREGULAR WORK SHIFT ON GOVERNMENTAL MANDATED WORK SHALL BE PAID AN ADDITIONAL \$2.00 PER HOUR ABOVE THE APPLICABLE WAGE SCALE.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 25.66

OVERTIME PAY

See (B, *E2, F, R) on OVERTIME PAGE

* NOTE - On exterior work only.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: A holiday that falls on a Saturday will be celebrated on the preceding Friday. A holiday that falls on a Sunday will be celebrated on the following Monday.

REGISTERED APPRENTICES

WAGES per hour:

Painter/Decorator/Wallcovering: 750 hour terms at the following wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 18.00	\$ 18.50	\$ 19.00	\$ 19.50	\$ 20.00	\$ 21.00	\$ 22.00	\$ 23.00

Drywall Taper/ Finisher: 750 hour terms at the following wage rate:

1st	2nd	3rd	4th	5th	6th
\$ 20.00	\$ 20.50	\$ 21.00	\$ 21.50	\$ 22.00	\$ 23.00

SUPPLEMENTAL BENEFITS per hour:

Painter/Decorator/Wallcovering:

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 6.50	\$ 6.50	\$ 7.50	\$ 7.50	\$ 10.50	\$ 10.50	\$ 13.00	\$ 13.00

Drywall Taper/ Finisher:

1st	2nd	3rd	4th	5th	6th
-----	-----	-----	-----	-----	-----

\$ 7.50 \$ 7.50 \$ 7.50 \$ 10.00 \$ 10.00 \$ 12.00

6-38.W

Painter **12/01/2025**

JOB DESCRIPTION Painter

DISTRICT 6

ENTIRE COUNTIES

Cayuga, Herkimer, Madison, Oneida, Onondaga, Seneca

PARTIAL COUNTIES

Lewis: Only the Townships of High Market, Lewis, Leyden, Lyonsdale, Osceola, Turin and West Turin.

Ontario: The City and Township of Geneva.

Oswego: Only the Townships of Amboy, Constantia, Williamstown and Oneida Lake.

WAGES

Per hour:	07/01/2025	05/01/2026
		Additional
Basic Rate (Brush & Roll)	\$ 28.32	\$ 1.85*
Sign Painting	28.32	1.85*
Lead Based Paint Abatement	28.32	1.85*
Drywall Taper/ Finisher	29.32	1.85*
Wallcovering	29.32	1.85*
Drywall Machine Operator	29.82	1.85*
Spray	28.82	1.85*
Parking Lot, Hwy Striping	28.82	1.85*
Epoxy (Brush-Roller)	28.82	1.85*
Epoxy (Spray)	28.82	1.85*
Sandblasting (Operator)	28.82	1.85*
Boatswain Chair	28.82	1.85*
Swing Scaffold	28.82	1.85*
Structural Steel	28.82	1.85*
(except bridges, tanks, tunnel)		
Coal Tar epoxy	29.82	1.85*
Asbestos Encapsulation	30.52	1.85*

* To be allocated at a later date.

NOTE - SEE BRIDGE PAINTER RATES FOR BRIDGES, TANKS, OR TUNNELS.

SHIFT WORK

FOR ANY SHIFT WHICH STARTS PRIOR TO 6:00 AM OR AFTER 3:00 PM, ALL EMPLOYEES WHO WORK A SINGLE IRREGULAR WORK SHIFT ON GOVERNMENTAL MANDATED WORK SHALL BE PAID AN ADDITIONAL \$2.00 PER HOUR ABOVE THE APPLICABLE WAGE SCALE.

SUPPLEMENTAL BENEFITS

Per hour:	
Journeyworker	\$ 27.20

OVERTIME PAY

See (B, *E2, F, R) on OVERTIME PAGE

* NOTE - On exterior work only.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
 Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: A holiday that falls on a Saturday will be celebrated on the preceding Friday. A holiday that falls on a Sunday will be celebrated on the following Monday.

REGISTERED APPRENTICES

WAGES per hour:

Painter/Decorator: 750 hour terms at the following wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 18.00	\$ 18.50	\$ 19.00	\$ 19.50	\$ 20.00	\$ 21.00	\$ 22.00	\$ 23.00

Drywall Taper/ Finisher: 750 hour terms at the following wage rate:

1st	2nd	3rd	4th	5th	6th
\$ 20.00	\$ 20.50	\$ 21.00	\$ 21.50	\$ 22.00	\$ 23.00

SUPPLEMENTAL BENEFITS per hour:

Painter/Decorator:							
1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 6.50	\$ 6.50	\$ 7.50	\$ 7.50	\$ 10.50	\$ 10.50	\$ 13.00	\$ 13.00

Drywall Taper/ Finisher:					
1st	2nd	3rd	4th	5th	6th

\$ 7.50 \$ 7.50 \$ 7.50 \$ 10.00 \$ 10.00 \$ 12.00

6-31

Painter **12/01/2025**

JOB DESCRIPTION Painter

DISTRICT 3

ENTIRE COUNTIES

Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Cortland, Delaware, Erie, Genesee, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Wayne, Wyoming, Yates

WAGES

Per hour:	07/01/2025	05/01/2026
		Additional
Bridge	\$ 46.19	\$ 2.50
Tunnel	46.19	
Tank*	44.19	

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.

*Tank rate applies to indoor and outdoor tanks, tank towers, standpipes, digesters, waste water treatment tanks, chlorinator tanks, etc. Covers all types of tanks including but not limited to steel tanks, concrete tanks, fiberglass tanks, etc.

SHIFT WORK

Note an additional \$1.50 per hour is required when the contracting agency or project specification requires any shift to start prior to 6:00am or after 12:00 noon.

SUPPLEMENTAL BENEFITS

Per hour: \$ 31.51

OVERTIME PAY

Exterior work only See (B, E2, E4, F, R) on OVERTIME PAGE.
 All other work See (B, F, R) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
 Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following wage:

1st	2nd	3rd	4th	5th	6th
\$ 24.00	\$ 26.00	\$ 28.00	\$ 30.00	\$ 34.00	\$ 38.00

Supplemental benefits per hour:

1st	2nd	3rd	4th	5th	6th
\$ 6.60	\$ 6.95	\$ 7.30	\$ 7.65	\$ 8.00	\$ 8.35

3-4-Bridge, Tunnel, Tank

Painter - Metal Polisher **12/01/2025**

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

	07/01/2025
Metal Polisher	\$ 40.33
Metal Polisher*	41.43
Metal Polisher**	44.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2025

Journeyworker:
 All classification \$ 13.44

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, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:
 One (1) year term at the following wage rates:

07/01/2025

1st year	\$ 20.17
2nd year	22.18
3rd year	24.20
1st year*	\$ 20.56
2nd year*	22.62
3rd year*	24.74
1st year**	\$ 22.67
2nd year**	24.68
3rd year**	26.70

*Note: Applies on New Construction & complete renovation
 ** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:
 Per hour:

1st year	\$ 8.94
2nd year	8.94
3rd year	8.94

8-8A/28A-MP

Plumber **12/01/2025**

JOB DESCRIPTION Plumber

DISTRICT 6

ENTIRE COUNTIES

Jefferson, St. Lawrence

PARTIAL COUNTIES

Franklin: Only the Village of Hogansburg and the St. Regis Indian Reservation.
 Lewis: Entire County with the exception of the Townships of Lyonsdale, West Turin, Leyden and Lewis.

WAGES

Per hour:	07/01/2025	05/01/2026
		Additional
Plumber, Steamfitter, Pipefitter, Welder, HVAC, Refrigeration.	\$ 42.82	\$ 4.75*

* To be allocated at a later date.

SHIFT WORK

SINGLE IRREGULAR WORK SHIFT: Additional 15% premium added to the wages above for a single irregular work shift beginning between 3:30P and 7:00A.

SUPPLEMENTAL BENEFITS

Per hour:
 Journeyworker \$ 30.31*

*NOTE: \$ 18.56 of the supplemental benefits are paid at the same premium as shown for the overtime work performed at the energy producing facilities whose primary function is the sale of power or the production of fuel. This also includes semi-conductor manufacturer and/or fabrication plants.

OVERTIME PAY

Time and one half for the 9th & 10th hours Monday thru Friday and first 10 hours on Saturday. All other overtime hours are double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
 Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: When a holiday falls on a Saturday, the holiday will be observed on the preceding Friday. If a holiday falls on a Sunday, the holiday will be observed on the following Monday.

REGISTERED APPRENTICES

WAGES per hour: One year terms at the following percentage of Journeyworker's wage.

1st	2nd	3rd	4th	5th
55%	60%	70%	75%	85%

SUPPLEMENTAL BENEFITS per hour*:

1st	\$ 21.04
2nd	25.67
3rd	28.46
4th/5th	30.31

*NOTE: Below is the portion of supplemental benefits paid at overtime premium for work performed at energy producing facilities whose primary function is the sale of power or the production of fuel. This also includes semi-conductor manufacturer and/or fabrication plants.

1st	\$ 9.29
2nd	13.92
3rd	16.71
4th/5th	18.56

6-81Wtr

Plumber

12/01/2025

JOB DESCRIPTION Plumber

DISTRICT 7

ENTIRE COUNTIES

Herkimer, Oneida

PARTIAL COUNTIES

Hamilton: Only the Town of Inlet.

Lewis: Towns of Lewis, Leyden, Lyonsdale, and West Turin.

Madison: Towns of Brookfield, Eaton, Fenner, Hamilton, Lebanon, Lenox, Lincoln, Madison, Nelson, Oneida, Smithfield, and Stockbridge.

Otsego: Towns of Cherry Valley, Exeter, Middlefield, Otsego, Plainfield, Richfield, Roseboom, and Springfield.

WAGES

Per hour:	07/01/2025	05/01/2026
		Additional
Plumber	\$ 45.93	\$ 3.45*
Steamfitter	45.93	3.45*

* To be allocated at a later date

SHIFT WORK

Agency-mandated shift operations:

1. Shift work shall start no earlier than 6AM Monday and will conclude no later than 9AM Saturday (overtime premiums applicable after 8 hours in a shift).
2. Single irregular shiftwork, less than 3 consecutive days will be paid at the rate of time and one-half of the regular hourly rate.
3. 3 consecutive work days or more:
 - First Shift - Regular hourly rate.
 - Second Shift - Regular hourly rate plus 12%.
 - Third Shift - Regular hourly rate plus 18%.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 15.15
	+ 18.67**

** This portion of the benefit is subject to the SAME PREMIUM as shown for overtime on projects over \$100 million in total construction cost (including engineering & architecture).

OVERTIME PAY

See (B, E, Q, *V) on OVERTIME PAGE

*Portion of supplemental benefits subject to V code when project cost is over \$100 million (including engineering & architecture).

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on Sunday, it will be observed the following day. If a holiday falls on Saturday, it will be observed that day unless so determined by the Federal Government to be celebrated on a different day.

REGISTERED APPRENTICES

WAGES: Yearly terms at the following percentages of Journeyworker's wage.

1st	2nd	3rd	4th	5th
50%	55%	60%	70%	85%

SUPPLEMENTAL BENEFITS per hour:

1st Term: \$ 15.15
 + 8.92**

All others: \$ 15.15
 + 14.21**

** This portion of the benefit is subject to the SAME PREMIUM as shown for overtime on projects over \$100 million in total construction cost (including engineering & architecture).

7-112n-SF

Roofer

12/01/2025

JOB DESCRIPTION Roofer

DISTRICT 6

ENTIRE COUNTIES

Cayuga, Cortland, Franklin, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Seneca, St. Lawrence

WAGES

Per hour:	07/01/2025	06/01/2026	06/01/2027
		Additional	Additional
Roofer, Waterproofer	\$ 35.80	\$ 2.00*	\$ 2.00*

* To be allocated at a later date.

NOTE - Does not include metal roof flashings, gravel stop, or metal roofing; See Sheetmetal Worker wage schedule.

Additional per hour:

Green Roofing**	\$ 0.25
Pitch Removal & Appl.	1.50
Asbestos Abatement	1.50

** Green Roofing is any component of green technology or living roof above the roof membrane including, but not limited to, the fabric, dirt and plantings.

SHIFT WORK

WHEN MANDATED BY THE OWNER OR CONTRACTING AGENCY, THERE IS AN ADDITIONAL PREMIUM OF \$4.00/HR FOR HOURS WORKED BEFORE 5:30AM AND AFTER 5:30PM.

SUPPLEMENTAL BENEFITS

Per hour:
 Journeyworker \$ 26.30

Additional contribution 0.75
 on any Asbestos Abatement work

OVERTIME PAY

See (B, E, E2*, Q) on OVERTIME PAGE

*NOTE - If a holiday falls in that week and 32 hours were worked, Saturday will be paid at 1 1/2 times the rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: When any of these holidays falls on Sunday, the following day shall be observed as a holiday.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the Journeyworker's wage:

1st term (0 to 999)	65%
2nd term (1000 to 1999)	70%
3rd term (2000 to 2999)	75%
4th term (3000 to 3999)	85%

Additional per hour:

Green Roofing**	\$ 0.25
Pitch Removal & Appl.	1.50
Asbestos Abatement	1.50

SUPPLEMENTAL BENEFITS per hour:

1st term	\$ 19.93
2nd term	21.85
3rd term	25.30
4th term	26.30

Additional contribution
 on any Asbestos Abatement work \$ 0.75

6-195

Sheetmetal Worker

12/01/2025

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 6

ENTIRE COUNTIES

Cayuga, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence

WAGES

Per hour:	07/01/2025	11/01/2025	05/01/2026 Additional	05/01/2027 Additional
Sheetmetal Worker:				
** (under \$10 million)	\$ 36.29	\$ 37.54	\$ 3.25*	\$ 3.25*
** (over \$10 million)	\$ 42.29	\$ 43.54	3.25*	3.25*

* To be allocated at a later date.

**For total cost of Sheetmetal contract only.

TO INCLUDE METAL ROOF FLASHINGS, GRAVEL STOP, AND METAL STANDING SEAM ROOFING.

SUPPLEMENTAL BENEFITS

Per hour:	07/01/2025	11/01/2025
Journeyworker	\$ 23.31	\$ 23.56

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
 Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on a 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: One year terms at the following percentage of the Journeyworker's wage.

1st	2nd	3rd	4th	5th
55%	60%	70%	75%	85%

SUPPLEMENTAL BENEFITS per hour:

	1st	2nd	3rd	4th	5th
07/01/2025	\$ 14.84	\$ 15.45	\$ 16.54	\$ 18.18	\$ 19.27
11/01/2025	\$ 15.11	\$ 15.70	\$ 16.79	\$ 18.43	\$ 19.52

6-58

Sprinkler Fitter **12/01/2025**

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 07/01/2025

Sprinkler Fitter \$ 45.06

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker \$ 29.41

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 wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 23.28	\$ 25.98	\$ 28.15	\$ 30.31	\$ 31.94	\$ 34.64	\$ 36.81	\$ 38.97	\$ 41.14	\$ 43.30

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 9.57	\$ 9.57	\$ 21.49	\$ 21.49	\$ 21.74	\$ 21.74	\$ 21.74	\$ 21.74	\$ 21.74	\$ 21.74

1-669

Teamster - Building **12/01/2025**

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 Johnsbury.

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 & 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: 07/01/2025

GROUP #1	\$ 30.72
GROUP #2	31.72
GROUP #3	31.82
GROUP #4	30.98

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 23.34

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

Teamster - Building

12/01/2025

JOB DESCRIPTION Teamster - Building

DISTRICT 1

ENTIRE COUNTIES

Hamilton, Herkimer, Oneida

PARTIAL COUNTIES

Chenango: Entire county except the Townships of Afton, Bainbridge, Coventry, Greene, Guilford, Oxford and Smithville.
Lewis: Only the Township of Grieg, Lewis, Leyden, Lowville, Lyonsdale, Martinsburg, Turin, West Turin and Watson.
Madison: Only the Townships of Brookfield, Eaton, Hamilton, Lebanon, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida
Otsego: Entire county EXCEPT Townships of Butternuts, Laurens, Maryland, Milford, Morris, Oneonta, Otego, Unidilla and Worchester.

WAGES

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers,
dump trucks, pick-ups, panel, water trucks, fuel trucks on the site
(including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

WAGES per hour

07/01/2025

Group A \$ 34.65

Group B 34.95

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker \$ 29.56

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.

1-294z2

Teamster - Heavy&Highway

12/01/2025

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

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: 07/01/2025

GROUP #1 \$ 32.78
 GROUP #2 33.00

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:

Journeyworker \$ 25.72

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 a Sunday, it will be celebrated on Monday.

7-687

Teamster - Heavy&Highway

12/01/2025

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Herkimer, Montgomery, Oneida, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Chenango: Entire county except the Townships of Afton, Bainbridge, Coventry, Greene, Guilford, Oxford and Smithville.

Lewis: Only the Township of Grieg, Lewis, Leyden, Lowville, Lyonsdale, Martinsburg, Turin, West Turin and Watson.

Madison: Only the Townships of Brookfield, Eaton, Hamilton, Lebanon, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida

Otsego: Entire county EXCEPT Townships of Butternuts, Laurens, Maryland, Milford, Morris, Oneonta, Otego, Unidilla and Worchester.

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Luzerne, Caldwell (Lake George), and Queensbury.

WAGES

GROUP #1:

Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axel Dump Trucks, Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers.

GROUP #2:

Tandems and Batch Trucks, Mechanics, Dispatcher.

GROUP #3:

Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

GROUP #4:

Specialized Earth Moving Equipment, Euclid type, or similar off-highway, where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck.

GROUP #5:

Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

WAGES per hour	07/01/2025	07/01/2026	07/01/2027
Group #1	\$ 41.78	\$43.79	\$45.79
Group #2	41.84	43.85	45.85
Group #3	41.93	43.94	45.95
Group #4	42.07	44.09	46.10
Group #5	42.24	44.26	46.28

Hazardous waste projects that require a Level C or greater protection shall be paid an additional \$ 1.00 per hour.

SHIFT WORK

All employees who work a single irregular work shift starting between 5pm and 1 am on governmental mandated night shifts shall be paid an additional \$2.50 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 29.87 \$ 30.77 \$ 31.64

+\$1.00 per*
hour worked

+\$1.00 per*
hour worked

+\$1.00 per*
hour worked

(*) not applicable to paid holidays

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

1-294h/h

Welder

12/01/2025

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, Schuylar, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2025

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
- (B3) Time and one half of the hourly rate after 40 straight 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) 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

(29) Juneteenth

**New York State Department of Labor - Bureau of Public Work
State Office Building Campus
Building 12 - Room 130
Albany, New York 12226**

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

Fuel Delivery

Guards, Watchmen

Janitors, Porters, Cleaners,
Elevator Operators

Moving furniture and
equipment

Trash and refuse removal

Window cleaners

Other (Describe)

9. Does this project comply 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://apps.labor.ny.gov/EDList/searchPage.do>

For inquiries please call 518-457-5589.

NYS DOL Bureau of Public Work Debarment List 12/05/2025

Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL	****5754	0369 CONTRACTORS, LLC		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL	****5784	A.J.M. TRUCKING, INC.		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	DOL		AKHLAQ OULAKH		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		ALEXANDER DELISA		411 THEODORE FREMND SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	NYC		ALL COUNTY SEWER & DRAIN, INC.		7 GREENFIELD DR WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL	****8387	AMERICAN PAVING & MASONRY, CORP.		8 FOREST AVE GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL	****8654	AMERICAN PAVING, INC.		8 FORREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO GARCIA		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL		ANGELO STANCO		8 FOREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL		ANGELO TONDO		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	****4231	ANKER'S ELECTRIC SERVICE, INC.		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL		ANTHONY CASALE		20 HEATHER RIDGE ROAD TROY NY 12180	05/20/2025	05/20/2030
DOL	DOL		ANTHONY MONGELLI		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	DOL	****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	NYC	****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DA	****2404	BJA RENOVATION, CORP		33 DOLLARD DR NORTH BABYLON NY 11703	03/19/2025	03/19/2030
DOL	DOL	****5078	BLACK RIVER TREE REMOVAL, LLC		29807 ANDREWS ROAD BLACK RIVER NY 13032	10/17/2023	10/17/2028
DOL	DOL		C.M.C CONTRACTORS, INC.		500 WEST PUTNAM AVE SUITE 400GREENWICH CT 06830	09/03/2025	09/03/2030
DOL	DOL	****5161	CALADRI DEVELOPMENT CORP.		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	****3391	CALI ENTERPRISES, INC.		1223 PARK STREET PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL		CARLOS F. ESCOBAR		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		CARLOS FIGUEROA		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL	****4155	CASA BUILDERS, INC.	FRIEDLANDER CONSTRUCTI ON	64 N PUTT CONNERS ROAD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	AG	****7247	CENTURY CONCRETE CORP		2375 RAYNOR ST RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	****2292	CHAMPION MAINTENANCE CONTRACTORS, INC.		211 SOUTH RIDGE STREET RYE BROOK NY 10573	09/03/2025	09/03/2030
DOL	NYC	****2117	CHARAN ELECTRICAL ENTERPRISES		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DOL		CHARLES CASALE		55 MAIN AVENUE WYNANTSKILL NY 12198	05/20/2025	05/20/2030
DOL	DOL		CHARLES CASALE		55 MAIN AVENUE WYNANTSKILL NY 12198	05/20/2025	05/20/2030
DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL		CHRISTOPHER PEROSI		5507 NESCONSET HIGHWAY MT. SINAI NY 11766	07/17/2025	07/17/2030
DOL	DOL	****2281	CORRAO TRUCKING, INC.		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL		CRAIG JOHANSEN		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL	****3228	CROSS-COUNTY LANDSCAPING AND TREE SERVICE, INC.	ROCKLAND TREE SERVICE	26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026

NYS DOL Bureau of Public Work Debarment List 12/05/2025

Article 8

DOL	DOL	****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DANIEL DELISA		211 SOUTH RIDGE STREET RYE BROOK NY 10573	09/03/2025	09/03/2030
DOL	DOL		DANIEL ROBERT MCNALLY		7 GREENFIELD DRIVE WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL		DARWIN PEGUESE		6400 BALTIMORE NATIONAL SUITE 602CANTONSVILLE NY 21228	10/24/2024	10/24/2029
DOL	DOL		DAVID FRIEDLANDER		64 NORTH PUTT CORNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	DOL		DENISE NAGLE		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL		DINA TAYLOR		64 N PUTT CONNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	AG		EDWIN HUTZLER		23 NORTH HOWELLS RD BELLPORT NY 11713	08/04/2021	08/04/2026
DOL	DA		EDWIN HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	****2337	EGL DRAINAGE SOLUTION & REPAIRS LLC		5507 NESCONSET HIGHWAY MT. SINAI NY 11766	07/17/2025	07/17/2030
DOL	DOL	****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL		EMIL KISZKO		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	****3298	EMJACK CONSTRUCTION CORP.		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	****3298	EMJACK CONSTRUCTION LLC		4192 SIR ANDREW CIRCLE DOYLESTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		EUGENIUSZ "GINO" KUCHAR		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DA		FREDERICK HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	****2998	G.E.M. AMERICAN CONSTRUCTION CORP.		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DA		GIOVANNA TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		GIOVANNI NAPOLITANO		2501 BAYVIEW AVENUE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DA	****0213	GORILLA CONTRACTING GROUP, LLC		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DA	****4760	GTX CONSTRUCTION ASSOCIATES, CORP		2501 BAYVIEW AVE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DOL		HENRY WICKE A/K/A HENRY WICKE, JR.		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	****6961	HUNTER ELEVATOR COMPANY, INC.		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL	****2397	ISLAND BREEZE MARINE, INC.		6400 BALTIMORE NATIONAL CANTONSVILLE MD 21228	10/24/2024	10/24/2029
DOL	DOL	****5010	J. LINDSLEY ENTERPRISE, LLC		1002 STATE ROUTE 176 FULTON NY 13069	07/30/2025	07/30/2030
DOL	DOL	****0241	J. LINDSLEY ROOFING, LLC		211 NORTH 2ND STREET FULTON NY 13069	07/30/2025	07/30/2030
DOL	DOL	****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		J.M.J CONSTRUCTION		151 OSTRANDER AVENUE SYRACUSE NY 13205	11/21/2022	11/21/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027

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DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	12/12/2022	12/12/2027
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		JAMES LINDSLEY		211 NORTH 2ND STREET FULTON NY 13069	07/30/2025	07/30/2030
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****7993	JBS DIRT, INC.		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****2435	JEFFEL D. JOHNSON	JMJ7 AND SON	5553 CAIRNSTRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JEFFEL JOHNSON ELITE CARPENTER REMODEL AND CONSTRUCTION		C2 EVERGREEN CIRCLE LIVERPOOL NY 13090	11/21/2022	11/21/2027
DOL	DOL	*****2435	JEFFREY M. JOHNSON	JMJ7 AND SON	5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JENNIFER LINDSLEY		211 NORTH 2ND STREET FULTON NY 13069	07/30/2025	07/30/2030
DOL	DOL		JERRY DASTON		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		JMJ7 & SON CONSTRUCTION, LLC		5553 CAIRNS TRAIL LIVERPOOL NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 AND SONS CONTRACTORS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS		7014 13TH AVENUE BROOKLYN NY 11228	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS AND SONS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS, LLC		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JOHN MARKOVIC		47 MANDON TERRACE HAWTHORN NJ 07506	03/29/2021	03/29/2026
DOL	DOL		JOHN NAGLE A/K/A JOHN NAGLE, JR.		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		JONATHAN DELISA		411 THEODORE FREMND AVE SUITE 206 RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		JORGE FIGUEROA		411 THEODORE FRMND AVE SUITE 206 RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DA		JOSEPH DEMASCO		33 DOLLARD DRIVE NORTH BABYLON NY 11703	03/19/2025	03/19/2030
DOL	DOL		JOSEPH HALL		937 US ROUTE 11 CENTRAL SQUARE NY 13036	10/21/2024	10/21/2029
DOL	DOL	*****2271	JOSEPH HALL COMPANIES LLC		937 US ROUTE 11 CENTRAL SQUARE NY 13036	10/21/2024	10/21/2029
DOL	DOL		JOSEPH K. SALERNO		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL		JOSEPH K. SALERNO II		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027

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DOL	DOL	****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL	****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		JRN CONSTRUCTION CO, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DOL	****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KEAN INDUSTRIES, LLC		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL	****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KEVIN FUNEZ URBINA A/K/A KEVIN FUNEZ		1009 LYNDALE AVE TRENTON NJ 08629	12/16/2024	12/16/2029
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	****8760	KJ&J CONSTRUCTION, LLC		1009 LYNDALE AVE TRENTON NJ 08629	12/16/2024	12/16/2029
DOL	DOL		KMA GROUP II, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL	****1833	KMA GROUP INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KMA INSULATION, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KRIN HEINEMANN		2345 ROUTE 52, SUITE 2N HOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	NYC		KULWANT S. DEOL		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DA	****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL	****3716	LIGHTNIN ELECTRIC INC.		3418 NORTHERN BLVD SUITE 5-27LONG ISLAND CITY NY 11101	12/13/2024	12/13/2029
DOL	AG	****3291	LINTECH ELECTRIC, INC.		3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
DOL	DOL		LIZETTE PONCE		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		LOUIS A. CALICCHIA		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	****2196	MAINSTREAM SPECIALTIES, INC.		11 OLD TOWN RD SELKIRK NY 12158	02/02/2021	02/02/2026
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	DOL	****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028

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DOL	DOL		MOHAMMAD MIAN		8269 21ST ST BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	NYC		NASEER CHAUDHRY		2349 BRAGG STREET BROOKLYN NY 11229	04/22/2025	04/22/2030
DOL	DOL	****7790	NATIONAL BUILDING & RESTORATION CORP		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	****1797	NATIONAL CONSTRUCTION SERVICES, INC		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	NYC		NAVIT SINGH		402 JERICHO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		NELCO CONTRACTING, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DA		NICHOLAS BARNETT		33 DOLLARD DR BABYLON NY 11703	03/04/2025	03/04/2030
DOL	DOL		NICHOLAS RAO		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DA		NICHOLAS T. ANALITIS		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL		NIKOLA NTONI		3418 NORTHERN BLVD SUITE 5-27LONG ISLAND CITY NY 11101	12/13/2024	12/13/2029
DOL	NYC	****6971	NN CONSTRUCTION, INC.		2349 BRAGG STREET BROOKLYN NY 11229	04/22/2025	04/22/2030
DOL	NYC	****5643	NYC LINE CONTRACTORS, INC.		402 JERICHO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PAULINE CHAHALES		935 S LAKE BLVD MAHOPAC NY 10541	03/02/2021	03/02/2026
DOL	DOL		PETER STEVENS		11 OLD TOWN ROAD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DOL	****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL	****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL	****4772	R.W. LOBDELL CONSTRUCTION LLC		635 WEST DRYDEN ROAD FREEVILLE NY 13068	01/31/2025	01/31/2030
DOL	DOL	****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	07/11/2022	07/11/2027
DOL	DOL		ROBBYE BISSEsar		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	07/11/2022	07/11/2027
DOL	DOL		ROSA GARCIA		411 THEODORE FRMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL	****7172	RZ & AL INC.		198 RIDGE AVENUE VALLEY STREAM NY 11581	06/06/2022	06/06/2027
DOL	DOL		SAL FRESINA MASONRY CONTRACTORS, INC.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		SAL MASONRY CONTRACTORS, INC.		(SEE COMMENTS) SYRACUSE NY 13202	07/16/2021	07/16/2026
DOL	DOL	****9874	SALFREE ENTERPRISES INC		P.O BOX 14 2821 GARDNER RDPOMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		SALVATORE A FRESINA A/K/A SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DOL		SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DA	****0476	SAMCO ELECTRIC CORP.		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		SILVANO TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028

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DOL	DOL	****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	NYC	****3661	SPANIER BUILDING MAINTENANCE CORP		200 OAK DRIVE SYOSSET NY 11791	03/14/2022	03/14/2027
DOL	DOL		STANADOS KALOGELAS		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL	****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL	****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		STEVEN DELISA		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL	****3800	SUBURBAN RESTORATION CO. INC.		5-10 BANTA PLACE FAIR LAWN PLACE NJ 07410	03/29/2021	03/29/2026
DOL	DOL	****9150	SURGE INC.		8269 21ST STREET BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	DOL		SYED MUHAMMAD S. JAFRI A/K/A SHARRUKH JAFRI		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		SYED RAZA		198 RIDGE AVENUE NY 11581	06/06/2022	06/06/2027
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL	****4855	TECH INDUSTRIES LLC		20 HEATHER RIDGE ROAD TROY NY 12180	05/20/2025	05/20/2030
DOL	DOL	****9733	TERSAL CONSTRUCTION SERVICES INC		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13208	07/16/2021	07/16/2026
DOL	DOL		TERSAL CONTRACTORS, INC.		221 GARDNER RD P.O BOX 14POMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		TERSAL DEVELOPMENT CORP.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL	****2426	THE MATRUKH GROUP, INC.		4307 28TH AVE PO BOX 9082ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		THOMAS LOBDELL		635 WEST DRYDEN ROAD FREEVILLE NY 13068	01/31/2025	01/31/2030
DOL	DOL		TIMOTHY PERCY		29807 ANDREWS ROAD BLACK RIVER NY 13612	10/17/2023	10/17/2028
DOL	DA	****1050	TRI STATE CONSTRUCTION OF NY CORP.		50-39 175TH PLACE FRESH MEADOWS NY 11365	03/28/2022	03/28/2027
DOL	DA	****4106	TRIPLE H CONCRETE CORP		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	****8210	UPSTATE CONCRETE & MASONRY CONTRACTING CO INC		449 WEST MOMBASHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL		VINCENT CORRAO		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL	****8266	WILLIAM CHRIS MCCLENDON	MCCLENDON ASPHALT PAVING	1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM CHRIS MCCLENDON		1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM G. PROERFRIEDT		85 SPRUCEWOOD ROAD WEST BABYLON NY 11704	01/19/2021	01/19/2026
DOL	DOL	****5924	WILLIAM G. PROPHY, LLC	WGP CONTRACTIN G, INC.	54 PENTAQUIT AVE BAYSHORE NY 11706	01/19/2021	01/19/2026
DOL	DOL		WILLIAM SCRIVENS		4192 SIR ANDREW CIRCLE DOYELSTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL	****9494	WND CONSTRUCTION LLC		411 THEODORE FREMND AVENUE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		XENOFON EFTHIMIADIS		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028

NOTICE TO PROCEED

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		
				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. 5% X _____ Work Completed.....	\$ _____
				b. 5% 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).....	\$ _____
TOTALS					
NET CHANGE BY CHANGE ORDERS					

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)

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

<p>RECOMMENDED:</p> <p>By: _____ Engineer (if required)</p> <p>Title: _____</p> <p>Date: _____</p>	<p>ACCEPTED:</p> <p>By: _____ Owner (Authorized Signature)</p> <p>Title: _____</p> <p>Date: _____</p>	<p>ACCEPTED:</p> <p>By: _____ Contractor (Authorized Signature)</p> <p>Title: _____</p> <p>Date: _____</p>
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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: _____	By: _____	By: _____	By: _____	By: _____	By: _____
(Authorized signature)	Owner (Authorized Signature)	Owner (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____	Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____	Date: _____	Date: _____	Date: _____

SECTION 011000

SUMMARY OF THE WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The title and location of the Work is printed on the cover of this Project Manual.
- B. The Project consists of replacing existing mechanical equipment, installation of new mechanical equipment, and associated work required within the facility.

1.02 RELATED CONTRACTS

- A. The Project consists of the following separate contracts:
Contract No. 1 – Electrical Contractor

1.03 SUBSTANTIAL AND PHYSICAL COMPLETION DATES

- A. Substantially complete the Work by November 30, 2026.
- B. Final completion of the Work by December 31, 2026, days from award.

1.04 CONTRACT AWARD SUBMITTALS

- A. Submittal No. 1: Submit the contractor's list of subcontractors-suppliers information required in schedules and records article in specification section 013300 not later than 15 days after agreement is signed.
- B. Submittal No.2: Submit the contractor's progress schedule information required in schedules and records article in specification section 013300 not later than 15 days after agreement is signed.

1.05 ITEMS NOT INCLUDED

- A. The following items shown on the Drawings are not included in the Contract:
 - 1. Items indicated "NIC" (Not in Contract).
 - 2. Existing construction, except where such construction is to be removed, replaced, or altered.

1.06 CONFINED SPACE

- A. Comply with confined space and permit-required confined space as defined in Title 29, Part 1910, Section 146 of the Code of Federal Regulations (29CFR 1910.146).
- B. Comply with Safety Requirements for Confined Spaces (ANSI/ASSE Z117.1-2009).

- C. All spaces shall be treated as permit-required confined spaces until the Contractor and/or subcontractors are able to re-classify the space to a non-permit confined space as per 29CFR 1910.146 and ANSI/ASSE Z117.1-2009.
- D. Indicated confined spaces are not intended to limit or define Contractor's or subcontractors' regulatory compliance requirements. In addition to confined spaces indicated on the drawings, other confined spaces may be present or created by the work of this contract. Notify the Owner's Representative, in writing, of confined spaces created or eliminated during execution of the Work.
- E. For the purpose of inspecting ongoing work, furnish at no additional cost to the State, personnel, as directed, to allow the Owner's Representative to enter confined space and permit-required confined space in compliance with Title 29, Part 1910, Section 146 of the Code of Federal Regulations (29CFR 1910.146).

1.07 OCCUPANCY

- A. This is an occupied facility. The building will be occupied and operational during execution of the work. Ingress to and egress from the building shall be maintained at all times.

1.08 CONNECTION TO ELECTRICAL EQUIPMENT OR SYSTEMS

- A. Contractor will not be allowed to tie into electrical equipment or systems until the National Grid and/or the Engineer has reviewed and approved the connection.
 - 1. Submit written procedures thru the Engineer to the Utility Provider, detailing how the connection Work is proposed to be performed.
 - 2. After procedures have been approved, notify the Engineer at least 3 working days prior to the connection Work so that arrangements can be made to have a Town Representative witness the Work.

1.09 CONTRACTOR USE OF PREMISES

- A. Work hours shall be as established in the Supplementary Conditions.
- B. Inform the RPR of work area access requirements. The RPR will coordinate and schedule the requirements with Owner to obtain and ensure timely availability of work areas.
- C. Check in with the RPR, as directed, at the beginning of each workday. Furnish information regarding where employees will be working during the day.
- D. The following items are not allowed on the Site premises.
 - 1. Firearms, ammunition, weapons, and dangerous instruments (other than tools required for the Work).
 - 2. Alcoholic beverages and persons under the influence of same.
 - 3. Illegal controlled substances and persons under the influence of same.
- E. Comply with County's policies relating to smoking at the Site.

- F. Utility Outages and Shutdowns: Do not interrupt utility services or branch services within the building except for the time required to make new connections. Arrange with the RPR for the time and duration of interruptions of services. Provide temporary services required to maintain building services at all times other than during scheduled interruptions.
- G. Be responsible and accountable for employees, suppliers, subcontractors, and their employees, with regard to their use of the premises.
- H. Furnish County with a telephone number or method to contact the supervisor for the Work in case of an emergency after work hours, including weekends and holidays.
- I. Comply with applicable federal and State of New York Right-to-Know Law provisions and supply copies of the appropriate Material Safety Data Sheets (MSDS) to the RPR, and to the County's Right-to-Know Information Officer.
- J. Direct employees to be watchful for people in or near the work area where safety hazards may be present.
- K. Report fire and other emergency situations to the RPR immediately and dial 911.
- L. Routes of ingress and egress within the building to the location of the Work shall be as directed by the RPR.
- M. Store materials and perform the Work so that pedestrian and vehicular traffic is not obstructed.
- N. Do not diminish the level of life safety during performance of the Work.

1.10 OPENINGS AND CHASES IN NEW CONSTRUCTION

- A. Construction Work Contract:
 1. Unless specifically indicated otherwise, provide openings, chases, and similar items in new construction provided under this Contract, as required for items to be provided under related contracts.
 2. After the installation and completion of the items for which openings and chases have been provided, build in, over, around and finish the openings and chases to complete the Work.
 3. Provide all cutting, patching, and refinishing resulting from failure to provide the required openings and chases, if the necessary information was furnished by the related contractor before 24 hours of start of the applicable part of the Work.
 4. If related contractors fail to furnish drawings or written information covering the openings and chases they require in new construction at least 24 hours before installation of the Work affected by those items, the related contractors will be required to do all cutting, patching, and refinishing of the construction so affected, at their own expense.

- B. All Contracts: Locate and field drill or cut required openings under 10 inches (in diameter or on a side), which were not plant fabricated, in precast prestressed concrete units after the units have been installed. Such openings and/or cutting of prestressing strand shall be approved by the Design Engineer and prestressed Unit manufacturer before drilling or cutting.
 - 1. Refinish exposed surfaces damaged during drilling or cutting operations (if unit is not structurally damaged) to match adjacent area.
 - 2. Replace units structurally damaged during drilling or cutting operations

1.11 REFERENCE SPECIFICATIONS AND STANDARDS

- A. Comply with the requirements of the various specifications and standards referred to in these Specifications, except where they conflict with the requirements of these Specifications. Such reference specifications and standards shall be the date of latest revision in effect at the time of receiving bids unless the date is given.

1.12 LAYING OUT

- A. Examine the Contract Documents thoroughly and promptly report any errors or discrepancies to the Engineer before commencing the Work.
- B. Lay out the Work in accordance with the Contract Documents.
 - 1. All construction stake-out will be provided by the Engineer.

1.13 PLANS AND SPECIFICATIONS

- A. Contract Documents are complementary, and it is intended that they include everything required and necessary to complete the work. Some items of work or materials may not be particularly mentioned or may have been inadvertently omitted from the drawings or specifications, or both.

1.14 INCONSISTENCIES

- A. All inconsistencies between the drawings and specifications shall be brought to the attention of the Engineer as soon as possible. Addenda take precedence over the drawings and specifications. The most stringent requirement will generally govern unless otherwise decided by the Engineer.

1.15 CONTRACTORS SCHEDULE OF WORK

- A. Contractor shall submit a preliminary work schedule at the preconstruction meeting.
- B. The work schedule must include the sequence in which work will be performed and be approved by the Engineer.
- C. Construction schedules are to include: phase or activity, start and end dates for each, and blank lines for notes or dates.

- D. Contractor shall update and distribute new schedules upon approval of the Engineer, following progress meetings.

1.16 SIGNAGE

- A. The Contractor shall provide and install all suitable signs, barricades, and other protective devices for the maintenance and protection of traffic and/or personnel for the proposed work.

PART 2 PRODUCTS

2.01 RESPONSIBILITIES

- A. Contractor shall:
 - 1. Assume responsibility for protection and safekeeping of products stored on or off premises.
 - 2. Move stored products that interfere with the operations of Owner or other Contractors.
 - 3. Obtain and pay for all additional storage or work areas required for his operations.

2.02 EQUIPMENT AND MATERIALS

- A. All equipment, materials, instruments, or devices incorporated in this project shall be new and unused, unless indicated otherwise in the Contract Documents.
- B. Equipment and materials to be incorporated in the work shall be delivered sufficiently in advance of their installation and use to prevent delay in the execution of the work, and they shall be delivered as nearly as feasible in the order required for executing the work.
- C. The Contractor shall protect all equipment and materials from deterioration and damage.
- D. Any equipment or materials of whatever kind which may have become damaged or deteriorated from any cause, shall be removed, and replaced by good and satisfactory items, and at the Contractor's expense for both labor and materials.
- E. Equipment and materials awaiting installation shall be stored in a dry location and shall be properly covered and secured to prevent damage from wind, rain, snow, or flooding.
- F. Equipment subject to moisture damage such as electrical and instrumentation devices, motors, etc., shall be stored in a dry, heated enclosure, and in accordance with manufacturer's recommendations.

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 012100

ALLOWANCES

PART 1 GENERAL

1.01 DESCRIPTION

- A. Include in the contract sum the allowances stated in this Section.
- B. Should the net cost be more than the specified amount of the allowance, the contract sum will be adjusted by Order on Contract in accordance with the General Conditions. No Work in excess of the allowance will be permitted except by Order on Contract. Should the net cost be less than the specified amount of the allowance, the balance will be deducted from the final payment.

1.02 ALLOWANCES

- A. Electrical Construction – Contract No. 1
 - 1. The Electrical Contractor shall include in his Base Bid a cash allowance in the amount \$5,000.00 for Field Directive as authorized by the Resident Project Representative in accordance with pertinent provisions of the General Conditions of the Construction Contract.
- B. The cost of providing the Work of these allowances will be paid, up to the amount specified, based on documentation of actual costs. The actual amount will be determined, by the Engineer, by evaluating the accuracy and completeness of the cost or pricing data submitted. Costs above the allowance amount, if any, will be paid by means of a Change Order.
- C. Include overhead and profit for administering this allowance separately in the contract sum, not in the allowance.
- D. Cause the products covered by this allowance to be provided by such persons or firm and for such amount as designated.
- E. The amount of the allowance includes furnishing and installing the products in accordance with the requirements of referenced Specification Section(s) and Drawings.
- F. Execute agreement with designated persons or firm. Arrange for Samples, Shop Drawings, Product Data, Delivery and Installation in accordance with the requirements of referenced Specification Section(s) and Drawings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 013119

PROJECT MEETINGS

PART 1 GENERAL

1.01 INITIAL JOB MEETING

- A. The Owner's Representative (Engineer) will notify all parties concerned of the time and place of the initial job meeting.
- B. The meeting will be conducted by the Owner's Representative. In order to ensure an orderly procedure, an agenda for the meeting will be developed, a copy of which will be transmitted to the Contractor(s) prior to the meeting. All items on the format, as they apply, will be discussed.

1.02 MONTHLY JOB MEETINGS

- A. Unless otherwise directed, job meetings will be held once a month at a time and place agreed upon by the Town's Representative, the Contractor(s), and the Engineer's Representative. All parties will attend the monthly meeting. Other meetings may be called, when necessary. Other interested parties may attend these meetings when needed, e.g., subcontractors and representatives from suppliers, and public utilities. The meetings will be conducted by the Owner's Representative for the following purposes:
 - 1. Review job progress, quality of Work, and approval and delivery of materials.
 - 2. Identify and resolve problems which impede planned progress.
 - 3. Coordinate the efforts of all concerned so that the project progresses on schedule to on time completion.
 - 4. Maintain sound working relationships between the Contractors and the Owner's Representative, and a mutual understanding of the project requirements.
 - 5. Maintain sound working procedures.

1.03 ATTENDANCE

- A. A Contractor's Representative shall be required to attend all meetings scheduled by the Owner's Representative.
- B. The Contractor's Representative shall be a competent supervisor familiar with the work and have authority to act for the Contractor.
- C. If the Contractor's Representative fails to attend 2 scheduled meetings without prior approval, the contractor will be directed to replace the current Contractor Representative. Further incidents of non-attendance by the Contractor's Representative, will form the basis for review of the Contractor's responsible bidder status.
- D. Attendance is mandatory at the preconstruction, progress, and final inspection meetings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 013300

SUBMITTALS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Other requirements pertaining to submittals are included in the various sections of the Specifications.
- B. Contract Closeout Submittals: Section 017716.

1.02 DEFINITIONS

- A. Deviation: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by the Contractor.

1.03 DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS

- A. Deviations from the requirements of the Contract Documents will not be allowed unless a request for deviation is made in writing prior to or at the time of submission and the specific deviation is approved by the Engineer.
 - 1. The submission of a deviation shall be done in a timely manner according to the schedule of submittals to allow the Engineer sufficient time for review.

1.04 "OR EQUAL" TO BRAND NAME PRODUCTS

- A. Whenever a product is specified by brand name, a comparable brand, equal to that named, may be submitted for approval subject to the requirements of the General Conditions.
 - 1. The contractor shall bear the burden of proving that the proposed product is equal to the specified product. The submission of an "or equal" shall be done in a timely manner to allow the Engineer sufficient time to review the proposed product.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Identify all submittals by project title and number. Include Contractor's name, date, and revision date. On shop drawings, product data and samples, also include the name of the supplier and subcontractor (if any), and applicable specification section number. Stamp each submittal and initial or sign the stamp to certify review and approval of submittal.
- B. Assemble submittals in accordance with the requirements in the individual sections of the Specifications and as required by this section. It is the Contractor's responsibility to review and verify that all information required for each submittal is included in the submittal package. Errors or omissions found by the Contractor are to be corrected prior

to the submission of the submittal package for approval. Incomplete submittal packages that have been submitted for review and approval will be returned.

1. It is the Contractor's responsibility to verify that portions of the submittal package to be provided by a subcontractor (or supplier) are complete, as well as portions of the submittal package being provided directly by the Contractor.
 2. Do not combine the submittals of more than one specification section with submittals required by other specification sections unless specifically stated in the contract specifications.
- C. If a submittal is based on, or the result of, a change order or field order to the Contract documents, include copies of the applicable change order or field order with the submittal.

1.06 ELECTRONIC SUBMITTALS

- A. Shop drawing, product data and quality assurance submittals shall be transmitted in Portable Document Format (PDF).
1. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
- B. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer/product, dimensions, and coordination of information with other parts of the work.
- C. It is the contractor's responsibility to provide the submittals in a PDF format. The contractor may use any of the following options:
1. Subcontractors and Suppliers provide electronic (PDF) or paper submittals to Contractor.
- D. Image Quality:
1. Image resolution: The PDF files shall be created at a minimum resolution of 200 dots per inch utilizing the original document size. The Contractor will be responsible to increase the resolution of the scanned file or images being submitted as required to adequately present the information.
 2. Image Color Rendition: When information represented requires color to convey the intent and compliance, provide full color PDF reproduction.
- E. Internet Service and Equipment Requirements:
1. The Contractor will be required to have an Email address and Internet access at Contractor's main office.
- F. Paper prints (Hard Copies) or scanned PDF prints of reviewed Submittals:
1. Record Copy: Within 14 days of receipt of submittals marked "Approved", Approved As Noted", the Contractor shall provide one paper copy of the submittal to the Owner's Representative.
 - a. Paper copies shall be printed in a size format equal to the original document.

- b. Scaled Shop Drawings shall be printed to the scale noted on the drawings.
 - c. The resolution of the printed copy shall be equal to that of the PDF file that it is being printed from.
 - d. The Record Copy shall be used by the Owner's Representative during the construction of the project and shall be retained as a turn-over item to the owner at the end of the project as required section 017716 Contract Closeout.
2. Contractor Copies: The Contractor will be responsible for making copies, for the Contractor's own use and for use by its Sub-Contractors and suppliers.

1.07 SHOP DRAWINGS

- A. Submit an electronic file for each shop drawing required by the Specifications. Show the information, dimensions, connections, and other details necessary to ensure that the shop drawings accurately interpret the Contract Documents. Show adjoining construction in such detail as required indicating proper connections. Where adjoining connected construction requires shop drawings or product data, submit such information for approval at the same time so that connections can be accurately checked.
- B. Have shop drawings prepared by a qualified detailer. Shop drawings shall be neatly drawn and clearly legible. Machine-duplicated copies of Contract Drawings will not be accepted as shop drawings.
 1. Where shop drawings are indicated to be drawn to scale:
 - a. Use scale normally found on an "Architect" or "Engineer" scale.
 - b. Written Scale: Clearly label scales being used on each drawing and/or on each detail on the drawing.
Examples: 1/8" = 1'-0" 1" = 40'-0".
 - c. Graphic Scale: Adjacent to each Written Scale, provide a graphic scale delineating the scale being used. Graphic scale shall be divided into measuring units relating to the accuracy required for the drawing or details.
 - d. Clearly dimension key elements of the drawing or detail.
 - e. When the drawing sheet is printed full size, the minimum text size shall be 1/8" (3.2 mm) for hand drafting and 3/32" (2.5 mm) for CAD drawings.
- C. The shop drawings will be reviewed, and stamped copy returned. If the returned copy is stamped "REJECTED" or "REVISE AND RESUBMIT", promptly correct the deficiencies and resubmit the shop drawings meeting Contract requirements.
- D. Submit the shop drawings via email to submittals@fourthcoast.com. The shop drawings will be reviewed, and electronic copies will be dispersed via email.

1.08 PRODUCT DATA

- A. Submit an electronic file for each item of product data required by the Specifications. **Modify product data by deleting information that is not applicable to the project or by marking each copy to identify pertinent products.** Supplement standard information, if necessary, to provide additional information applicable to project.
- B. The product data will be reviewed, and stamped copy returned. If the returned copy is stamped “REJECTED” or “REVISE AND RESUBMIT”, promptly correct the deficiencies and resubmit the shop drawings meeting Contract requirements.
- C. Submit the product data via email to submittals@fourthcoast.com. The product data will be reviewed, and electronic copies will be dispersed via email.

1.09 QUALITY ASSURANCE

- A. Submit an electronic copy of each item of quality assurance information required by the Specifications. Provide quality assurance information in the format required by the specifications, including supporting documentation as required.
- B. The quality assurance information will be reviewed, and stamped copy returned. If returned copies are stamped “REJECTED” or “REVISE AND RESUBMIT”, promptly correct the deficiencies and resubmit the shop drawings meeting Contract requirements.
- C. Submit the quality assurance information to submittals@fourthcoast.com. The quality assurance information will be reviewed, and the review results will be dispersed via email.

1.10 SAMPLES

- A. Submit 1 (unless a different number is specified) of each sample required by the Specifications to the Engineer.
- B. Samples will become the property of the Owner when submitted unless specifically stated otherwise and will not be incorporated in the Work.
- C. The electronic submittal process is not intended for color samples, color charts, or physical material samples.
- D. The sample will be reviewed, and comments will be made by email. Contractor will receive email notice of completed review.

1.11 REVIEW OF SUBMITTALS

- A. Items submitted for review will be reviewed for compliance with the contract documents, based upon the information submitted. The items will be acted upon with the following dispositions:

1. Approved: Where the submittal is marked “Approved” the work covered by the submittal may proceed provided it complies with the contract documents. Final acceptance will depend on that compliance.
2. Approved as Noted: Where the submittal is marked “Approved as Noted” the work covered by the submittal may proceed provided it complies with the review comments noted on the submittal and the contract documents. Final acceptance will depend on that compliance.
3. Disapproved: Where the submittal is marked “Rejected” do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery, or other activity for the item submitted. Prepare a new submittal according to the review comments noted on the submittal and meeting the contract documents.
4. Revise and Resubmit: Where the submittal is marked “Revise and Resubmit” do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery or other activity for the item submitted. Revise or prepare a new submittal according to the review comments noted on the submittal and meeting the contract documents.
5. Acknowledged: Where the submittal is marked “Reviewed” receipt of the submittal is acknowledged and has been recorded.

1.12 SCHEDULES AND RECORDS

- A. Complete the items below as required and submit them not later than 15 days after approval of the Contract unless the Contractor or the Owner determines an earlier submission is required to properly schedule or progress the Work.
 1. SCHEDULE OF SUBMITTALS: Indicate in the spaces following each item, the date the item will be submitted, the date approval is required (allow at least 3 weeks), and the date delivery of the material or equipment is necessary for timely completion of the Work in accordance with the Project Schedule. The date entered for submittal of each item is the last day a deviation will be considered.
 2. CONTRACTOR’S LIST OF SUBCONTRACTORS – SUPPLIERS: An affirmative review of the subcontractor’s responsibility will be conducted. Any subcontractor disapprovals resulting from negative information derived from the Owner’s review will result in written notice to the Contractor and the proposed subcontractor. A responsibility meeting may result from these actions. The Contractor will defer to the provisions of Article 6, General Conditions, regarding its responsibility to execute the work.
 - a. Indicate the items of Work proposed to be accomplished by Subcontractors, the name and address of each proposed subcontractor and the date proposed to award each subcontract, the dollar value of the subcontract, and Minority and Woman-Owned Business Enterprise information. Indicate the names and addresses of proposed suppliers, the dollar value of supplies, date of purchase order issuance, and Minority and Women-Owned Business Enterprise information.
 - b. Failure in providing this information may result in payments being withheld and referral to the Owner for a responsibility determination.
 3. CONTRACTOR’S PROGRESS SCHEDULE: Establish the periods of time during which the various segments of the Work must be completed in order to

complete all of the Work by the physical completion date. Submit the schedule at least two days prior to initial job meeting.

- B. If after initial approval, circumstances require a change in a subcontractor or supplier or require additional subcontractors or suppliers to be used, submit revised forms to reflect the changes or additions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION



ST LAWRENCE ENGINEERING DPC

745 GRAVES STREET, CLAYTON NEW YORK 13624
315/783.5384 · 315/408.7443
www.fourthcoast.com - www.stlawrenceengineering.com

DATE _____

PROJECT NAME _____

CONTRACTOR _____

SHOP DRAWING, PRODUCT DATA OR SAMPLE TRANSMITTAL

NO. _____

1ST Submittal _____ (Indicate by X)

Resubmittal _____ (Indicate by X)

IF RESUBMITTAL, PREVIOUS TRANSMITTAL NO. OF ITEM BEING RESUBMITTED:

Specification Section & Paragraph No: _____

Drawing or Detail Reference No.: _____

Description of Product or Equipment: _____

Manufacturer: _____

1. The above submittal has been reviewed and approved by the Contractor in accordance with provisions of the General Conditions for this project, and there are no deviations from the requirements of the Contract Documents. _____ (Indicate by X); or,
2. The above submittal has been reviewed and approved by the Contractor in accordance with the provisions of the General Conditions for this project with any specific deviations from the requirements of the Contract Documents clearly identified. _____ (Indicate by X – note: if this is actually a Substitution, a separate Substitution Application Form must be attached, clearly documenting how the Owner would benefit from such a contract change; the submittal will not be returned until Substitution Application has been acted upon)
3. The products enclosed in this submittals are in accordance with the American Iron and Steel (AIS) with provisions of the NY State Revolving Fund Program Requirement Bid Packet, the attached AIS Certification is enclosed. _____ (Indicate by X); or, The Contractor will be tracking these items on the De Minimis Waiver form enclosed. _____ (Indicate by X); or, The Contractor will be submitting an AIS Waiver Request enclosed. _____ (Indicate by X)

Contractor's Signature _____

Contractor _____

Street Address or P.O. Box No. City, State _____

SPACE BELOW FOR ENGINEER USE ONLY

The above submittal has been reviewed by the Engineer in accordance with the General Conditions for this project and is returned with action as indicated in the legend below.

Shop drawings and other submittals are part of the Contractor's own Work Plan and are not Contract Documents. Engineer's review of Contractor's submittals is only for the limited purpose of checking for conformance with the design concept expressed in the Contract Documents. Engineer's review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the sole responsibility of the Contractor. Engineer's review of Contractor's submittals cannot change the Contract Documents and cannot relieve the Contractor of any obligations under the Contract. The Engineer's review shall not constitute approval of Contractor's safety precautions or of any construction means, methods, techniques, sequences or procedures.

Approved

Approved as
Noted

Rejected

Revise and
Resubmit

Reviewed

By (reviewer initials): _____ Date: _____

Comments: _____



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DATE

PROJECT NAME

CONTRACTOR

SUBSTITUTION APPLICATION FORM

Specification Section or Drawing No. _____

Proposed Substitution: _____

4. Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request. Applicable portions of the data are clearly identified.

The Undersigned certifies:

1. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
2. Same warranty will be furnished for proposed substitution as for specified product.
3. Maintenance and service parts will be locally available for the proposed substitution.
4. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
5. Cost data comparison is complete and attached. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
6. Proposed substitution does not affect dimensions and functional clearances.
7. Payment will be made for changes to design, including Engineering design, detailing, and construction costs caused by the substitution.
8. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Contractor's Signature

Contractor

Street Address or P.O. Box No. City, State

SECTION 016000

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage, and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Procedures for Owner-supplied products.
- F. Maintenance materials, including extra materials, spare parts, tools, and software.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. DO NOT USE products having any of the following characteristics:
 - 1. Made using or containing CFC's or HCFC's.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One (1) or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual Specification Sections.
- B. Deliver to Project Site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Engineer will consider requests for substitutions as outlined herein and Section 3.4.4. of the Supplementary Conditions.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- D. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner and Engineer/Engineer for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure (after Contract award):
 - 1. Submit one (1) copy of the request for substitution for consideration. Limit each request to one (1) proposed substitution. Provide all information as required under Section 013300 - Submittals and Section 3.4.4. of the Supplementary Conditions.
 - 2. Submit Shop Drawings, product data, and certified test results attesting to the proposed product equivalence as outlined in Section 013300 - Submittals. Burden of proof is on proposer. When colors are pre-selected and noted on the Drawings or in the Specifications, the substitution form will include proposed substitute color palette.
 - 3. The Engineer/Engineer will notify Contractor in writing of decision to accept or reject request.

3.02 OWNER-SUPPLIED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner reviewed Shop Drawings, product data, and samples, to Contractor.
 - 2. Arrange and pay for product delivery to site.
 - 3. On delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
 - 1. Review Owner reviewed Shop Drawings, product data, and samples.

2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to Work Area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- J. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- K. Prevent contact with material that may cause corrosion, discoloration, or staining.
- L. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

SAMPLE

APPLICATION FOR REVIEW OF SUBSTITUTE MATERIAL OR EQUIPMENT

PROJECT: _____ DATE: _____

CONTRACTOR NAME: _____

ITEM DESCRIPTION: _____

ENGINEER/ENGINEERING SPECIFICATION OR DRAWING REFERENCE: _____

We hereby propose to substitute the following item of material or equipment in lieu of that as originally specified for the above-referenced project. We certify that this substitution, if accepted, will meet the intent of the original design and be equal to that as specified in quality and performance.

In support of this application we have attached the required documentation outlining the deviations from the originally specified item and the modifications which would result from its implementation.

The acceptance of this application will not affect the completion of our work in accordance with the Contract Agreement and will not in any way, directly or indirectly, cause additional cost to the Owner. In addition, we accept complete responsibility to perform all additional work, make any necessary modifications and will absorb all costs of any related changes imposed on other contractors resulting from the acceptance of this substitution.

CONTRACTOR

SIGNATURE

APPLICATION FOR REVIEW OF SUBSTITUTE MATERIAL OR EQUIPMENT

SUMMARY OF PROPOSED SUBSTITUTES

Variations of proposed substitute from specified: (Provide written summary and document with supporting manufacturer's data and attach.)

Modifications required as a result of the substitution: (If the substitute requires modifications to structure, piping, layout, electrical, etc. Attach details of proposed modifications necessary to accommodate the substitute.)

(The review and acceptance of this Application does not relieve the Contractor from responsibilities of any unforeseen modifications resulting from this Application.)

Estimate of costs resulting from application:

Claims from other Prime Contractors \$ _____

Credit to Owner as a result of this substitution \$ _____

* The time required by the Engineer/Engineer to review this application and making the required changes in the Contract Documents shall be recorded. The Contractor shall reimburse the Owner for the Engineer/Engineer's charges for evaluating this Application

END OF SECTION

SECTION 016500

MATERIALS AND EQUIPMENT

PART 1 GENERAL

1.01 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Specific requirements pertaining to materials and equipment specified elsewhere are additional to the provisions of this Section.

1.02 PRODUCT LABELS

- A. When materials or equipment are specified to conform to ASTM, Federal or other reference specifications, the materials delivered to the site shall bear the manufacturer's printed labels stating that the materials meet the requirements of such referenced specifications.

1.03 TRANSPORTATION AND HANDLING

- A. Deliver factory packaged materials and equipment in the manufacturer's original containers.
- B. Transport and handle materials and equipment in such a manner as to prevent their damage.
- C. Arrange for delivery of materials and equipment during the hours of the day established by the Owner's Representative.
- D. Have workers available to receive and unload materials and equipment delivered to the site. Do not deliver, or have delivered, any materials and equipment to the site unless such forces are available.
- E. Facility personnel are not authorized to sign for receipt of Contractor's material or equipment.

1.04 STORAGE AND PROTECTION

- A. Neatly pile, store, protect, and secure materials and equipment in locations where directed.
- B. Protect materials and equipment subject to damage by temperature or other weather conditions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 017329

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements of this section apply to Each Prime Contractor and their Subcontractors to perform all work required. Cutting, patching, matching, trenching, excavating, and backfilling as indicated on the Contract Drawings or as required for the installation of work of their Contract where this work is not specifically described in other sections.
- B. Work included, but not necessarily limited to:
 - 1. Make the parts fit properly.
 - 2. Uncover work to provide for installation, inspection, or of ill-timed work.
 - 3. Remove and replace work not conforming to requirements of the Contract Documents.
 - 4. Remove and replace defective work.
 - 5. Provide all required cutting, patching, matching, trenching, excavating, and backfilling as required to perform the work of their contract, except specifically noted otherwise on the Contract Drawings.
 - 6. All cutting and patching required to incorporate existing work or equipment with installation of new work.
 - 7. General Contractor shall review all contract drawings for all penetrations they are required to provide, as outlined in paragraph 1.05.A.2 of this section, for other Prime Contractors and their Subcontractors and provide penetrations where not shown on Architectural Drawings.
 - 8. In addition to other requirements specified, upon the Architect/Engineer's request, uncover work to provide for inspection by the Architect/Engineer of covered work and remove samples of installed materials for testing.
 - 9. Do not cut or alter work performed under separate contract without the Architect/Engineer's written permission.

1.02 RELATED SECTIONS

- A. Section 312200 – Grading
- B. Section 312323 – Fill

1.03 DEFINITIONS

- A. Cutting: The removal of portions of the construction, its equipment or site elements with extreme care to preserve the finish or the function of that portion which remains, because the cutting is done with the knowledge and intention that this remaining portion will be patched or restored to approximately its previous condition.

- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of Work of the contract.
- C. Demolition: The complete wrecking or removal of existing elements of the building and subsequent alteration or change in that which remains.

1.04 SUBMITTALS

- A. See Section 013300 - Submittal Procedures, for submittal process.
- B. Request for the Architect/Engineer's consent:
 - 1. Prior to cutting which affects structural safety, submit written request to the Architect/Engineer for permission to proceed with cutting.
 - 2. Should conditions of the work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Architect/Engineer and secure his written permission prior to proceeding.
 - 3. Describe the extent of cutting and patching required and how it is to be performed. Indicate dates when cutting and patching to be performed.
 - 4. List utilities which will be disturbed or affected as a result of cutting and patching activity. Include utilities which will be relocated and those which will be "out-of-service" and indicate duration of interruption.

1.05 QUALITY ASSURANCE

- A. Perform all cutting and patching in strict accordance with pertinent requirements of these specifications and, in the event no such requirements are determined, in conformance with the Engineer's written direction.
- B. Visual Requirements: Do not cut and patch construction exposed on the exterior or in interior occupied spaces in a manner that would, in the Architect's opinion, reduce the buildings aesthetic qualities or would result in visible evidence of cutting and patching. Remove and replace cut and patched work which is unsatisfactory at no additional cost to the Owner.
- C. Do not cut or alter work performed by other Contractors without Architect/Engineer's written permission.

1.06 CUTTING, PATCHING AND DEMOLITION

- A. Definition - For the purpose of this work cutting is "the removal of portions of the construction, its equipment or site elements with extreme care to preserve the finish or the function of that portion which remains, because the cutting is done with the knowledge and intention that this remaining portion will be patched or restored to approximately its previous condition".
- B. Definition - For the purpose of this work demolition is "the complete wrecking or removal of existing elements of the building and subsequent alteration or change in that which remains".

- C. Coordination:
1. The Mechanical, Electrical, and Plumbing Contractors shall be responsible for the timely and accurate layout of their work that involves cutting of surfaces of either the existing or new building except as described 1.05 C.2. and shall provide the General Contractor with this information.
 2. The General Contractor shall be responsible for all cutting operations of surfaces including walls, floors, ceilings and roof systems as required to complete the work to be provided by the other contractors, with the exception that openings requiring drilling of holes 8" or less in diameter or cutting openings less than 100 square inches for piping, conduit and ductwork shall be by the respective Mechanical, Electrical, or Plumbing Contractor unless otherwise noted. All voids between piping, conduit and ductwork and the sides of openings drilled shall be packed with fire rated insulation material by the responsible Contractor to reestablish the integrity of the walls fire rating. These Contractors shall also provide closures, escutcheon plates, and fire caulking to close openings around pipes, conduits and other drilled openings.
 3. Any openings required to be cut through the roof system shall be performed by a certified roofing installer. These openings shall include the installation of headers and blocking to support remaining deck and other material above. All openings in walls shall include installation of headers or lintels to support wall material and masonry above opening.
 4. The General Contractor shall be responsible for all patching of areas of cutting, except as noted herein above or otherwise specifically noted. Patching shall be done in a manner that disturbed surfaces are restored to their original condition.
 - a. Brick, CMU, and Glazed Tile unit walls shall be repaired by replacing whole masonry units in area of cutting to match surrounding walls.
 - b. Lay-in acoustic ceiling tiles and tee grid removed to execute the work of this contract shall be replaced upon the completion of the work. All acoustic tiles and tee grid members damaged by the work of this contract shall be replaced by the General Contractor. Tile units replaced shall match existing tile units in color and texture.
 - c. Plaster and gypsum wallboard walls and ceilings shall be patched or replaced to the closest stud and painted to restore to original condition.
 - d. Wall finishes such as ceramic tile and wall paper shall be patched or replaced to the nearest tile and the wallpaper shall be patched to the nearest seam.
 - e. Finished flooring surfaces including sheet vinyl, VCT, terrazzo, ceramic or quarry tile, and underlying concrete shall be patched or replaced by replacing whole units to the nearest joint or divider strip.

PART 2 PRODUCTS

2.01 MATERIALS

- A. For replacement of work removed, use materials to match new or existing adjacent surfaces which comply with the pertinent sections of these specifications.
- B. For replacement of excavated materials see Division 31 for Excavating, Filling, and Grading.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspection:
 - 1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, backfilling, and patching.
 - 2. After uncovering the work, inspect conditions affecting installation of new work.
- B. Discrepancies:
 - 1. If uncovered conditions are not as anticipated, immediately notify the Engineer and secure needed directions.
 - 2. Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 PREPARATION PRIOR TO CUTTING

- A. Provide all required protection including, but not necessarily limited to shoring, bracing, and support to maintain structural integrity of the work.
- B. Vent all machinery used during the progress of the work in this section directly to the outside, unless otherwise instructed by the Engineer.

3.03 PERFORMANCE

- A. Perform all required trenching, excavating and backfilling as required for all work unless otherwise indicated in pertinent sections of these specifications. Perform cutting and demolition by methods which will prevent damage to other portions of the work and will provide proper surfaces to receive installation of repair and new work.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval to avoid marring or damaging existing finishes. Cut or drill from the exposed or finished side into concealed surfaces.
- C. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill. Dampen as required to minimize dust.
- D. Comply with requirements of applicable sections of Division 31 where cutting and patching requires excavating and backfilling.
- E. Bypass utility services such as pipe or conduit before cutting where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or

partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture of other foreign matter after bypassing and cutting.

- F. Restore work with new Products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material.
- I. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 3. Where removal of walls or partitions extend one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken containing the patch after the patched area has received primer and second coat.
 - 4. Patch, repair, or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.
- J. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- K. Perform fitting and adjustment of products to provide finished installation complying with the specified tolerances and finishes.
- L. Each Prime Contractor shall patch all areas disturbed, as required by the execution of their Contract, with systems and materials to match existing adjacent systems and materials, subject to approval by Engineer or as detailed on the Contract Drawings.

3.04 INTERFACE WITH OTHER WORK

- A. Coordinate as required with other trades to assure proper and adequate provision in the work for those trades that interface with the work of this section.

3.05 CLEANING

- A. Each Contractor shall be responsible for thoroughly cleaning area upon the completion of cutting and patching operations. Thoroughly clean adjacent surrounding surfaces of all dust debris, oil residue, moisture, and patching materials prior to new finishes being installed and upon completion of final finishing.

END OF SECTION

SECTION 017716

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Summary of Work: Section 011000.

1.02 CONTRACT CLOSEOUT INSPECTIONS

- A. The following inspections will be made in addition to the normal inspections to ensure that all Contract requirements are met and that the Work is complete and acceptable. The purpose of each of these inspections is to furnish the Contractor a written list of Contract exceptions, omissions, and incompletions so that the Work can be progressed to timely completion in accordance with the Contract Documents.
 - 1. The Substantial Completion Inspection: The Substantial Completion Inspection will be performed when the majority of the work is completed to establish a punch list, and allow all parties to discuss items and work to be completed. A copy of the Substantial Completion inspection list will be furnished to the Contractor. When this inspection progresses over any length of time, copies of the list will be furnished as the inspection progresses so that the Contractor may proceed with the required Work without delay.
 - 2. Final Completion Inspection: The Final Completion Inspection shall take place upon completion of all punch list items to ensure that all work has been completed satisfactorily.

1.03 FINAL CLEANING

- A. Perform final cleaning prior to joint inspection for physical completion. Leave the premises in a neat, unobstructed condition, the work areas broom clean (except where more thorough cleaning is specified), and everything in perfect repair and adjustment.
- B. Clean site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove tools, equipment, waste and surplus materials, rubbish, and construction facilities from the premises as soon as possible upon completion of the Work.

1.04 PROJECT RECORD DOCUMENTS

- A. Maintain on site, 2 sets of the following record documents; record actual revisions to the Work:

1. Contract Drawings.
 2. Project Manual.
 3. Addenda.
 4. Change Orders and other modifications to the Contract.
 5. Reviewed shop drawings, product data, and samples.
- B. Store record documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Project Manual: Legibly mark and record in Part 2 of each Section of the Specifications, a description of the actual products installed, including the following:
1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by addenda and modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
1. Measured depths of foundations in relation to finish (first) (main) floor datum.
 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract Drawings.
- F. Applications for progress payments will not be approved if the record documents are not kept current. Application for final payment will not be approved until the project record documents are delivered to the Owner's Representative.

1.05 OPERATION AND MAINTENANCE DATA

- A. Prepare 2 sets comprised of 8-1/2 x 11 inch text pages bound in capacity expansion binders with durable plastic covers identified with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required. Prepare a printed Table of Contents for each volume, with each product or system description identified. Internally subdivide the binder contents with permanent page dividers, logically organized as described below, with tab titles clearly printed under reinforced laminated plastic tabs:
- Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcontractors, and major equipment suppliers.
- Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify

names, addresses, and telephone numbers of subcontractors and suppliers. Identify the following:

1. Significant design criteria.
2. List of equipment.
3. Parts list for each component.
4. Operating instructions.
5. Maintenance instructions for equipment and systems.
6. Maintenance instructions for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.

Part 3: Project documents and certificates, including the following:

1. Shop drawings and product data.
2. Air and water balance reports.
3. Certificates.
4. Photocopies of warranties.

- B. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with the Owner's comments. Revise content of documents as required prior to final submittal.
- C. Submit 2 volumes prior to final Application for Payment.

1.06 WARRANTIES

- A. Furnish warranty certification and copies of warranties that extend beyond the one-year period required by the General Conditions. Warranties submitted without warranty certification will not be accepted.
 1. Warranty Certification: Written certification from the warrantor that invoices for installation, service, supplies, and warranty fees have been paid in full to persons or firms due payment, and that the warranty is in effect and non-retractable due to any of the specified conditions.
- B. Prepare printed Table of Contents and assemble warranty certifications and warranty copies in a binder with a durable plastic cover.
- C. Deliver the binder to the Owner's Representative prior to final Application for Payment.
- D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, indicating date of acceptance as start of warranty period.
- E. Applications for final payment will not be approved until the warranty certification and warranty documents are delivered to the Owner's Representative.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Label and deliver spare parts, maintenance items, and extra materials to the Site. Place in locations as directed.
 - 1. Include "NOT FOR WARRANTY REPAIRS" on the labels.
 - 2. Obtain receipt prior to final payment.

- B. Do not use the spare parts and maintenance materials required by the Contract Documents to remedy defects during the one-year period described in Paragraph 9.8 of the General Conditions except when approved otherwise by authorized Facility Representative. In such cases, replace items used.

- C. Furnish the names, business addresses, and telephone numbers of fully equipped authorized service organizations to the Owner's Representative.

- D. Applications for final payment will not be approved until these items are delivered to the Owner's Representative.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 031100

CONCRETE FORMWORK

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Steel Concrete Reinforcement: Section 032100.
- B. Cast-In-Place Concrete: Section 033000.

1.02 REFERENCES

- A. Except as shown or specified otherwise, the Work of this Section shall conform to the requirements of Specifications for Structural Concrete for Buildings ACI 301-16 of the American Concrete Institute.

1.03 DESIGN REQUIREMENTS

- A. ACI 301, Section 2.1 – Formwork and formwork accessories, General:
 - 1. Add the following to 2.1.1 Description:

The formwork shall be designed for loads, lateral pressure, and allowable stresses outlined in Chapter 4 - Design of “Guide to Formwork for Concrete” (ACI 347-14).

PART 2 PRODUCTS

2.01 FORMWORK - GENERAL

- A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.
- C. Comply with applicable State and local codes with respect to design, fabrication, erection, and removal of formwork.
- D. Comply with relevant portions of ACI 347, ACI 301, and ACI 318.
 - 1. Maintain one copy of standards on project site.

2.02 WOOD FORM MATERIALS

- A. Form Materials: At the discretion of the Contractor.

1. Construct formwork for exposed (painted or unpainted) concrete surfaces with smooth face of undamaged plywood or other panel type materials acceptable to the Engineer, to provide continuous, straight, smooth cast surfaces. Furnish in largest practicable sizes to minimize the number of joints.
 2. Construct formwork for concrete concealed from view or covered with cement plaster with rough sawn boards of sound grade, as approved by the Engineer, to provide a mechanical bond for subsequent application of plaster.
- B. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without excessive and objectionable bow or deflection.

2.03 REMOVABLE PREFABRICATED FORMS

- A. Preformed Steel Forms: Minimum 16 gage matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
- B. Preformed Plastic Forms: Thermoplastic polystyrene form liner, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
- C. Glass Fiber Fabric Reinforced Plastic Forms: Matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished concrete surfaces.

2.04 FORMWORK ACCESSORIES

- A. Form Ties: Snap-off type, galvanized metal, adjustable length, 1 1/2 inch back break dimension, free of defects that could leave holes larger than 1 inch in concrete surface.
- B. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.
1. Composition: Colorless reactive, mineral oil-based, soy-based, or vegetable-oil based compound.
- C. Embedded Anchor Shapes, Plates, Angles and Bars: As specified in Section 05 1200.
- D. Waterstops: Polyvinyl chloride, minimum 2000 psi tensile strength, minimum 50 degrees F to plus 175 degrees F working temperature range, 6 inch height, maximum possible lengths, ribbed profile, preformed corner sections, heat welded jointing.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 ERECTION – FORMWORK

- A. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- B. Align joints and make watertight. Keep form joints to a minimum.
- C. Provide chamfer strips on external corners of beams, joists, and columns.
- D. Coordinate this section with other sections of work that require attachment of components to formwork.

3.03 APPLICATION - FORM RELEASE AGENT

- A. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
- B. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

3.04 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Locate and set in place items that will be cast directly into concrete.
- B. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other work.
- C. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- D. Install waterstops in accordance with manufacturer's instructions, so they are continuous without displacing reinforcement. Heat seal joints so they are watertight.

3.05 FORM CLEANING

- A. Clean formed cavities of debris prior to placing concrete.
 - 1. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.06 FORMWORK TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 117, unless otherwise indicated.
- B. Construct and align formwork for elevator hoistway in accordance with ASME A17.1.

3.07 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000.
- B. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and to verify that supports, fastenings, wedges, ties, and items are secure.
- C. Do not reuse wood formwork more than 2 times for concrete surfaces to be exposed to view. Do not patch formwork.

3.08 FORM REMOVAL

- A. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
- B. Store removed forms to prevent damage to form materials or to fresh concrete. Discard damaged forms.
- C. Rubbing out of all exposed concrete: The Contractor shall provide smooth finish texture on all areas exposed to view by surface rubbing concrete wall with an applied coating of silica sand and portland cement. Rub to an even texture to achieve a uniform smooth finish. Use an admixture of Acryl 30, or equal, with mixing water to achieve proper strength of applied coating.

END OF SECTION

SECTION 032100

STEEL CONCRETE REINFORCEMENT

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Concrete Formwork: Section 031100.
- B. Cast-In-Place Concrete: Section 033000.

1.02 REFERENCES

- A. Except as shown or specified otherwise, the Work of this Section shall conform to the applicable requirements of the following:
 - 1. Specifications for Structural Concrete, ACI 301-99 of the American Concrete Institute.
 - 2. Manual of Standard Practice, MSP-1-01 of the Concrete Reinforcing Steel Institute.

1.03 SUBMITTALS

- A. Shop Drawings: Placing drawings for bar reinforcement.
- B. Samples:
 - 1. Bar Supports: Full size.
 - 2. Fabric Reinforcement: 8 inches square, each wire size.
 - 3. Fabric Reinforcement Supports: 3'-0" long pieces.
 - 4. Reed Clips: 2'-6" long pieces.
- C. Quality Control Submittals:
 - 1. Certificates: Affidavit required under Quality Assurance Article.

1.04 QUALITY ASSURANCE

- A. Certifications: Affidavit by the bar reinforcement manufacturer certifying that bar material meets the contract requirements.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Bar Reinforcement: ASTM A 615, Grade 60, deformed steel bars.

- B. Fabric Reinforcement: ASTM A 185, welded wire fabric, fabricated into flat sheets unless otherwise indicated.
- C. Bar Supports; Either of the Following Types:
 - 1. Galvanized steel or AISI Type 430 stainless steel, and without plastic tips.
 - 2. Insoluble plastic, with minimum 1,500 psi tensile strength and capable of retaining fabricated shape at temperatures between 5 degrees F and 170 degrees F.
- D. Tie Wire: Black annealed wire, 16-1/2 gage or heavier.

PART 3 EXECUTION

3.01 PLACING

- A. ACI 301, Section 3.3 Execution:
 - 1. Replace the first sentence in paragraph 3.3.2.1 Tolerances- with the following:

Place, support, and fasten reinforcement as shown on the project drawing or approved shop submittal.
 - 2. Add the following paragraphs:
 - a. At the time concrete is placed, reinforcement shall be free of loose rust and loose mill scale.
 - b. Bar Reinforcement: In rectangular panels of two-way construction, place the steel in the short direction first with the longer bars on top in the opposite direction.
 - c. Fabric Reinforcement: Offset end laps in adjacent sheets to prevent continuous joints at ends of sheets.
 - 1) In concrete slabs supported by steel joists, place fabric reinforcement approximately 3/4 inch below top surface of the concrete.
 - 2) Support of Fabric Reinforcement, provide Fabric Reinforcement Supports tied to fabric at 18 inches o.c. and spaced at 36-inch intervals.
 - d. Fireproofing Reinforcement: Unless otherwise indicated, install reinforcement for concrete fireproofing as follows:
 - 1) Reinforce concrete flange encasement of steel beams, girders, and columns with reed clips when the flanges are more than 3 inches in width and the thickness of concrete encasement on such flanges is less than 3 inches.
 - 2). Where the bottom of the concrete encasement on lower flange of steel beams and girders is 12 inches or more below the soffit of adjacent concrete slab, and

where no slab occurs, wrap the beams and girders with steel wire at intervals of 12 inches, in addition to the reed clips.

3.02 SCHEDULE

- A. Unless other reinforcing is shown on the Drawings, reinforce the following items of concrete as indicated below:
1. Concrete Slabs on Grade: 6 x 6 - W2.9 x W2.9 welded wire fabric.
 2. Concrete Floor Fills 2-1/2 Inches Thick or Less: 6 x 6 - W2.1 x W2.1 welded wire fabric.
 3. Concrete Floor Fills Greater than 2-1/2 Inches Thick: 6 x 6 - W4 x W4 welded wire fabric.

END OF SECTION

SECTION 033000

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete pad

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Concrete Formwork: Section 031100.
- B. Steel Concrete Reinforcement: Section 032100.
- C. Cast In Place Concrete for Water/Wastewater Plants: Section 033001.
- B. Concrete Walks: Section 321300.

1.03 REFERENCES

- A. Except as shown or specified otherwise, the Work of this Section shall conform to the requirements of Specifications for Structural Concrete for Buildings ACI 301 of the American Concrete Institute.
- B. ACI 302.1R - Guide for Concrete Floor and Slab Construction; American Concrete Institute International; 2004 (Errata 2007).
- C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- D. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 2010.
- E. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 2010.
- F. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001 (Reapproved 2008).
- G. ACI 309R – Guide to Consolidation of Concrete; American Concrete Institute International; 2005

- H. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2011.

1.04 DEFINITIONS (Amendments to ACI 301, Section 1.2)

- A. Exposed Construction: Exposed to view.

1.05 SUBMITTALS

- A. Submittals Package: Submit product data for design mix(es) and materials for concrete specified below at the same time as a package.
- B. Shop Drawings: Placing drawings for bar reinforcement.
- C. Product Data:
 - 1. Concrete design mix(es) with name and location of batching plant.
 - 2. Portland Cement: Brand and manufacturer's name.
 - 3. Fly Ash: Name and location of source, and DOT test numbers.
 - 4. Air-entraining Admixture: Brand and manufacturer's name.
 - 5. Water-reducing Admixture: Brand and manufacturer's name.
 - 6. Aggregates: Name and location of source, and DOT test numbers.
 - 7. Lightweight Coarse Aggregate: Brand and manufacturer's name
 - 8. Chemical Hardener (Dustproofing): Brand and manufacturer's name, and application instructions.
 - 9. Chemical Curing and Anti-Spalling Compound: Brand and manufacturer's name, and application instructions.
 - 10. Bonding Agent (Adhesive): Brand and manufacturer's name, and preparation and application instructions.
 - 11. Expansion Joint Filler: Brand and manufacturer's name.
 - 12. Emery Aggregate: Brand and manufacturer's name, and application instructions.

1.06 QUALITY ASSURANCE

- A. Concrete batching plant shall be currently approved as a concrete supplier by the New York State Department of Transportation.
- B. Fly ash supplier shall be currently approved as a fly ash supplier by the New York State Department of Transportation.
- C. Certifications: Affidavit by the bar reinforcement manufacturer certifying that bar material meets the contract requirements.
- D. Source Quality Control: The Owner's Representative reserves the right to inspect and approve the following items, at his own discretion, either with his own forces or with a designated inspection agency:
 - 1. Batching and mixing facilities and equipment.
 - 2. Sources of materials.

1.07 STORAGE

- A. Store materials so as to insure the preservation of their quality and fitness for the Work. Materials, even though accepted prior to storage, are subject to inspection and shall meet the requirements of the Contract before their use in the Work.

PART 2 PRODUCTS

2.01 MATERIALS (Amendments to ACI 301, Section 4, for Normal Weight Concrete and Section 7, for Lightweight Concrete)

- A. Cement: ASTM C 150, Type I - Normal.
 - 1. Acquire all cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C 33.
 - 1. Acquire all aggregates for entire project from same source.
 - 2. Course aggregates shall be strong, clean crushed limestone complying with ASTM C33, size no. 67 provided from one source.
 - 3. The maximum aggregate size shall not be larger than one-fifth of the narrowest dimension between sides of forms, one-third of the depth of slabs, not three-fourths of minimum clear spacing between individual reinforcing bars or bundles of bars.
 - 4. Sand: Clean sharp, natural sand, graded in accordance with ASTM C33.
- C. Water-reducing Admixture: ASTM C 494, Type A, and on the New York State Department of Transportation's current "Approved List".
- D. Fly Ash: ASTM C 618, including Table 1A (except for footnote A), Class F except that loss on ignition shall not exceed 4.0 percent.
- E. Chemical Curing and Anti-Spalling Compound: ASTM C-309, Type 1D, Class B, with a minimum 18 percent total solids content. No thinning of material allowed.
 - 1. SureCure Emulsion, Kaufman Products, Inc. 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372. Or approved equal
 - 2. Cure & Seal by Symons Corp., 200 East Touhy Ave., PO Box 5018, Des Plaines, IL 60017-5018, (847) 298-3200. Or approved equal
 - 3. "Kure N Seal W" by Sonneborn/ BASF Building Systems, 889 Valley Park Dr., Shakopee, MN 55379, (800) 433-9517. Or approved equal
 - 4. Day-Chem Cure & Seal 26 percent (J-22) by Dayton Superior Corp., 721 Richard St., Miamisburg, OH 45342, (800) 745-3700. Or approved equal
 - 5. Acrylseal HS by Master Builders/ BASF Building Systems, 23700 Chagrin Blvd., Cleveland, OH 44122, (800) 628-9990. Or approved equal

- F. Chemical Hardener (Dustproofing): Colorless aqueous solution of magnesium-zinc fluosilicate. Approved products include:
1. Lapidolith by Sonneborn/ BASF Building Systems, 889 Valley Park Dr., Shakopee, MN 55379, (800) 433-9517. Or approved equal
 2. Surfhard by The Euclid Chemical Co., 19218 Redwood Rd., Cleveland, OH 44110, (216) 531-9222. Or approved equal
 3. Pena-Lith by W.R. Meadows, Inc., PO Box 543, Elgin, IL 60121, (847) 683-4500. Or approved equal
 4. FluoHard by L & M Construction Chemicals, Inc., 14851 Calhoun Rd., Omaha, NE 68152, (402) 453-6600. Or approved equal
 5. Armortop by Anti Hydro International, Inc., 265 Badger Ave., Newark, NJ 07108, (800) 777-1773. Or approved equal
 6. Diamond by Kaufman Products, Inc., 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372. Or approved equal
- G. Type 1 Expansion Joint Filler: Preformed, resilient, non-extruding cork units; ASTM D 1752, Type II.
- H. Type 2 Expansion Joint Filler: Preformed, resilient, non-extruding, self-expanding cork units; ASTM D 1752, Type III.
- I. Type 3 Expansion Joint Filler: Preformed, resilient, non-extruding bituminous units; ASTM D 1751.
- J. Chamfer Strips: Wood, metal, PVC or rubber; one inch chamfer.
- K. Epoxy Bonding Agent (Adhesive): 100 percent solids epoxy-resin-base bonding compound, complying with ASTM C 881, Types I, II, IV and V, Grade 2 (horizontal areas) or Grade 3 (overhead/vertical areas), and Class B (40-60 degrees Fahrenheit) or Class C (60 degree Fahrenheit and above).
1. SurePoxy HM Series by Kaufman Products, Inc., 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372. Or approved equal
 2. Sikadur Hi-Mod 32 by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, (800) 933-7452. Or approved equal
 3. Epogrip by Sonneborn/ BASF Building Systems, 889 Valley Park Drive, Shakopee, MN 55379, (800) 433-9517. Or approved equal
- L. Emery Aggregate: Natural emery, crushed, polyhedral in shape, with not more than 10 percent flat or elongated pieces, properly screened, graded and packaged in the manufacturer's plant, and delivered to the site in sealed, labeled packages. Approved products include:
1. Emerundum by Anti Hydro International, Inc., 265 Badger Ave., Newark, NJ 07108, (800) 777-1773. Or approved equal
 2. Non-Slip Aggregate by Setcon Industries, Inc., 5 Mathews Ave., Riverdale, NJ 07457-1020, (201) 283-0500. Or approved equal
 3. Frictex H by Sonneborn/ BASF Building Systems, 889 Valley Park Dr., Shakopee, MN 55379, (800) 433-9517. Or approved equal

2.02 PROPORTIONING (Amendments to ACI 301, Sections 4 & 7)

- A. Compressive Strength:
 - 1. Minimum 4000 psi for exterior slabs.
 - 2. Minimum 3000 psi for all other uses stated in Section 1.01.
 - 3. As listed on Structural Drawings.

- B. Weight: Normal, except as indicated below:
 - 1. Lightweight Concrete (for floor fills): Air-dry unit weight between 95 and 115 lb/cu ft.

- C. Durability: Concrete shall be air-entrained. Design air content shall be 6 percent by volume, with an allowable tolerance of plus or minus 1.5 percent for total air content. Entrained air shall be provided by use of an approved air-entraining admixture. Air-entrained cement shall not be used.

- D. Slump:
 - 1. 3000 psi Normal Weight Concrete: Between 2 inches and 4 inches.
 - 2. 4000 psi Normal Weight Concrete: Between 2 inches and 3 inches.
 - 3. Lightweight Concrete: Between 1 inch and 4 inches.

- E. Admixtures: Do not use admixtures in concrete unless specified or approved in writing by the Engineer.

- F. Selection of Proportions: Concrete proportions shall be established on the basis of previous field experience or laboratory trial batches, unless otherwise approved in writing by the Engineer. Proportion mix with a minimum cement content of 564 pounds per cubic yard for 3000 psi concrete and 611 pounds per cubic yard for 4000 psi concrete.
 - 1. Optional Material: Fly ash may be substituted for (Portland) cement in normal weight concrete up to a maximum of 15 percent by weight of the required minimum (Portland) cement. If fly ash is incorporated in a concrete design mix, make necessary adjustments to the design mix to compensate for the use of fly ash as a partial replacement for (Portland) cement.
 - a. Adjustments shall include the required increase in air-entraining admixture to provide the specified air content.
 - b. Lower early strength of the concrete shall be considered in deciding when to remove formwork.

2.03 REINFORCEMENT (Amendments to ACI 301, Section 3)

- A. Bar Reinforcement: ASTM A 615, Grade 60, deformed steel bars.

- B. Fabric Reinforcement: ASTM A 185, welded wire fabric, fabricated into flat sheets unless otherwise indicated.

C. Bar Supports: Galvanized steel or AISI Type 430 stainless steel, and without plastic tips.

D. Tie Wire: Black annealed wire, 16-1/2 gage or heavier.

2.04 JOINTS AND EMBEDDED ITEMS (Amendments to ACI 301, Section 5.3.2.6)

A. Obtain bond at construction joints by the use of bonding agent (adhesive) or the use of cement grout.

2.05 PRODUCTION (Amendments to ACI 301, Section 5)

A. Provide ready-mixed concrete, either central-mixed or truck-mixed.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION

A. Do not use items of aluminum for mixing, chuting, conveying, forming or finishing concrete, except magnesium alloy tools may be used for finishing.

B. Keep excavations free of water. Do not deposit concrete in water.

C. Hardened concrete, reinforcement, forms, and earth which will be in contact with fresh concrete shall be free from frost at the time of concrete placement.

D. Prior to placement of concrete, remove all hardened concrete spillage and foreign materials from the space to be occupied by the concrete.

3.02 FORMWORK (Amendments to ACI 301, Section 2)

A. Chamfer all exposed external corners of concrete.

3.03 PLACING REINFORCEMENT (Amendments to ACI 301, Section 3)

A. At the time concrete is placed, reinforcement shall be free of mud, oil, loose rust, loose mill scale, and other materials or coatings that may adversely affect or reduce the bond.

3.04 PLACING CONCRETE (Amendments to ACI 301, Section 5)

A. Operation of truck mixers and agitators and discharge limitations shall conform to the requirements of ASTM C 94.

B. Do not allow concrete to free fall more than 4 feet.

3.05 FINISHING FORMED SURFACES (Amendments to ACI 301, Section 5.3.3)

- A. Finish Schedule: Except where indicated otherwise on the Drawings, provide the finishes below:
 - 1. Rough Form Finish for concrete surfaces not exposed to view.
 - 2. Smooth Form Finish for concrete surfaces exposed to view.
 - 3. Smooth Rubbed Finish for exterior concrete surfaces exposed to view.
 - 4. Grout Cleaned Finish for interior concrete surfaces exposed to view.

3.06 FINISHING SLABS (Amendments to ACI 301, Section 5.3.4)

- A. Slabs On Grade: Provide key type joints unless otherwise shown. Tool exposed joints.
- B. Finish Schedule: Except where indicated otherwise on the Drawings, provide the finishes below:
 - 1. Floated Finish for:
 - a. Treads and platforms of exterior steps and stairs.
 - b. Slabs and fill over which waterproofing, roofing, vapor barrier, insulation, terrazzo, or resin bound flooring is required.
 - 2. Troweled Finish for:
 - a. Interior slabs that are to be exposed to view.
 - b. Slabs and fill over which resilient wood flooring, resilient tile or sheet flooring, carpet, or thin-film coating system is required.
 - c. Slabs and fill over which thin-set ceramic tile is required, except fine-broom finished surface.
 - d. Treads and platforms of interior steps and stairs.
 - 3. Broom or Belt Finish for:
 - a. Exterior slabs. Texture, as approved by the Owner's Representative.
 - 4. Scratched Finish for:
 - a. Surfaces to be covered with ceramic tile set in a bonded thick mortar bed, except screed to a Class B tolerance.
 - b. Surfaces to be covered with floor topping.
 - 5. Integral Emery Aggregate Surfacing with Floated Finish for:
 - a. Interior pedestrian ramps.
- C. Finishing, General: Provide monolithic finishes on concrete floors and slabs without the addition of mortar or other filler material. Finish surfaces in true planes, true to line, with particular care taken during screeding to maintain an excess of concrete in front of the screed so as to prevent low spots. Screed and darby concrete to true planes while plastic and before free water rises to the surface. Do not perform finishing operations during the time free water (bleeding) is on the surface.
- D. Integral Emery Aggregate Surfacing: Provide a nonslip "dry shake" finish with emery aggregate. Apply emery aggregate in accordance with the manufacturer's printed application instructions for a moderate duty nonslip surface, unless otherwise indicated.

3.07 CURING AND PROTECTION (Amendments to ACI 301, Section 5.3.6)

- A. Maintain concrete surfaces in a moist condition for at least 7 days after placing, except where otherwise indicated. Do not use curing compound.
 - 1. For surfaces of exterior slabs (on grade), apply chemical curing and anti-spalling compound in accordance with the recommendations of the manufacturer.

3.08 CHEMICAL HARDENER (DUSTPROOFING)

- A. Apply chemical hardener to all troweled finished interior floors which are to be left exposed.
- B. Do not apply chemical hardener until concrete has cured the number of days recommended in manufacturer's instructions.
- C. Prepare surfaces and apply chemical hardener in accordance with manufacturer's printed instructions and recommendations.

3.09 FIELD QUALITY CONTROL (Amendments to ACI 301, Section 1)

- A. Field Inspection and Testing:
 - 1. The Engineers may request Tests of concrete and concrete materials to be performed at any time to ensure conformance with specified requirements.
 - a. Type and Frequency of Tests will be determined by the Engineer. Testing will be conducted by an independent testing agency paid for by the Village of Orleans.
 - 2. Current American Concrete Institute standards will be followed.
 - 3. Testing and Resolution of Rejected Work will be conducted as outlined in C-700, Article 14 – General Conditions.
- B. Make available to the Owner's Representatives whatever test samples are required to make tests. Furnish shipping boxes for compression test cylinders.
- C. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.
- E. Compressive Strength Tests: ASTM C 39/C 39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 50 cu yd.
- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.10 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Engineer. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area

3.11 REMEDIAL WORK

- A. General: Reinforce or replace deficient work as directed by the Engineer and at no additional cost to the Owner.
- B. Patching: Repair defective areas and fill form-tie holes and similar defects in accordance with Chapter 9 of ACI 301. Where, in the opinion of the Engineer, surface defects such as honeycomb occur, repair the defective areas as directed by the Engineer.

3.12 PROTECTION

- A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION

SECTION 042000

UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete Block.
- B. Mortar and Grout.
- C. Reinforcement and Anchorage.
- D. Flashings.
- E. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 055000 - Metal Fabrications: Loose steel lintels.
- B. Section 072100 - Thermal Insulation: Insulation for cavity spaces.
- C. Section 079005 - Joint Sealers: Backing rod and sealant at control and expansion joints.

1.03 REFERENCE STANDARDS

- A. ACI 530/530.1/ERTA - Building Code Requirements and Specification for Masonry Structures; American Concrete Institute International; 2009.
- B. ACI 530.1/ASCE 6/TMS 602 - Specification For Masonry Structures; American Concrete Institute International; 2008.
- C. ASTM A 82/A 82M - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement; 2007.
- D. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- E. ASTM A 641/A 641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2009a.
- F. ASTM C 90 - Standard Specification for Loadbearing Concrete Masonry Units; 2009.
- G. ASTM C 91 - Standard Specification for Masonry Cement; 2005.

- H. ASTM C 129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2006.
- I. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar; 2004.
- J. ASTM C 150 - Standard Specification for Portland Cement; 2007.
- K. ASTM C 207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006.
- L. ASTM C 270 - Standard Specification for Mortar for Unit Masonry; 2008a.
- M. ASTM C 404 - Standard Specification for Aggregates for Masonry Grout; 2007.
- N. ASTM C 476 - Standard Specification for Grout for Masonry; 2009.
- O. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete; 2005.
- P. IMIAWC (CW) - Recommended Practices & Guide Specifications for Cold Weather Masonry Construction; International Masonry Industry All-Weather Council; 1993.
- Q. IMIAWC (HW) - Recommended Practices & Guide Specifications for Hot Weather Masonry Construction; International Masonry Industry All-Weather Council; current edition.

1.04 SUBMITTALS

- A. See Section 013300 - Submittal Procedures, for submittal process.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.
- C. Samples: Submit four samples of facing brick units to illustrate finish and appearance, color, texture, and extremes of color range for each type or color of brick or CMU selected.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of the contract documents.
 - 1. Maintain one copy of each document on project site.

1.06 MOCK-UP

- A. Construct a masonry wall as a mock-up panel sized 4 feet long by 4 feet high, which includes all specified masonry unit types, mortar and accessories and structural backup.

- B. Locate where directed.
- C. Mock-up, if acceptable, may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 x 8 inches and nominal depths as indicated on the drawings for specific locations.
 - 2. Integral Water Repellent: All concrete masonry units used in exterior cavity wall, including lintel block shall contain the recommended amount of integral water-repellent known as the "Dry-Block System, admix", as manufactured by W.R. Grace Chemical Company or equal.
 - 3. Special Shapes: At all external corners at interior walls, concrete block shall be provided with bull-nosed corners.
 - 4. Load-Bearing Units: ASTM C90, normal weight.
 - a. Hollow block, as indicated shall be two core standard unit and shall be a minimum of twenty-eight (28) days old.
 - b. Exposed faces: Manufacturer's standard neutral color and texture where indicated.
 - 5. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block, as indicated shall be two core standard unit and shall be a minimum of twenty-eight (28) days old.
 - b. Normal weight.
 - 6. Color: As selected by Owner.
 - 7. Comply with ASTM C90 for finish and appearance requirements. Do not include units in the work which do not meet the minimum established requirements.

2.04 MORTAR AND GROUT MATERIALS

- A. Mortar mix shall consist of prepackaged blend of portland cement and hydrated lime.
 - 1. Portland Cement: ASTM C150, Type I; color as required to produce approved color sample.
 - 2. Hydrated Lime: ASTM C207, Type S.
 - 3. Grout Aggregate: ASTM C404.
- B. Sand shall conform to the requirements of ASTM C 144, except that grading shall comply with the following limits.
 - 1. No. 4 Sieve: 100% percent passing.
 - 2. No. 8 Sieve: 95 to 100 % percent passing.
 - 3. No. 16 Sieve: 60 to 100 % percent passing.

4. No. 30 Sieve: 35 to 70 % percent passing.
 5. No. 50 Sieve: 15 to 35% percent passing.
 6. No. 100 Sieve: 2 to 15 % percent passing.
 7. No. 200 Sieve: 0 to 2 % percent passing.
- C. Pigments for Colored Mortar: Iron or chromium oxides with demonstrated stability and colorfastness. Pigments for colored mortar shall be nonfading and alkali proof and in accordance with ASTM C 979 and approved by the Engineer.
- D. Water: Clean and potable.
- E. Calcium Chloride: Calcium chloride or admixtures containing calcium chloride shall not be used.
- F. Other Admixtures: Air entraining agents, accelerators, retarders, or other admixtures shall not be used without the express written consent of the Engineer.
- G. Moisture-Resistant Admixture: Water repellent compound designed to reduce capillarity.
1. Acceptable product: Dry-Block or equal.

2.05 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: ASTM A 615/A 615M Grade 40 (280) deformed billet bars; uncoated.
- B. Single Wythe Joint Reinforcement: Truss type; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/A 153M, Class B; 0.1875 inch side rods with 0.1483 inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure. Single wythe joint reinforcement shall be Dur-O-Wal D/A 3100 truss type as manufactured by Dur-O-Wal, Inc. or approved equal.
- C. Multiple Wythe Joint Reinforcement: Truss type; fabricated with moisture drip; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/153M, Class B2; 0.1875 inch side rods with 0.1483 inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure. Multiple wythe joint reinforcement shall be Dur-O-Eye adjustable wall assemblies as manufactured by Dur-O-Wal or approved equal.

2.06 FLASHINGS

- A. Copper/Fabric Flashings: 7 oz/sq ft sheet copper bonded to two (2) layers glass fabric laminated with asphalt to copper core as manufactured by Advanced Building Products.
1. Drip Edge: Stainless steel, ASTM A666, Type 304, soft temper; 26 gage (0.45mm) thick; finish 2B to 2D for use with copper/kraft paper flashings.
- B. Prefabricated Corners and End Dams: 5oz. Advanced Building Products or equal.

- C. Lap Sealant: Butyl type flashing mastic as recommended by flashing manufacturer.

2.07 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
- B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; 1 inch wide x by maximum lengths available.
- C. Mortar Maze Cell Vents: Durable polypropylene as manufactured by Advanced Building Products or equal. Color as selected by Engineer.
- D. Air Space Maintenance and Drainage System: Dovetail Mortar Mat or equal.
 - 1. Required thickness of mat for air space between insulation and exterior wythe.
 - a. 3/4" for air spaces 1" - 1-1/8".
 - b. 1" for air spaces 1-1/4" - 1-3/8".
 - c. 1-1/4" for air spaces greater than or equal to 1-1/2".
 - 2. Provide at all window heads, door heads, and base of wall at thru-wall cavity flashings.
- E. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.08 MORTAR AND GROUT MIXES

- A. Mortar for Unit Masonry: ASTM C 270, using the Proportion Specification.
 - 1. All Applications: Type S - 1800 psi min.
- B. Grout: ASTM C 476. Consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.
- C. Mixing: Use mechanical batch mixer and comply with referenced standards. Mix for at least 3 minutes after all ingredients are in the drum, and at least long enough to make a thorough, complete intimate mix of materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Do not commence installation until foundations are clean, rough and level. Remove all laitance and foreign material.
- D. Verify that the foundation elevation is such that the bed joint thickness will be between 1/4" and 3/4" and that the foundation is true to line with masonry not projecting over more than 1/4".

- E. Verify that built-in items are in proper location, and ready for roughing into masonry work.
- F. Clean projecting dowels free from loose scale, dirt, concrete and other material that will inhibit bond.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 MORTAR MIXING

- A. Measuring of materials shall be either by weight or volume such that the specified proportions of mortar materials can be controlled and accurately maintained.
- B. Sand shall not be measured by the shovel.
- C. Mortar shall be mixed in a mechanical batch mixer for at least three minutes, but not more than five minutes with the maximum amount of water which will produce a workable consistency.
- D. If, within two hours of mixing, excessive water is lost from the mortar by evaporation, retemper the mortar.
- E. Discard all mortar which is more than two and one-half hours old.

3.04 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 - 1. Bond: Running, or as otherwise indicated.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.05 PLACING AND BONDING

- A. Lay hollow masonry units with face shell bedding on head and bed joints.
- B. Lay all masonry in running bond unless otherwise shown on the Contract Drawings. Use only brick that are clean and free from dust and other foreign matter.
- C. Furrowing of bed joints shall not be permitted.
- D. Remove excess mortar as work progresses. Do not permit mortar to drop and accumulate into cavity air space or to plug weeps.

- E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- F. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.06 MINIMUM REQUIREMENTS OF COLD WEATHER CONSTRUCTION

- A. Air Temperature (degrees F):
 - 1. Above 40
 - a. Heating of Materials: Normal masonry procedures.
 - b. Protection: Cover walls with plastic or canvas at end of workday to prevent water entering masonry.
 - 2. Below 40
 - a. Do not lay masonry units having a temperature below 20 degrees F. Remove visible ice on masonry units before the unit is laid in the masonry.
 - b. Heating of Materials: Heat mortar sand or mixing water to maintain mortar temperatures between 40 and 120 degrees F at the time of mixing. Maintain mortar above freezing until used in masonry.
 - c. Protection: Cover walls with plastic or canvas at end of workday to prevent water entering masonry.
 - d. Mean daily temperature is between 40 and 32 degrees F:
 - 1) Protect completed masonry from rain or snow by covering with a weather resistive membrane for 24 hours after construction.
 - 3. Below 32
 - a. Heating of Materials: In addition to the above, heat the sand. Frozen sand and frozen wet masonry units must be thawed.
 - b. Protection: With wind velocities over 10 mph, provide windbreaks during the workday and cover walls and materials at the end of the workday to prevent wetting and freezing.
 - c. Mean daily temperature is between 32 and 25 degrees F:
 - 1) Completely cover masonry with a weather resistive membrane for 24 hours after construction.
 - d. Mean daily temperature is between 25 and 20 degrees F:
 - 1) Completely cover completed masonry with insulation blankets or equal protection for 24 hours after construction.
 - e. Ambient Temperature Between 25 and 20 degrees F:
 - 1) Use heat sources on both sides of the masonry under construction and install wind breaks when wind velocity is in excess of 10 mph.
 - f. Mean daily temperature is below 20 degrees F:
 - 1) Maintain masonry temperature above 32 degrees F for a 24 hour period after construction by enclosure with supplementary heat, by electric heating blankets, by infrared heat lamps, or by other acceptable methods as approved by the Engineer.
 - g. Ambient Temperature Below 20 degrees F:

- 1) Provide an enclosure for the masonry under construction and use heat source to maintain temperatures above 32 degrees F within the enclosure.

3.07 MINIMUM REQUIREMENTS OF HOT WEATHER CONSTRUCTION

A. Preparation:

1. When Ambient temperature exceeds 100 degrees F, or exceeds 90 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain sand piles in a damp, loose condition.
 - b. Provide necessary conditions and equipment to produce mortar having a temperature below 120 degrees F.
2. When Ambient temperature exceeds 115 degrees F, or exceeds 105 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain sand piles in a damp, loose condition.
 - b. Provide necessary conditions and equipment to produce mortar having a temperature below 120 degrees F and shade materials and mixing equipment from direct sunlight.

B. During Construction:

1. When Ambient temperature exceeds 100 degrees F, or exceeds 90 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain temperature of mortar and grout below 120 degrees F.
 - b. Flush mixer, mortar transport container, and mortar boards with cool water before they come into contact with mortar ingredients or mortar.
 - c. Maintain mortar consistency by re-tempering with cool water.
 - d. Use mortar within 2 hours of initial mixing.
2. When Ambient temperature exceeds 115 degrees F, or exceeds 105 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain temperature of mortar and grout below 120 degrees F.
 - b. Flush mixer, mortar transport container, and mortar boards with cool water before they come into contact with mortar ingredients or mortar.
 - c. Maintain mortar consistency by re-tempering with cool water.
 - d. Use mortar within 2 hours of initial mixing.
 - e. Use cool mixing water for mortar and grout.
 - f. Ice is permitted in the mixing water prior to use. Do not permit ice in the mixing water when added to the other mortar or grout materials.

C. Protection:

1. When Ambient temperature exceeds 100 degrees F, or exceeds 90 degrees F with a wind velocity greater than 8 mph:
 - a. Fog spray all newly constructed masonry until damp, at least three times a day until the masonry is three days old.

3.08 REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY

- A. Install horizontal joint reinforcement 16 inches on vertical center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.

- E. Reinforce stack bonded unit joint corners and intersections with strap anchors 16 inches on center.

3.10 REINFORCEMENT AND ANCHORAGES - MULTIPLE WYTHE UNIT MASONRY

- A. Install horizontal joint reinforcement 16 inches on vertical center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.

3.11 MASONRY FLASHINGS

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
 - 1. Extend flashings full width at such interruptions and at least 8 inches minimum into adjacent masonry or turn up at least 8 inches minimum to form watertight pan at non-masonry construction.
 - 2. Remove or cover protrusions or sharp edges that could puncture flashings.
 - 3. Seal lapped ends and penetrations of flashing before covering with mortar.
- B. Lap end joints of flashings at least 6 inches and seal watertight with mastic or elastic sealant.

3.12 LINTELS

- A. Install loose steel lintels over openings. Provide steel lintels in accordance with the lintel schedule as indicated in the Contract Drawings.

3.13 GROUTED COMPONENTS

- A. Timing: Do not grout until masonry has cured at least 24 hours.
- B. At bearing locations, fill masonry cores with grout for a minimum 12 inches either side of opening.

3.14 CONTROL AND EXPANSION JOINTS

- A. Do not continue horizontal joint reinforcement through control and expansion joints.
- B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.
- C. Size control joint in accordance with Section 079005 for sealant performance.

3.15 BUILT-IN WORK

- A. As work progresses, install built-in metal door frames and other items to be built into the work and furnished under other sections.

- B. Install built-in items plumb, level, and true to line.
- C. Bed anchors of metal door frames in adjacent mortar joints. Fill frame voids solid with grout.
 - 1. Fill adjacent masonry cores with grout minimum one full core from framed openings.
- D. Do not build into masonry construction organic materials that are subject to deterioration.

3.16 SITE TOLERANCES

- A. Erect masonry within the following tolerances from the specified dimensions.
 - 1. Dimension of elements:
 - a. In cross section or elevation: $-1/4$ inch, $+ 1/2$ inch.
 - b. Mortar joint thickness:
 - 1) bed: $\pm 1/8$ inch
 - 2) head: $- 1/4$ inch, $+ 3/8$ inch
 - 3) collar: $- 1/4$ inch, $+ 3/8$ inch
 - c. Grout space of cavity width, except for masonry walls passing framed construction: $-1/4$ inch, $+ 3/8$ inch.
 - 2. Elements
 - a. Variation from level:
 - 1) bed joints: $\pm 1/4$ inch in 10 feet; $\pm 1/2$ inch maximum
 - 2) top surfacing of bearing walls: $\pm 1/4$ inch in 10 feet; $\pm 1/2$ inch maximum
 - b. Variation from plumb:
 - 1) $\pm 1/4$ inch in 10 feet; $\pm 3/8$ inch in 20 feet; $\pm 1/2$ inch maximum
 - c. True to a line:
 - 1) $\pm 1/4$ inch in 10 feet; $\pm 3/8$ inch in 20 feet; $\pm 1/2$ inch maximum
 - d. Alignment of columns and walls (bottom versus top)
 - 1) bearing walls: $\pm 1/2$ inch
 - 2) nonbearing walls: $\pm 3/4$ inch
 - 3. Locations of elements:
 - a. Indicated in plan: $\pm 1/2$ inch in 20 feet; $\pm 3/4$ maximum
 - b. Indicated in elevation: $\pm 1/2$ inch in story height; $\pm 3/4$ maximum
 - 4. If the above conditions cannot be met due to previous construction, notify the Engineer.

3.17 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. At the completion of this portion of the work, visually inspect the work of this section. Point or cut out and repoint if necessary, all holes and defective joints.
- C. Replace defective mortar. Match adjacent work.

- D. Replace defective masonry units not conforming to ASTM appearance requirements.
- E. Thoroughly clean all brick surfaces to be left exposed in the finished work by brush, water, and an approved cleaning solution, removing all traces of mortar, grout efflorescence, and foreign matter. In the event ordinary cleaning is not adequate, provide acid cleaning when so directed by the Engineer and at no additional cost to the Owner.

3.18 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners which may be subject to damage by construction activities.

END OF SECTION

SECTION 072100

THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wall Construction Gypsum Drywall.
- B. Underside of Floor Slab.

1.02 RELATED REQUIREMENTS

- A. Section 033000 – Cast-In-Place Concrete.
- B. Section 042000 – Unit Masonry.
- C. Section 078400 - Firestopping: Insulation as part of fire-rated through-penetration assemblies.
- D. Section 092116 - Gypsum Board Assemblies: Acoustic insulation inside walls and partitions.

1.03 REFERENCE STANDARDS

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2015a.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.
- C. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.

1.04 SUBMITTALS

- A. See Section 013300 - Submittal Procedures for submittal process.
- B. Provide product data on product characteristics and performance criteria.
- C. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

PART 2 PRODUCTS

2.01 INSULATION MATERIALS

- A. Under Slab Insulation: Extruded Polystyrene Board Insulation with cut cell surfaces; with the following characteristics:
1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 2. Smoke Developed Index: 165 or less, when tested in accordance with ASTM E 84.
 3. Thermal Resistance: 5.0 per inch
 4. Board Size: 48 x 96 inch.
 5. Board Edges: Square.
 6. Compressive Resistance: 60 psi.
 7. Water Absorption, maximum: 0.3 percent, volume.
 8. All extruded polystyrene insulation material shall be manufactured with HCFC or other CFC-free blowing agents.
 9. Manufacturer: High load 60 Brand by The Dow Chemical Company or approved equal.
- B. Batt Insulation: ASTM C 665; preformed batt; conforming to the following:
1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 2. Smoke Developed Index: 50 or less, when tested in accordance with ASTM E84.
 3. Formaldehyde Content: Zero.
 4. Thermal Resistance: R of 13 for wood and metal framing. This in conjunction with paragraph 2.01 Foam Board Insulation Materials. Attic Insulation - R-38.
 5. Thickness: 3-1/2 inch or 5-1/2 inch for wood framing. 3-1/2 inch or 6-1/2 inch for metal framing.
 6. Facing: Unfaced.
 7. Provide wire or metal straps to hold insulation in place in applications where the stud depth is larger than the insulation thickness.
 8. Manufacturer: Unfaced Formaldehyde-free Thermal and Acoustical Fiber Glass Insulation by Johns Manville or approved equal.
- C. Fire Batt Insulation: ASTM C 665; preformed batt; conforming to the following:
1. Material: Mineral wool fiber made from basalt rock and slag fiber.
 2. Flame Spread Index: 0, when tested in accordance with ASTM E 84.
 3. Smoke Developed Index: 0, when tested in accordance with ASTM E 84.
 4. Formaldehyde Content: Zero.
 5. Thermal Resistance: R of 4.1 per inch of thickness.
 6. Facing: Unfaced.
 7. Provide wire or metal straps to hold insulation in place in applications where the stud depth is larger than the insulation thickness.
 8. Manufacturer: Roxul AFB Acoustical Fire Batts by Roxul or approved equal.

2.02 ACCESSORIES

- A. Sheet Vapor Retarder: Clear polyethylene film for above grade application, 6 mil thick.

- B. Air Infiltration Barrier: Tyvek Commercial Wrap as manufactured by DuPont or approved equal.
- C. Sill Sealer: Styrofoam sill seal foam gasket as manufactured by The Dow Chemical Company or equal.
- D. Adhesive: Type recommended by insulation manufacturer for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.
- C. Sequence work to ensure fireproofing, and firestop materials are in place before beginning work of this section.

3.02 BOARD INSTALLATION UNDER CONCRETE SLABS

- A. Install boards staggered with long direction parallel with exterior wall.
 - 1. Place boards over vapor barrier with tight joints.
 - 2. Install in running bond pattern.
- B. Extend boards over expansion joints.
- C. Place insulation under slabs on grade after base for slab has been compacted.
- D. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- E. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.

3.03 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions.
- B. Install in wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Install fiberglass insulation in gypsum board walls.
- D. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.

- E. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
- F. Retain insulation batts in place with wire mesh secured to framing members.
- G. Tape seal tears or cuts in vapor retarder.

3.07 PROTECTION

- A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

SECTION 079200

JOINT SEALERS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Glazing Sealants: Section 088100.

1.02 SUBMITTALS

- A. Product Data: Catalog sheets, specifications, and installation instructions for each product specified except miscellaneous materials.
- B. Samples:
 - 1. Sealants: One pint or standard tube.
 - 2. Joint Fillers: 24 inch long full section.
 - 3. Gaskets: 24 inch long full section.
 - 4. Joint Primer/Sealer/Conditioners: One pint.
 - 5. Backer Rods: 24 inch long full section.
 - 6. Bond Breaker Tape: 24 inch long full section.
- C. Quality Control Submittals:
 - 1. Installer's Qualifications Data: Affidavit required under Quality Assurance Article.
 - 2. Company Field Advisor Data: Name, business address, and telephone number of Company Field Advisor.

1.03 QUALITY ASSURANCE

- A. Installer's Qualifications: The persons installing the sealants and their supervisor shall be personally experienced in the installation of sealants and shall have been regularly employed by a company engaged in the installation of sealants for a minimum of two years.
 - 1. Furnish the names and addresses of five similar projects which the foregoing people have worked on during the past two years.
 - 2. Furnish a letter from the sealant manufacturer, stating that the foregoing people are authorized to install the manufacturer's sealant materials and that the manufacturer's specifications are applicable to the requirements of this Project.
- B. Pre-Installation Meeting: Prior to starting the Work and before materials are ordered, a meeting will be held at the Site to discuss the specifications, details, and application requirements. The meeting shall be attended by the Contractor, the sealant applicator and the sealant manufacturer's Company Field Advisor.
- C. Container Labels: Include manufacturer's name, trade name of product, kind of material, federal specification number (if applicable), expiration date (if applicable), and packaging date or batch number.
- D. Test and validate sealants used for exterior weathersealing per the Sealant Waterproofing Restoration Institute (SWRI).
- E. Warranties:

1. Silicone sealants: 20 years Weatherseal Warranty.
2. Polyurethane or Silicone: 5 year Weatherseal Warranty.
3. Sealants for Granite, Marble and Limestone: 20 year Non-Stain Warranty.

1.04 PROJECT CONDITIONS

- A. Environmental Requirements:
 1. Temperature: Unless otherwise approved or recommended in writing by the sealant manufacturer, do not install sealants at temperatures below 40 degrees F or above 85 degrees F for non silicone sealants and below minus 20 degrees F or above 125 degrees F for silicone sealants.
 2. Humidity and Moisture: Do not install the Work of this section under conditions that are detrimental to the application, curing, and performance of the materials.
 3. Ventilation: Provide sufficient ventilation wherever sealants, primers, and other similar materials are installed in enclosed spaces. Follow manufacturer's recommendations.
- B. Protection:
 1. Protect all surfaces adjacent to sealants with non-staining removable tape or other approved covering to prevent soiling or staining.
 2. Protect all other surfaces in the Work area with tarps, plastic sheets, or other approved coverings to prevent defacement from droppings.

PART 2 PRODUCTS

2.01 SEALANTS

- A. Type 1 Sealant, any of the following generic types:
 1. One-part, non-sag silicone or polyurethane sealant: Bostik Chem-Calk 900, Bostik Chem-Calk 915, Bostik Chem-Calk 916 Textured, Bostik Chem-Calk 2020, Pecora Dynatrol I, Sika Sikaflex 1a, Sonneborn Sonolastic NP I, or Tremco DyMonic (not SWRI), Dow Corning Contractors Weatherproofing Sealant (CWS), Dow Corning Concrete Sealant (CCS), Pecora 895.
- B. Type 1A Sealant: Pavements, Walks & Curbs
 1. For Horizontal Joints: Two-part, self-leveling silicone or polyurethane sealant for traffic bearing construction; Bostik Chem-Calk 550 (not SWRI), Tremco Vulkem 255, Pecora Urexpan NR-200, Pecora Silicone 310SL, Bostik Chem-Calk 550, Dow Corning Parking Structure Sealant FC or SL, Dow Corning Contractors Concrete Sealant, Sikaflex 2c SL
 2. For Vertical Joints: Two-part, non-sag silicone or polyurethane sealant; Bostik Chem-Calk 500 (not SWRI), Tremco Vulkem 227, Pecora Dynatrol II, Pecora Silicone 311NS, Dow Corning Parking Structure Sealant NS, Dow Corning CCS, Sikaflex 2c NS EZ.
- C. Type 1D Sealant: Bathrooms, Showers, and Wet Locations
 1. One-part, mildew resistant silicone sealant; Dow Corning 786, Dow Corning Tub and Ceramic, Pecora 898 Sanitary Silicone, General Electric Sanitary SCS1700, or Bostik Silicone Rubber Bathroom Caulk.

- D. Type 3 Sealant: One-part acrylic polymer sealant; Pecora AVW-920, PTI 738, or Tremco Mono.
- E. Type 2A Sealant: One-part acrylic or elastomeric sealant for sealing small joints; PTI 200 or Tremco Small Joint Sealant, Pecora AC-20.
- F. Type 5 Sealant: Flame and smoke resistant intumescent sealant; Metacaulk MC 150+, 3M Fire Barrier Caulk CP 25, Dow Corning 790.
- G. Pre-formed Sealant: Preformed paintable sealant strips of open cell, compressible urethane foam, saturated with non-drying, non-staining, and non-migrating butylene compound.
- H. Sealant Colors: For exposed materials provide color as indicated or, if not indicated, as selected by the Director from manufacturer's standard colors. For concealed materials, provide the natural color which has the best overall performance characteristics.

2.02 JOINT FILLERS

- A. Slabs – Extreme Expansion - Self-Expanding Cork Joint Filler: Resilient, non-extruding type pre-molded cork units; ASTM D 1752, Type III.
- B. Slabs – Normal Expansion - Cork Joint Filler: Resilient, non-extruding type pre-molded cork units; ASTM D 1752, Type II.
- C. Expanded Polyethylene Joint Filler: Flexible, compressible, closed-cell polyethylene of not less than 10 psi compression deflection (25 percent).
- D. Closed Cell Polyurethane Joint Filler: Resilient, compressible, semi-rigid; W.R. Meadows Ceramar or A.C. Horn Closed Cell Plastic Foam Filler, Code 5401.

2.03 MISCELLANEOUS MATERIALS

- A. Joint Primer/Sealer/Conditioner: As recommended by the sealant manufacturer for the particular joint surface materials and conditions.
 - a. Pecora No. P-100 for non-porous substrates.
 - b. Pecora No. P-75 or P-200 for porous substrates.
- B. Backer Rod: Compressible rod stock of expanded, extruded polyethylene.
- C. Bond Breaker Tape: Polyethylene or other plastic tape as recommended by the sealant manufacturer; non-bonding to sealant; self adhesive where applicable.
- D. Cleaning Solvents: Oil free solvents as recommended by the sealant manufacturer. Do not use re-claimed solvents.
- E. Masking Tape: Removable paper or fiber tape, self-adhesive, non-staining.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine all joint surfaces for conditions that may be detrimental to the performance of the completed Work. Do not proceed until satisfactory corrections have been made.

3.02 PREPARATION

- A. Clean joint surfaces immediately before installation of sealant and other materials specified in this Section.
 - 1. Remove all loose materials, dirt, dust, rust, oils and other foreign matter that will impair the performance of materials installed under this Section.
 - 2. Remove lacquers, protective coatings and similar materials from joint faces with manufacturer's recommended solvents.
 - 3. Do not limit cleaning of joint surfaces to solvent wiping. Use methods such as grinding, acid etching or other approved and manufacturer's recommended means, if required, to clean the joint surfaces, assuring that the sealant materials will obtain positive and permanent adhesion.
- B. Set joint fillers at proper depth and position as required for installation of bond breakers, backer rods, and sealants. Do not leave voids or gaps between the ends of joint filler units.
 - 1. Smooth Edged Joints: For joints between two concrete slabs or where new concrete abuts smooth edged materials use either cork joint filler or closed cell polyurethane joint filler.
 - 2. Irregular Edged Joints: For joints where new concrete abuts granite curbs or other irregular edges use closed cell polyurethane joint filler.
- C. Priming Joint Surfaces:
 - 1. Prime joints which are to receive Type 1A and 1B Sealants.
 - 2. Prime joints of friable (crumbly, chalky) masonry surfaces which are to receive Type 1 Sealant.
 - 5. Prime joints other than those above if so recommended by the manufacturer's printed instructions.
 - 6. Do not allow the primer/sealer to spill or migrate onto adjoining surfaces.

3.03 JOINT BACKING INSTALLATION

- A. Install bond breaker tape in relaxed condition as it comes off the roll. Do not stretch the tape. Lap individual lengths.
- B. Install backer rod of sufficient size to fill the joint width at all points in a compressed state. Compress backer rod at the widest part of the joint by a minimum of 25 percent. Do not cut or puncture the surface skin of the rod.

3.04 SEALANT INSTALLATION

- A. Except as shown or specified otherwise, install sealants in accordance with the manufacturer's printed instructions.
- B. Install sealants with ratchet hand gun or other approved mechanical gun. Where gun application is impractical, install sealant by knife or by pouring as applicable.
- C. Types 2 and 2A Sealants: If low temperature makes application difficult, preheat sealants using manufacturer's recommended heating equipment.
- D. Type 4 Sealant: Allow sealant to cure for a minimum of 3 days before backfilling.

- E. Finishing: Tool all vertical, non-sag sealants so as to compress the sealant, eliminating all air voids and providing a neat smoothly finished joint. Provide slightly concave joint surface, unless otherwise indicated or recommended by the manufacturer.
 - 1. Use tool wetting agents as recommended by the sealant manufacturer.

3.05 FIELD QUALITY CONTROL

- A. Test Samples:
 - 1. Where directed, for each 1000 linear feet of joint installed, cut out and carefully remove a 6 inch long sample of the undisturbed sealant and joint backer material from the newly installed Work. Remove the samples in the presence of the Owners Representative who will retain them for evaluating and testing.
 - 2. Reseal cut out areas with the same materials.

3.06 CLEANING

- A. Immediately remove misapplied sealant and droppings from metal surfaces with solvents and wiping cloths. On other materials, remove misapplied sealant and droppings by methods and materials recommended in writing by the manufacturer of the sealant material.
- B. After sealants are applied and before skin begins to form on sealant, remove all masking and other protection and clean up remaining defacement caused by the Work.

END OF SECTION

SECTION 085123
DETENTION WINDOWS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Joint Sealers: Section 079200.
- B. Glass and Glazing: Section 088100

1.02 REFERENCES

- A. AAMA/WDMA/CSA 101/I.S.2/A440, NAFS - North American Fenestration Standard/Specification for windows, doors, and skylights; jointly published by the American Architectural Manufacturers Association (AAMA), the Window & Door Manufacturers Association (WDMA), and the Canadian Standards Association (CSA).
- B. SMA 1004, Specifications for Aluminum Tubular Frame Screens for Windows; published by the Screen Manufacturers Association (SMA).

1.03 DEFINITIONS

- A. Performance class designations according to AAMA/WDMA/CSA101/I.S.2/NAFS:
 - 1. HC: Heavy Commercial.
- B. Performance grade number according to AAMA/WDMA/CSA 101/I.S.2/NAFS:
 - 1. Design pressure number in pounds force per square foot used to determine the structural test pressure and water test pressure.
- C. Structural Test Pressure: For uniform load structural test, is equivalent to 150 percent of the design pressure.
- D. Minimum Test Size: Smallest size permitted for performance class (gateway test size). Products must be tested at minimum test size or at a size larger than minimum test size to comply with requirements for performance class.

1.04 PERFORMANCE REQUIREMENTS

- A. General: Provide formed steel maximum detention fixed thermally improved windows having horizontal or vertical steel detention bars spaced 6" on center concealed within the rails. The round detention bars shall penetrate the flat detention bars concealed in the frame to form an integral detention grid.
- B. Manufacturer:
 - 1. Steel / Aluminum Detention Windows; Hope's SA30 Series Fixed: www.hopescorrectional.com.
 - 2. Substitutions of approved equal: See Section 0160000 – Product Requirements.

1.05 SUBMITTALS

- A. Shop Drawings: Show fabrication details and connections to adjacent construction.
- B. Product Data: Catalog sheets, specifications, and installation instructions for each type window unit.
- C. Samples:
 - 1. Corner section of frame, sash, and insect screen.
 - 2. Color Samples: Manufacturer's standard color finishes.
- D. Quality Control Submittals:
 - 1. Installer's Qualifications Data:
 - a. Name of each person who will be performing the Work and their employer's name, business address and telephone number.
 - b. Names and addresses of 3 similar projects that each person has worked on during the past 5 years.

1.06 QUALITY ASSURANCE

- A. Manufacturer shall have not less than (10) years experience in the fabrication of steel detention windows and be a member of The Steel Window Institute (SWI).
- B. Qualifications: The person(s) installing the windows and their Supervisor shall be personally experienced in window installations and shall have been regularly employed by a Company installing windows for a minimum of 5 years.
- C. Source quality control:
 - 1. Air infiltration test, meets or exceeds ASTM E283, maximum air infiltration .37 CFM/ Ft. of crack length with pressure differential across the window unit of 1.57 PSF.
 - 2. Water penetration test, meets or exceeds ASTM E331, no water penetration for 15 minutes when the window is subjected to a rate of flow of 5 gal. /hr. /sq. ft. with differential pressure across the window unit of 2.86 PSF.
 - 3. Tool-resisting steel meets or exceeds ASTM A627-03, Grade 4, submit test reports from a qualified independent testing laboratory verifying that the window manufacturer's tool-resisting steel are in conformance with ASTM A627-03.
 - 4. Impact Test, meets or exceeds ASTM F1592-01 "Standard Test Methods for Detention Hollow Metal Vision Systems"
 - a. Impact Blows - Must withstand a minimum of 600 blows at each impact location (1200 total blows per frame without rail bar, 1800 total blows per frame with rail bar)
 - b. Glazing Test - The glazing and panels shall remain in place. No damage to the extent that forcible entry can be achieved.
 - c. Frame Test – No weld joints or the entire frame joint shall completely separate.
 - d. The wall anchoring shall retain the frame in place throughout the test procedure to the extent that forcible entry cannot be achieved.
 - 5. Uniform Load Deflection Test: Test unit accordance with ASTM E330-97 at 65-psf.
 - 6. Condensation Resistance Test (CRF): Test unit for thermal performance in accordance with AAMA 1503-98 with condensation resistance factor of at least 54.

7. Thermal Transmittance Test (Conductive U-Value): Test unit in accordance with AAMA 1503-98 with U-Value of 65 or less.
8. Forced Entry Resistance Test: Unit tested in accordance with ASTM F588-97 for Type B Grade 10.
9. Quality of e-coat/ top-coat combination shall meet or exceed the following ASTM designations: ASTM D714- Paint Blistering Test, ASTM D4585 – Humidity Test, ASTM B117 – Salt Spray (Fog) Test, ASTM D1654 – Painted Products in Corrosive Environments, ASTM G85 – Cyclic Fog/Dry Test (Prohesion), ASTM D5894 – Salt Fog/UV Painted Metal, ASTM D4541 – Pull Off Strength of Coating Test.
10. Along with submittals, the window manufacturer shall provide the applicable test report from a qualified independent testing laboratory regularly engaged in testing windows to verify that his products conform to these test requirements. All testing must be current and meet minimum requirements in conformance with specifications

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver windows in protective containers, marked with identification for window location.
- B. Store and handle windows in a manner that will not cause damage to the finish.

PART 2 PRODUCTS

2.01 SERIES SA30 STEEL/ALUMINUM FIXED

- A. The perimeter interior framing shall be formed from 12-gauge steel.
- B. The perimeter exterior framing shall be aluminum thermal break sections extruded from alloy 6063-T52 with a minimum wall thickness of .125". The screws attaching the exterior and interior perimeter framing shall be stainless steel.
- C. Optional horizontal and/or vertical rail bars are available to receive and conceal steel detention bars without dividing the glass area. Rail bars shall be from 12-gauge steel.
- D. Thermal break in the exterior aluminum frame shall be poured in thermal break material.
- E. Glazing rebate shall provide unobstructed glazing surface at least 3/4" in height.
- F. Maximum detention windows shall have detention bars of 7/8" or 1" round and 1/4" x 2 1/2" flat tool-resisting steel conforming to ASTM specifications A627. (Moderate detention windows shall have detention bars of 7/8" or 1" round and 1/4" x 2 1/2" flat mild steel.)
- G. Glazing beads shall be aluminum, extruded from alloy 6063-T52 with a minimum wall thickness of .062". Attaching screw shall be tamper-resistant stainless steel.
- H. Anchors shall be fabricated from steel angles with a minimum leg thickness of 3/16". (For pre-cast applications anchors shall be 3/8" diameter concrete anchor studs.)

- I. Screws shall be tamper-resistant truss-head plated steel.
- J. Painted Finish (Steel):
 - 1. Pre-treatment.
 - 2. Primer – E-Coat (Electrodeposited epoxy primer).
 - 3. Finish coat – Factory applied polyurethane
- K. Finish (Aluminum):
 - 1. 204R1 Bronze Anodize

2.02 FABRICATION

- A. Fabricate windows in accordance with approved shop drawings.
- B. The perimeter framing shall consist of two units, exterior and interior sub-frames. The interior sub-frame shall be coped and welded at corners the full depth of the frame for maximum strength and weather tightness, with all exposed welds dressed smooth. The corners of the exterior sub-frame shall be coped and screwed.
- C. Optional horizontal and/or vertical imposts or rail bars shall be securely welded to the frame for maximum strength and weather tightness, with all welds dressed smooth or concealed.
- D. The interior sub-frame shall be equipped with threaded AVK nuts to which the exterior sub frame shall be securely attached. Drilled holes with pop rivet attachment shall not be acceptable.
- E. Anchors shall be located a maximum of 18" on center and shall be a minimum of 2" long.
- F. All removable covers or trim, either exterior or interior, shall be attached with tamper-resistant screws spaced not more than 9" on center at the interior and spaced not more than 12" on center at the exterior.
- G. Horizontal or vertical 7/8" or 1" round steel detention bars shall penetrate and be securely welded to the concealed 1/4" x 2 1/2" flat detention bars to form an integral detention grid. The 7/8" or 1" round detention bars shall be equipped with a feature that allows the rod to rotate freely and discourages a device from cutting into the bar.
- H. Where the height or width of a window requires, intermediate detention bars may be added that would allow the horizontal or vertical 7/8" or 1" round steel detention bars to penetrate and run continuously. This intermediate bar would prevent any deflection or spreading of the horizontal or vertical detention bars. For maximum detention, this intermediate bar shall be 1/4" x 2 1/2" flat tool-resistant steel bar (1/4" x 2 1/2" flat mild steel for moderate detention) concealed in a 12-gauge steel formed impost. The recommended width or height without an intermediate bar should not exceed 36".
- I. Glazing:
 - 1. All frames shall be designed for outside glazing.
 - 2. Provide continuous glazing beads to suit glass, security glass, as specified.
 - 3. Glazing beads shall be attached with tamper-resistant screws spaced a maximum of 9" on center.

- J. Factory finishing (Steel):
 - 1. E-Coat Prime Painting
 - a. Following the pretreatment, windows and accessories are e-coated with a cathodic epoxy primer of PPG Powercron® 8000 or equivalent to insure all surfaces are evenly covered. Spray or dip primers shall not be acceptable.
 - b. Immersed in a rinse of ultra-filtered RO water for 3 min to remove all the excess paint and removing any runs.
 - c. A spray of ultra-filtered RO water repeats the above process to further improve surface conditions.
 - d. The primer is oven baked to 335 degrees F for 15 minutes to a dry film thickness of 0.7 - 1.0 mil.
 - e. The material is then cooled in preparation for the finish coat.
 - 2. Ultrathane Finish Painting
 - a. Following the prime coat, all windows and accessories are given a spray coat of acrylic polyurethane and oven baked at 225 degrees F for 15 minutes to dry film thickness of 1.5 to 2.0 mils.
 - b. The combined overall dry film thickness of the prime coat and finish coat shall be 2.2 - 3.0 mils.
 - c. The architect shall choose from an unlimited color selection. Color matching is available upon request, along with clear coats. Some colors may require clear coats for added protection.
 - d. E-Coat/top coat combination shall provide full documented compliance with all ASTM designations as outlined in Quality Assurance portion of the specifications.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine surfaces to receive windows for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Install the Work of this Section in accordance with the manufacturer's printed instructions, except as shown or specified otherwise.
- B. Paint aluminum surfaces in contact with masonry or incompatible metals with bituminous coating.
- D. Anchor window units securely in place, plumb, level, aligned, without warp of frames or sash.
 - 1. Anchor windows securely to surrounding construction with minimum of 1" long welds at anchor points. Maximum distance between weld points will be 18".
 - 2. The exterior joints between the windows, trim and mullions shall be properly sealed weather tight with an approved sealant and neatly pointed.

3.04 CLEANING

- A. Clean surfaces promptly after installation.

END OF SECTION

SECTION 088100
GLASS AND GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass.
- B. Glazing compounds and accessories.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Joint Sealer: Section 079005.
- B. Detention Windows: Section 085123.

1.03 REFERENCES

- A. Comply with recommendations in the "Glazing Manual" of the Glass Association of North America and the "Sealant Manual" of the Flat Glass Marketing Association except as shown or specified otherwise, and except as specifically recommended otherwise by the manufacturers of the glass and glazing materials.

1.04 SUBMITTALS

- A. See Section 013300 - Submittal Procedures for submittal process.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
- D. Certificates: Certify that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Compatibility of Materials: All components of the glazing system shall be manufactured or recommended by one manufacturer to assure the compatibility of materials.
- B. Safety Glazing Material: Type indicated, meeting requirements of ANSI Z97.1 with label on each piece.
- C. Certification:
 - 1. Affidavit by the material supplier, certifying type and quality of glass furnished.
- D. Noise-Reducing Glass: Labeled to show certified test for required STC rating per ASTM E 90.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect glass from edge damage during handling, storage, and installation.

1.07 PROJECT CONDITIONS

- A. Environmental Requirements: Comply with glazing materials manufacturer's written recommendations regarding environmental conditions under which glazing materials can be installed.
- B. Glazing channel dimensions shown are intended to provide for necessary minimum bite on the glass, minimum edge clearance and adequate glazing material thicknesses, with reasonable tolerances. Provide correct glass size for each opening, within the tolerances and necessary dimensions required.

PART 2 PRODUCTS

2.01 INSULATING FORCED ENTRY RESISTANT SECURITY GLAZING

- A. Organically Sealed Insulating Units: Manufacturer's standard edge construction of spacers and sealant permanently bonded to glass surfaces and hermetically sealed with secondary sealant to provide a dehydrated air space 1/2 inch thick with -60 degrees F dew point.
- B. Glass Clad Polycarbonate Laminate Sheet: Chemically strengthened clear glass laminated to each side of a polycarbonate core, fabricated to produce the required forced entry resistance listed below.
 - 1. Forced Entry Resistance: H.P. White TP-0500.01 Level 1 or ASTM F1915 Grade 4.
 - 2. Overall Nominal Thickness: 9/16 inch.
 - 3. Products:
 - a. Secure-Tem + Poly 2117 by Global Security Glazing.
 - b. ICGCP 916 CS by Standard Bent Glass.
 - c. 9/16" ArmorProtectPlus by Oldcastle Glass.
 - d. D-FenceGlas DFG 9/16 by North American Specialty Glass.
 - e. DGCP562 by Dlubak Corp.
- C. Tempered Float Glass; ASTM C 1048, Kind FT, Condition A, Type I, Class 1, tempered by the manufacturer's standard process.
 - 1. Nominal Thickness: 1/4 inch.
 - 2. Cut glass to final size before tempering.
- D. Overall Nominal Thickness of Sealed Unit: 1-5/16 inches.

2.02 GLAZING MATERIALS

- A. Type 1 Glazing Material: Silicone Rubber Glazing Sealant; silicone rubber one-part elastomeric sealant; FS TT-S-001543, Class A; acid-type for non-porous channel surfaces, and non-acid type where any of the channel surfaces are porous.
- B. Type 14 Glazing Material: Pure silicone caulk, closed cell PVC tape, or DAP 33 putty as recommended by Technical Glass Products to comply with U.L. Listing.

- C. Colors: For exposed materials provide color as indicated or, if not indicated, as selected by the Director from the manufacturer's standard colors. For concealed materials, provide any of the manufacturer's standard colors.
- D. Setting Blocks: Neoprene, 70-90 durometer hardness, with proven compatibility with sealants used.
- E. Spacers: Neoprene, 40-50 durometer hardness, with proven compatibility with glazing materials used.
- F. Compressible Filler Rod: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, proven to be compatible with glazing materials used, flexible and resilient, with 5-10 psi compression strength for 25 percent deflection.
- G. Cleaners, Primers and Sealers: Type recommended by glazing material manufacturer.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean the glazing channel, or other framing members to receive glass, immediately before glazing. Remove coatings which are not firmly bonded to the substrate. Remove lacquer from metal surfaces wherever elastomeric sealants are used.
- B. Inspect each piece of glass immediately before installation, and eliminate pieces which have observable damage or face imperfections.
- C. Apply primer or sealer to joint surfaces wherever recommended by sealant manufacturer.

3.02 INSTALLATION

- A. Each installation shall withstand normal temperature changes, wind loading, and impact loading (for operating sash and doors) without failure of any kind including loss or breakage of glass, failure of sealants or gaskets to remain watertight and airtight, deterioration of glazing materials and other defects in the Work.
- B. Install glass in accordance with the standards detailed in the "Glazing Manual" of the Glass Association of North America and the "Sealant Manual" of the Flat Glass Marketing Association except as shown and specified otherwise, and except as specifically recommended otherwise by the manufacturers of the glass and glazing materials.
- C. Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw and bow oriented in the same direction as other pieces.
- D. Install glazing materials in accordance with the manufacturer's printed instructions.

3.03 GLAZING

- A. Install setting blocks of proper size at quarter points of sill rabbet. If required to keep in place set blocks in thin course of the heel-bead compound.
- B. Provide spacers inside and out, and of proper size and spacing, for all glass sizes larger than 50 united inches, except where gaskets are used for glazing. Provide 1/8 inch minimum bite of spacers on glass and use thickness equal to sealant width, except with sealant tape use thickness slightly less than final compressed thickness of tape.
- C. Voids and Filler Rods: Prevent exudation of sealant or compound by forming voids or installing filler rods in the channel at the heel of jambs and head (do not leave voids in the sill channels) except as otherwise indicated, depending on light sizes, thickness and type of glass, and complying with manufacturer's recommendations.
- D. Do not cut, seam, nip, or abrade glass which is tempered, heat strengthened, or coated.
- E. Force glazing materials into channel to eliminate voids and to ensure complete "wetting" or bond of glazing material to glass and channel surfaces.
- F. Tool exposed surfaces of glazing sealants and compounds to provide a substantial "wash" away from the glass. Install pressurized tapes and gaskets to protrude slightly out of the channel, so as to eliminate dirt and moisture pockets.
- G. Where wedge-shaped gaskets are driven into one side of the channel to pressurize the sealant or gasket on the opposite side, provide adequate anchorage to ensure that gasket will not "walk" out when subjected to dynamic movement. Anchor gasket to stop with matching ribs, or by proven adhesives, including embedment of gasket tail in cured heel bead.
- H. Gasket Glazing: Miter cut and bond ends together at corners where gaskets are used for channel glazing, so that gaskets will not pull away from corners and result in voids or leaks in the glazing system.

3.04 CURE, PROTECTION AND CLEANING

- A. Cure glazing materials in accordance with manufacturer's printed instructions and recommendations, to obtain high early bond strength, internal cohesive strength, and surface durability.
- B. Mark glazed openings immediately upon installation of glass by attaching crossed streamers to framing. Do not apply markers of any type to surfaces of glass.
- C. Replace glass included in the work which is broken, or otherwise damaged, from the time Work is started at the site until the date of physical completion.
- D. Maintain glass in a reasonably clean condition until date of physical completion.
 - 1. Clean and trim excess glazing material from the glass and stops or frames promptly after installation.

- E. When directed, or just before the project is turned over to the State, remove dirt and other foreign material and wash and polish glass included in the work on both sides.

END OF SECTION

SECTION 260000

ELECTRICAL WORK

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Provide all labor, items, articles, materials, operations, methods or equipment listed, mentioned, indicated or scheduled on the drawings and specified herein, and required to complete the electrical work. Contract drawings and specifications are complementary and must be so construed to determine the full scope of work.
- B. Drawings:
 - 1. Contract Drawings are, in part, diagrammatic and are intended to convey the scope of the work and indicate the general arrangement of the equipment. Follow these drawings in laying out the work. Consult all drawings to become familiar with all conditions affecting the work and to verify spaces in which the work will be installed.
 - 2. Reasonable changes required by job conditions (including offsetting of conduits around beams, etc.) shall be made, after obtaining the Engineer's approval, at no additional cost to the Owner.
- C. Definitions: The term "provide" shall have the same meaning as "furnish and install". All materials so implied either on the drawings or in these specifications shall be furnished and installed unless specifically noted otherwise.

1.02 QUALITY ASSURANCE

- A. All work specified in Division 26 shall be performed by approved workmen qualified by satisfactory experience in the particular work.

1.03 STANDARDS

- A. The following standards shall govern and shall constitute minimum requirements as approved. If the requirements of this specification exceed those of the standards mentioned, this specification shall govern.
 - 1. Local building codes.
 - 2. Underwriters Laboratories Inc., (UL) approved or listed: All materials shall be UL approved or third party certified.
 - 3. Local electric utility: Standards in effect on bidding date.
 - 4. Local telephone utility: Standards in effect on bidding date for service entrance.
 - 5. National Electrical Manufacturer's Association, NEMA: Equipment enclosures, mountings and connections.
 - 6. America National Standards Institute, ANSI: Where mentioned herein.
 - 7. American Institute of Electronic and Electrical Engineers, IEEE: Power

- equipment.
- 8. National Electrical Safety Code, NESC: Outdoor and overhead work for temporary service.
- 9. Occupational Safety and Health Act, OSHA: Requirements for safety and health of employees.
- 10. National Fire Prevention Association, NFPA:
 - a. No. 70, National Electric Code, NEC, 2008 edition.
 - b. No. 101, Life Safety Code, most current release.

1.04 SUBMITTALS & CLOSE OUT AS-BUILT DOCUMENTATION

- A. Contractor shall prepare submittal documentation for all equipment/materials proposed for use on this project.
- B. Product Data: Catalog sheets, specifications and installation instructions.
- C. Provide approved shop drawings, wiring diagrams, instruction manuals, operating instructions, service manuals, and signed instruction receipts bound in common folder; submit to Engineer for approval and delivery to Owner prior to request for final acceptance and payment.
- D. Provide instruction on the operation and maintenance of all equipment installed in this Contract for personnel designated by the Owner. A minimum of two personnel instruction periods by qualified instructors shall be provided on normal operating procedures, minor adjustments and changes, preventive maintenance, and safety precautions. Obtain signed receipt that Owner's representative has been so instructed and can satisfactorily operate the equipment.

1.05 PERMITS AND INSPECTIONS

- A. Cost of fees shall be included in the bid as follows:
 - 1. Construction permits.
 - 2. Inspections and tests as described in this section.
- B. Underwriters' Certificate: Prior to submittal of Request for Final Payment, an electrical inspection certificate shall be obtained and submitted for approval. List of approved 3rd party inspecting underwriters is listed below:
 - 1. Commonwealth of Pennsylvania Inspectors
 - 2. Electrical Underwriters of NY, LLC
 - 3. The Inspector, LLC
 - 4. Other Underwriters are not restricted, however credentials shall be provided for Engineer approval prior to Inspection.

1.06 DEMOLITION

- A. General – Refer to all General Demolition notes on Contract Drawings.
- B. Ballast and Lamp Disposal

1. Remove all ballasts from existing luminaires indicated on contract drawings. Dispose of all ballasts which do not have non PCB labels in PCB containers and pay all costs to have containers taken to EPA approved incinerators and disposed of in accordance with all EPA regulations.
 2. Follow all EPA regulations for transporting material.
 3. If ballast has leaked in existing luminaires, remove material deposited in luminaire and dispose of those materials as indicated above. Provide documentation verifying disposal of PCB contaminated ballasts.
- C. Lamps
1. The Contractor shall employ the service of a certified disposal/recycling service company to dispose of all removed fluorescent and/or HID lamps. All disposal procedures shall be performed in accordance with EPA requirements and Subtitle C for the disposal of mercury contaminated lamps.
- D. Provide temporary wiring and connections to maintain existing electrical, communication, security and fire-alarm systems and circuits in service during construction. When work must be performed on energized equipment or circuits use personnel experienced in such operations.
- E. Existing Electrical, Communication, Security and Fire alarm systems: Maintain in service until new system (or associated modifications) are complete and ready for service. Disable systems only to make switchovers and connections. Minimize outage duration.
1. Obtain permission from Owner at least 72 hours before partially or completely disabling system.
 2. Make temporary connections to maintain service in areas adjacent to work area.

PART 2 PRODUCTS

2.01 RACEWAYS, FITTINGS AND ACCESSORIES

- A. Electrical Metallic Tubing: Steel, galvanized on the outside and enameled on the inside, UL categorized as Electrical Metallic Tubing (identified on UL Listing Mark as Electrical Metallic Tubing), by Allied Tube & Conduit Corp., LTV Copperweld, or Wheatland Tube Co.
- B. Flexible Metal Conduit: Galvanized steel strip shaped into interlocking convolutions, UL categorized as Flexible Metal Conduit (identified on UL Listing Mark as Flexible Steel Conduit or Flexible Steel Conduit Type RW), by AFC Cable Systems Inc., Anamet Electrical Inc., Electri-Flex Co., or International Metal Hose Co.
- C. Liquid-tight Flexible Metal Conduit: UL categorized as liquid-tight flexible metal conduit (identified on UL Listing Mark as Liquid-Tight Flexible Metal Conduit, also specifically marked with temperature and environment application data), by AFC Cable Systems Inc., Anamet Electrical Inc., Electri-Flex Co., or Universal Metal Hose Co.

- D. Wireways, Fittings and Accessories:
 - 1. NEMA 1 (Without Knockouts): Hoffman Enclosures Inc. Bulletin F-40, Hubbell/Wegmann's HSK, Lee Products Co.'s S Series, Rittal/Electromate's EW & EWHC Lay-In Wireway System, or Square D Co.'s Square-Duct Class 5100.

- E. Insulated Bushings, Plastic Bushings, and Insulated Grounding Bushings: By Appleton Electric Co., Cooper/Crouse-Hinds, OZ/Gedney Co., or Thomas & Betts Corp.

- F. Connectors and Couplings:
 - 1. Locknuts: UL, steel/zinc electroplate; Appleton Electric Co.'s BL-50 Series, Cooper/Crouse-Hinds' 11 Series, OZ/Gedney Co.'s 1-50S Series, Raco Inc.'s 1002 Series, Steel City/T&B Corp.'s LN-101 Series, or Thomas & Betts Corp.'s 141 Series.
 - 2. Electrical Metallic Tubing Couplings and Insulated Connectors: set screw type, steel/zinc electroplate; Appleton Electric Co.'s TW-50CS1, TWC-50CS Series, Cooper/Crouse-Hinds' 1650, 660S Series, Raco Inc.'s 2912, 2922 Series, Steel City/T & B Corp.'s TC-711 Series, or Thomas & Betts Corp.'s 5120, 5123 Series.
 - 3. Flexible Metal Conduit Connectors: Arlington Industries Inc.'s Saddle-Grip, OZ/Gedney Co.'s C-8T, 24-34T, ACV-50T Series, or Thomas & Betts Corp.'s Nylon Insulated Tite-Bite Series.
 - 4. Liquid-tight Flexible Metal Conduit Connectors:
 - a. Dry, Damp Locations: Steel, malleable iron, zinc electroplate, insulated throat; Appleton Electric Co.'s STB Series, Cooper/Crouse-Hinds' LTB Series, OZ/Gedney Co.'s 4Q-50T Series, Raco Inc.'s 3512 Series, Steel City/T & B Corp.'s LT-701 Series, or Thomas & Betts Corp.'s 5332 Series.
 - b. Wet Locations: OZ/Gedney Co.'s 4Q-TG Series (hot-dip/mechanically galvanized), or Thomas & Betts Corp.'s 3322 Series (PVC coated).

2.02 OUTLET, JUNCTION, AND PULL BOXES

- A. Galvanized Steel Outlet Boxes: Standard galvanized steel boxes and device covers by Appleton Electric Co., Beck Mfg./Picoma Industries, Cooper/Crouse-Hinds, Raco/Div. of Hubbell, or Steel City/T & B Corp.

- B. Galvanized Steel Junction and Pull Boxes: Code gage, galvanized steel screw cover boxes by Delta Metal Products Inc., Hoffman Enclosures Inc., Hubbell Wiegmann, Lee Products Co., or Rittal/Electromate.

- C. Threaded Type Boxes:
 - 1. Outlet Boxes:
 - a. For Dry, Damp Locations: Zinc electroplate malleable iron or cast iron alloy boxes by Appleton Electric Co., Cooper/Crouse-Hinds Co., OZ/Gedney Co., or Thomas & Betts Corp. with zinc electroplate steel covers to suit application.
 - b. For Wet Locations: Malleable iron or cast iron alloy boxes with hot dipped galvanized or other specified corrosion resistant finish as produced by Cooper/Crouse-Hinds (hot dipped galvanized or Corro-free

- epoxy powder coat), OZ/Gedney Co. (hot dipped galvanized), or Thomas & Betts Corp. (hot dipped galvanized) with stainless steel cover screws, and malleable iron covers gasketed to suit application.
2. Junction And Pull Boxes:
 - a. For Dry, Damp Locations: Zinc electroplate cast iron boxes by Appleton Electric Co., Cooper/Crouse-Hinds, OZ/Gedney Co., or Thomas & Betts Corp. with zinc electroplate steel or cast iron cover.
 - b. For Wet Locations: Cast iron boxes by Cooper/Crouse-Hinds' (hot dipped galvanized or Corro-free epoxy powder coat), OZ/Gedney Co. (hot dipped galvanized), or Thomas & Betts Corp. (hot dipped galvanized) with stainless steel cover screws and cast iron cover gasketed to suit application.
 3. Conduit Bodies, Threaded (Provided with a Volume Marking):
 - a. For Dry, Damp Location: Zinc electroplate malleable iron or cast iron alloy bodies with zinc electroplate steel covers; Appleton Electric Co.'s Unilets, Cooper/Crouse-Hinds' Condulets, OZ/Gedney Co.'s Conduit Bodies, or Thomas & Betts Corp.'s Conduit Bodies.
 - b. For Wet Locations: Malleable iron or cast iron alloy bodies with hot dipped galvanized or other specified corrosion resistant finish; Cooper/Crouse-Hinds' Condulets (hot dipped galvanized or Corro-free epoxy power coat), OZ/Gedney Co.'s Conduit Bodies (hot dipped galvanized), or Thomas & Betts Corp.'s Conduit Bodies (hot dipped galvanized) with stainless steel cover screws and malleable iron covers gasketed to suit application.
- D. Specific Purpose Outlet Boxes: As fabricated by equipment manufacturers for mounting their equipment thereon.
- E. Outlet Boxes and Related Products for Fire Rated Construction:
 1. Parameters For Use of Listed Metallic Outlet or Switch Boxes: UL Electrical Construction Equipment Directory - Metallic Outlet Boxes (QCIT).
 2. Wall Opening Protective Materials: As listed in UL Fire Resistance Directory - Wall Opening Protective Materials (CLIV), or UL Electrical Construction Equipment Directory - Wall Opening Protective Materials (QCSN).

2.03 CONDUCTORS AND ACCESSORIES

- A. Date of Manufacture: No insulated conductor more than one year old when delivered to the site will be acceptable.
- B. Acceptable Companies: American Insulated Wire Corp., BICC General Cable Industries Inc., Cerro Wire & Cable Co. Inc., Pirelli Cable Corp., or Southwire Co..
- C. Conductors: Annealed uncoated copper or annealed coated copper in conformance with the applicable standards for the type of insulation to be applied on the conductor. Conductor sizes No. 8 and larger shall be stranded.
- D. Types:

1. Electric Light and Power Wiring:
 - a. General: Rated 600V, NFPA 70 Type FEP, THHN, THWN-2.
 2. Class 1 Wiring:
 - a. No. 18 and No. 16 AWG: Insulated copper conductors suitable for 600 volts, NFPA 70 types KF-2, KFF-2, PAFF, PF, PFF, PGF, PGFF, PTF, SF-2, SFF-2, TF, TFF, TFN, TFFN, ZF, or ZFF.
 - b. Larger than No. 16 AWG: Insulated copper conductors suitable for 600 volts, in compliance with NFPA 70 Article 310.
 - c. Conductor with other types and thickness of insulation may be used if listed for Class 1 circuit use.
 3. Class 2 Wiring:
 - a. Multiconductor Cables: NFPA 70 Article 725, Types CL2P, CL2R, CL2.
 - b. Other types of cables may be used in accordance with NFPA 70 Table 725-61 "Cable Uses and Permitted Substitutions", as approved.
 4. Class 3 Wiring:
 - a. Single Conductors No. 18 and No. 16 AWG: Same as Class 1 No. 18 and No. 16 AWG conductors, except that:
 - 1) Conductors are also listed as CL3.
 - 2) Voltage rating not marked on cable except where cable has multiple listings and voltage marking is required for one or more of the listings.
 - b. Multiconductor Cables: NFPA 70 Article 725, Types CL3P, CL3R, CL3.
 - c. Other types of cables may be used in accordance with NFPA 70, Table 725-61 "Cable Uses and Permitted Substitutions", as approved.
- E. Connectors:
1. General: Connectors specified are part of a system. Furnish connectors and components, and use specific tools and methods as recommended by connector manufacturer to form complete connector system.
 2. Splices:
 - a. Spring Type:
 - 1) Rated 105° C, 600V; Buchanan/Ideal Industries Inc.'s B-Cap, Electrical Products Div./3M's Scotchlok Type Y, R, G, B, O/B+, R/Y+, or B/G+, or Ideal Industries Inc.'s Wing Nuts or Wire Nuts.
 - 2) Rated 150° C, 600V; Ideal Industries Inc.'s High Temperature Wire-Nut Model 73B, 59B.
 - b. Indent Type with Insulating Jacket:
 - 1) Rated 105° C, 600V; Buchanan/Ideal Industries Inc.'s Crimp Connectors, Ideal Industries Inc.'s Crimp Connectors, Penn-Union Corp.'s Penn-Crimps, or Thomas & Betts Corp.'s STA-KON.
 - c. Connector Blocks: NIS Industries Inc.'s Polaris System, or Thomas & Betts Corp.'s Blackburn AMT Series.
 - d. Resin Splice Kits: Electrical Products Div./3M's Scotchcast Brand Kit Nos. 82A Series, 82-B1 or 90-B1, or Scotchcast Brand Resin Pressure Splicing Method.
 - e. Heat Shrinkable Splices: Electrical Products Div./3M's ITCSN, Raychem Corp.'s Thermofit Type WCS, or Thomas & Betts Corp.'s SHRINK-KON Insulators.

- f. Cold Shrink Splices: Electrical Products Div./3M's 8420 Series.
 - 3. Gutter Taps: Anderson/Hubbell's GP/GT with GTC Series Covers, Blackburn/T&B Corp.'s H-Tap Type CF with Type C Covers, Framatome Connectors/Burndy's Polytap KPU-AC, H-Crimpit Type YH with CF-FR Series Covers, ILSCO's GTA Series with GTC Series Covers, Ideal Industries Inc.'s Power-Connect GP, GT Series with GIC covers, NSI Industries Inc.'s Polaris System, OZ/Gedney Co.'s PMX or PT with PMXC, PTC Covers, Penn-Union Corp.'s CDT Series, or Thomas & Betts Corp.'s Color-Keyed H Tap CHT with HTC Covers.
 - 4. Terminals: Nylon insulated pressure terminal connectors by Amp-Tyco/Electronics, Electrical Products Div./3M, Framatome Connectors/Burndy, Ideal Industries Inc., Panduit Corp., Penn-Union Corp., Thomas & Betts Corp., or Wiremold Co.
 - 5. Lugs:
 - a. Single Cable (Compression Type Lugs): Copper, one or 2 hole style (to suit conditions), long barrel; Anderson/Hubbell's VERSAtile VHCL, Blackburn/T&B Corp.'s Color-Coded CTL, LCN, Framatome Connectors/Burndy's Hylug YA, Electrical Products Div./3M Scotchlok 31036 or 31145 Series, Ideal Industries Inc.'s CCB or CCBL, NSI Industries Inc.'s L, LN Series, Penn-Union Corp.'s BBLU Series, or Thomas & Betts Corp.'s 54930BE or 54850BE Series.
 - b. Single Cable (Mechanical Type Lugs): Copper, one or 2 hole style (to suit conditions); Blackburn/T&B Corp.'s Color-Keyed Locktite Series, Framatome Connectors/Burndy's Qiklug Series, NSI Industries Inc.'s Type TL, Penn-Union Corp.'s VI-TITE Terminal Lug Series, or Thomas & Betts Corp.'s Locktite Series.
 - c. Multiple Cable (Mechanical Type Lugs): Copper, configuration to suit conditions; Framatome Connectors/Burndy's Qiklug Series, NSI Industries Inc.'s Type TL, Penn-Union Corp.'s VI-TITE Terminal Lug Series, or Thomas & Betts Corp.'s Color-Keyed Locktite Series.
- F. Tapes:
- 1. Insulation Tapes:
 - a. Rubber Tape: Electrical Products Div./3M's Scotch 130C, or Plymouth Rubber Co.'s Plymouth/Bishop W963 Plysafe.
 - 2. Moisture Sealing Tape: Electrical Products Div./3M's Scotch 2200 or 2210, or Plymouth Rubber Co.'s Plymouth/Bishop 4000 Plyseal-V.
 - 3. Electrical Filler Tape: Electrical Products Div./3M's Scotchfil, or Plymouth Rubber Co.'s Plymouth/Bishop 125 Electrical Filler Tape.
 - 4. Color Coding Tape: Electrical Products Div./3M's Scotch 35, or Plymouth Rubber Co.'s Plymouth/Bishop Premium 37 Color Coding.
- G. Wire-Pulling Compounds: To suit type of insulation; American Polywater Corp.'s Polywater Series, Electric Products Div./3M's WL, WLX, or WLW, Greenlee Textron Inc.'s Y-ER-EAS, Cable Cream, Cable Gel, Winter Gel, Ideal Industries Inc.'s Yellow 77, Aqua-Gel II, Agua-Gel CW, or Thomas & Betts Corp.'s Series 15-230 Cable Pulling Lubricants, or Series 15-631 Wire Slick.

- H. Wire Management Products: Cable clamps and clips, cable ties, spiral wraps, etc., by Catamount/T&B Corp., or Ideal Industries Inc.

2.04 WIRING DEVICES

- A. Local Switches:
 - 1. Single Pole, 20A, 120/277 V ac: Bryant's 4801, Crouse-Hinds/AH's 1891, General Electric's GE5931-1G, Hubbell's 1201, Leviton's 1201, Pass & Seymour's 15AC1, or Slater's 710-BR.
 - 2. Double Pole, 20A, 120/277 V ac: Bryant's 4802, Crouse-Hinds/AH's 1892, General Electric's GE5932-1G, Hubbell's 1202, Leviton's 1202, Pass & Seymour's 15AC2, or Slater's 712-BR.
 - 3. Three-Way, 20A, 120/277 V ac: Bryant's 4803, Crouse-Hinds/AH's 1893, General Electric's GE5933-1, Hubbell's 1203, Leviton's 1203, Pass & Seymour's 15AC3, or Slater's 713-BR.
 - 4. Four-Way, 20A, 120/277 V ac: Bryant's 4804, Crouse-Hinds/AH's 1894, General Electric's GE5934-1G, Hubbell's 1204, Leviton's 1204, Pass & Seymour's 15AC4, or Slater's 714-BR.
 - 5. Dimming style: Provide slide dimming, decora style – match dimming switches with ballast style proposed for use in application. Lutron, Pass & Seymour or equal.
 - 6. Lock Switch where designated.
- B. Occupancy Sensors:
 - 1. OS (TYPE C): Wall-mounted dual technology infrared/ultrasonic sensor, automatic/manual switch option, coverage up to 300 s.f. Rated: 120 volt, 600 watts ballast maximum, white color.
 - a. Make: Wattstopper: DSW-100-W
 - 2. OS (TYPE CD): Wall-mounted dual technology infrared/ultrasonic sensor, automatic/manual switch option, coverage up to 300 s.f. Rated: 120 volt, 600 watts ballast maximum, Dimming, works with 0-10VDC dimming drivers and ballasts, white color.
 - a. Make: Wattstopper: DW-311-W
- C. Receptacles:
 - 1 Duplex Receptacle, NEMA 5-20R (20A, 125 V, 2P, 3W): Provide Plug Tail Style.
 - 2. Ground Fault Interrupter Receptacle Rated 20A (NEMA 5-20R), Circuit-Ampacity 20A, Provide Plug Tail Style.
 - 3. Tamperproof with USB where designated.
- D. Wall Plates:
 - 1. Finished Areas: Provide Stainless Steel Wall Plates (Type 302 stainless steel with satin finish)
 - 2. Weatherproof Covers: Provide weather proof while in use.
 - 3. Covers for Threaded Type Boxes: Stamped sheet steel, gasketed device covers as produced by Crouse-Hinds Co., OZ/Gedney Co., or Thomas & Betts Corp.

2.05 SUPPORTING DEVICES

- A. Fasteners: Furnish all fasteners and hardware compatible with the materials and methods required for attachment of supporting devices.
1. Slotted Type Concrete Inserts: Galvanized pressed steel plate complying with ASTM A 283; box-type welded construction with slot designed to receive steel nut and with knockout cover, hot-dipped galvanized in compliance with ASTM A 123.
 2. Masonry Anchorage Devices: Expansion shields complying with FS FF-S-325, as follows:
 - a. Furnish lead expansion shields for machine screws and bolts 1/4 inch and smaller; head-out embedded nut type, single unit class, Group I, Type I, Class 1.
 - b. Furnish lead expansion shields for machine screws and bolts larger than 1/4 inch in size; head-out embedded nut type, multiple unit class, Group I, Type 1, Class 2.
 - c. Furnish bolt anchor expansion shields for lag bolts, zinc alloy, long-shield anchors class, Group II, Type 1, Class 1.
 - d. Furnish bolt anchor expansion shields for bolts, closed-end bottom bearing class, Group II, Type 2, Class 1.
 3. Toggle Bolts: Tumble-wing type, complying with FS FF-B-588C, Type, class and style as required.
 4. Nuts, Bolts, Screws, Washers:
 - a. General: Furnish zinc-coated fasteners, with galvanizing complying with ASTM A 153 for exterior use or where built into exterior walls. Furnish fasteners for the type, grade and class required for the particular installation.
 - b. Standard Nuts and Bolts: Regular hexagon head type, complying with ASTM A 307, Grade A.
 - c. Lag Bolts: Square head type, complying with FS FF-B-561C.
 - d. Machine Screws: Cadmium plated steel, complying with FS FF-S-92.
 - e. Wood Screws: Flat head carbon steel, complying with FS FF-S-111.
 - f. Plain Washers: Round, general assembly grade carbon steel, complying with FS FF-W-92.
 - g. Lock Washers: Helical spring type carbon steel, complying with FS FF-W-84.
- B. "C" Beam Clamps:
1. For 1 inch Conduit Maximum: B-Line Systems Inc.'s BG-8-C2, BP-8-C1 Series, or Caddy Fastener Div./Erico Products Inc.'s BC-8P and BC-8PSM Series.
 2. For 3 inch Conduit Maximum: Appleton Electric Co.'s BH-500 Series beam clamp with H50WB Series hangers, Kindorf/T&B Corp.'s 500 Series beam clamp with 6HO-B Series hanger, or OZ/Gedney Co.'s IS-500 Series beam clamp with H-OWBS Series hanger.
 3. For 4 inch Conduit Maximum: Kindorf/T&B Corp.'s E-231 beam clamp and E-234 anchor clip and C-149 series lay-in hanger, or Unistrut Corp.'s P2676 beam clamp and P-1659A Series anchor clip with J1205 Series lay in hanger.
 4. For Threaded Rods (100 lbs. load max.): Caddy Fastener Div./Erico Products

- Inc.'s BC-4A.
5. For Threaded Rods (200 lbs. load max.): Appleton Electric Co.'s BH-500 Series, Kindorf/T&B Corp.'s 500 Series, or OZ/Gedney Co.'s IS-500 Series.
 6. For Threaded Rods (300 lbs. load max.): Kindorf/T&B Corp.'s E-231 beam clamp and E-234 anchor clip, or Unistrut Corp.'s P2676 beam clamp and P-1659A Series anchor clip.
- C. Fastener Fittings for Wood and Existing Masonry: Kindorf/T&B Corp.'s E-243, E-244, E-245, E-170, or Versabar Corp.'s VX-4310, VX-2308, VX-4308, VX-4309.
 - D. Pipe Straps: Two hole steel conduit straps; Kindorf/T&B Corp.'s C-144 or C-280 Series.
 - E. Pipe Clamps: One-hole malleable iron type clamps; Kindorf/T&B Corp.'s HS-400 Series, or OZ/Gedney Co.'s 14-50 Series.
 - F. Channel Support System and Accessories: 12 gage galvanized steel channel and accessories; B-Line System Inc.'s B-22 (1-5/8 x 1-5/8 inches), B-12 (1-5/8 x 2-7/16 inches), B-11 (1-5/8 x 3-1/4 inches), Kindorf/T&B Corp.'s B-900 (1-1/2 x 1-1/2 inches), B-901 (1-1/2 x 1-7/8 inches), B-902 (1-1/2 x 3 inches), Unistrut Corp.'s, P-3000 (1-3/8 x 1-5/8 inches), P-5500 (1-5/8 x 2-7/16 inches), P-5500 (1-5/8 x 3-1/4 inches), or Versabar Corp.'s VA-1 (1-5/8 x 1-5/8 inches), VA-3 (1-5/8 x 2-1/2 inches).
 - G. Supporting Fasteners (Metal Stud Construction): Metal stud supports, clips and accessories as produced by Caddy/Erico Products Inc.

2.06 SAFETY SWITCHES (SINGLE THROW)

- A. NEMA 1, 3R, 4 (Stainless Steel), 12: Cutler-Hammer Inc.'s DH, Federal Pacific Electric Co.'s Class 1240, General Electric Co.'s Type TH, Square D Co.'s Heavy Duty Series, or Westinghouse Electric Corp.'s H-600; having:
 1. Fuses or unfused as indicated on drawings.
 2. Fused switches equipped with fuseholders to accept only the fuses specified (UL Class RK-1, RK-5, or L).
 3. NEMA 1 enclosure unless otherwise indicated on drawing.
 4. 240 V rating for 120 V, 208 V, or 240 V circuits.
 5. 600 V rating for 277 V, or 480 V circuits.
 6. Solid neutral bus when neutral conductor is included with circuit.
 7. Ground bus when equipment grounding conductor is included with circuit.
 8. Current rating and number of poles as indicated on drawings.
- B. Fuses:
 1. Cartridge Type (250 Volts, 600 Amperes or Less): Dual element time-delay, UL Class RK-5, 200,000 amperes R.M.S. symmetrical interrupting capacity:
 - a. Bussmann Mfg. Div./McGraw Edison Co.'s Type FRN-R.
 - b. Gould Inc. Circuit Protection Div. (Chase-Shawmut) Type AT-DER.
 - c. Littlefuse Inc.'s Type FLNR.

2.07 MANUAL TRANSFER SWITCHES

- A. Challenger's Double Throw Safety Switches, Cutler-Hammer Inc.'s DT-K, General Electric Co.'s Type TC, Square D Co.'s Double Throw Safety Switches, or Westinghouse Electric Corp.'s XF/XU; having:
1. Fuses, or unfused as indicated on drawings.
 2. Fused switches equipped with fuseholders to accept only the fuses specified in Section 262813 (UL Class RK-1, RK-5, L).
 3. NEMA 1 enclosure unless otherwise indicated on drawing.
 4. Minimum 240 V rating for 120 V, 208 V, or 240 V, circuits.
 5. Minimum 600 V rating for 277 V, or 480 V circuits.
 6. Solid neutral bus when neutral conductor is included with circuit and not indicated to be switched.
 7. Ground bus when equipment grounding conductor is included with circuit.
 8. Current rating and number of poles as indicated on drawings.

2.08 AUTOMATIC TRANSFER SWITCHES

- A. Provide complete factory assembled automatic power transfer equipment with field programmable digital electronic controls designed for fully automatic operation and including: surge voltage isolation, voltage sensors on all phases of both sources, linear operator, permanently attached manual handles, positive mechanical and electrical interlocking, and mechanically held contacts for both sources.
- B. Basis of Design is Kohler. Additional acceptable manufacturers: Emerson; ASCO Power Technologies, LP, Caterpillar Power Systems, Onan Transfer Products, GE Zenith Controls.
- C. Enclosures: General-purpose NEMA 250, Type 1 complying with NEMA ICS 6 and UL 508, unless otherwise indicated.
- D. Electrical Operation: Accomplish by a non-fused, momentarily energized solenoid or electric-motor-operated mechanism, mechanically and electrically interlocked in both directions.
- E. Switch Characteristics: Designed for continuous-duty repetitive transfer of full-rated current between active power sources.
1. Limitation: Switches using molded-case switches or circuit breakers or insulated-case circuit-breaker components are not acceptable.
 2. Switch Action: Double throw; mechanically held in both directions.
- F. Neutral Terminal: Solid, insulated from electrical ground and fully rated, unless otherwise indicated.
- G. The control module shall be mounted separately from the transfer mechanism unit for safety and ease of maintenance. Interfacing relays shall be industrial control grade plug-in type with dust cover. The control module shall include a user interface keypad with

tactile feedback pushbuttons and light-emitting diode status indication. These features shall be user accessible when the enclosure door is closed:

1. Keypad pushbuttons:
 - a. Start/end system test
 - b. Set/end exercise
 - c. End time delay
 - d. Lamp test/service reset

2. Light-emitting diode status indicators:
 - a. Contactor Position: Normal, Off, Emergency
 - b. Source Available: Normal, Emergency
 - c. Service required: immediate, maintenance
 - d. Not in automatic mode
 - e. Four stage time delay remaining
 - f. Exercise: load, no load, set/disabled
 - g. Test: load, no load
 - h. Load control active: peak shave, load shed, pre/post-transfer signal
 - i. In-phase monitor/Off delay active

2.09 GROUNDING AND BONDING

- A. Ground Clamps (Cable to Pipe): Blackburn/T&B Corp.'s GUV, Framatome Connectors/Burndy Corp.'s GAR, GD, GP, GK, or OZ/Gedney Co.'s ABG, CG.

- B. Ground Lugs: Copper, one or 2 hole style (to suit conditions), long barrel; Anderson/Hubbell's VERSAtile VHCL, Blackburn/T&B Corp.'s Color-Coded CTL, LCN, Framatome Connectors/Burndy's Hylug YA, Electrical Products Div./3M Scotchlok 31036 or 31145 Series, Ideal Industries Inc.'s CCB or CCBL, or Thomas & Betts Corp.'s 54930BE or 54850BE Series.

- C. Exothermic Type Weld: Erico Inc.'s Cadweld Process, or Furseweld/T&B Corp.'s Exothermic Welding System.

- D. Compression Connectors: Amp Inc.'s Ampact Copper Grounding System, or Burndy Corp.'s Hyground System.

- E. Grounding Electrode Conductors and Bonding Conductors: Copper conductors, bare or insulated with THWN, THWN-2 or THHN insulation.

- F. Hardware: Silicon-bronze bolts, nuts, flat and lock washers etc. by Dossert Corp., Framatome Connectors/Burndy Corp., or OZ/Gedney Co.

2.10 NAMEPLATES AND TAGS

- A. General: Precision engraved letters and numbers with uniform margins, character size minimum 3/16 inch high.
 1. Phenolic: Two color laminated engraver's stock, 1/16 inch minimum thickness,

- machine engraved to expose inner core color (white).
2. Aluminum: Standard aluminum alloy plate stock, minimum .032 inches thick, engraved areas enamel filled or background enameled with natural aluminum engraved characters.
 3. Materials for Outdoor Applications: As recommended by nameplate manufacturer to suit environmental conditions.

2.11 PANELBOARDS

- A. Distribution Style Basis of Design: Eaton, PRL4
- B. Branch Circuit Style Basis of Design: Eaton PRL1, PRL2, PRL3.
- C. Description: NEMA PB 1, circuit breaker type.
- D. Panelboard Bus:
 1. Fully Rated as indicated on Contract Drawings, Series Rated Panelboards shall not be accepted.
 2. Main Circuit Breaker (MCB) or Main Lug Only (MLO) in accordance with Contract Documents.
 3. Ampacity & interrupting capacity as indicated on Contract Drawings.
- E. Warning Labels
 1. Provide warning labels in accordance with NEC criteria.
 2. Panelboards fed from multiple sources, shall be placarded in accordance with NEC requirements: "Multiple Power Source Warning".
 3. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."
 4. NFPA 70E Label: Provide Arc Flash Hazard Warning label on each panelboard in a clearly visible location in accordance with NFPA 70E and NEC A.110.16. Label shall meet the requirements of ANSI Z535, Table 130.7(F).
- F. Directories
 1. Provide typed/printed panelboard directories for all new panels.
 2. Provide new typed/printed revised panelboard directories for all panels modified under this contract.

2.12 SWITCHBOARD

- A. Cutler-Hammer/Eaton Corp.'s MP200, General Electric Co.'s AV Line, Siemens/ITE Type FCI, Square D Co.'s QED, or Westinghouse Electric Corp.'s Pow-R-Line C, having:
 1. Ratings as indicated on drawings.
 2. UL label "SUITABLE FOR USE AS SERVICE EQUIPMENT".
 3. Front accessibility.
 4. Sections flush at rear (rear alignment).
 5. Main device: Stationary circuit breaker (see circuit breaker paragraph).
 - 1 - Voltmeter, switchboard type + 1 percent accuracy, scale 0-600 volts.
 - 1 - Voltmeter transfer switch (phase to phase, phase to neutral, and off).

- 1 - Ammeter, switchboard type + 1 percent accuracy, scale as required for 125 percent of full load transformer current.
- 1 - Ammeter transfer switch (each phase, and off).
- 6. Fully rated copper bus bars.
 - a. Ampere rating of through bus not less than frame size of main device.
- 7. Full length copper ground bus.
- 8. Full capacity copper neutral bus.
- 9. Sections that are designated "space" or "provision for future breaker" equipped with all accessories required to accept a future circuit breaker.
- 10. Space heaters with thermostatic control.
- 11. Circuit Breakers:
 - a. Mounting: Group mounted, or individually mounted as necessary to accommodate the circuit breaker style and switchboard construction.
 - b. Style: Molded case, or power circuit breakers, as required to accommodate the circuit breaker components.
 - c. Trip Device: Programmable solid state.
 - d. Interrupting Capacity: Equal to, or greater than, the short circuit rating required for the switchboard.
 - e. Component Description: See switchboard schedule for specific components required for each circuit breaker. In addition to the specific components, equip each circuit breaker with additional components as required to achieve a coordinated selective scheme between the main device and the feeder devices.

2.13 COMMUNICATION & STRUCTURED CABLING

- A. Refer to Contract Drawings for basis of design equipment and materials required for this project.

2.14 FIRE ALARM & SECURITY EQUIPMENT

- A. Work covered includes the furnishing of labor, equipment, and materials for installation of the fire alarm system as indicated on the drawings and herein.
- B. The Fire Alarm System shall consist of all necessary hardware equipment and software programming to perform the following functions:
 - 1. Fire alarm system detection and notification operations.
 - 2. Control and monitoring of and other equipment as indicated in the drawings and specifications.
- C. The system and all associated operations shall be in accordance with the following:
 - 1. Requirements of the following Model Fire Code: NFPA, 2003 Edition
 - 2. NFPA 72, National Fire Alarm Code, 2002 Edition
 - 3. NFPA 70, National Electrical Code, 2005 Edition
 - 4. NFPA 101, Life Safety Code, 2003 Edition
 - 5. NFPA 90A, Standard for the Installation of Air Conditioning and Ventilating Systems, 2002 Edition
 - 6. Local Jurisdictional Adopted Codes and Standards

7. ADA Accessibility Guidelines
- D. Quality Assurance:
 1. Shop Drawing Preparation, System overview design Qualifications: Personnel certified by NICET as Fire Alarm Level III, as supervisor, and NICET I and II all other installers
 2. Contractor engaging in modification of existing system shall be licensed by the State of NY. Provide certification as part of Submittal process.
- E. System Configuration
 1. Transmission shall be hard-wired, using separate individual circuits for each zone of alarm operation as required.
 2. System connections for initiating device circuits shall be Class B, Style D, signaling line circuits shall be Class B, Style 4 and notification appliance circuits shall be Class B, Style Y.
- F. Existing FACP shall be re-used for this project. Reference Contract Drawings for details.
- G. Provide Smoke & Heat detection equipment, Horn/Strobe & Strobe annunciation equipment (UL 464, UL 1971 85dBA, 24VDC), CO detection, Gas Detection and Pull Station equipment that is UL listed and approved for use with existing Honeywell control panel.
- H. EMG emergency pull station shall be provided and interfaced to the Security portion of the Control panel. Initiation of pull station shall alert the Central Station with a Panic Alarm. Coordinate with the Owner during installation for specific requirements. Provide Plastic Placard/Identification with Emergency activation instructions adjacent to the EMG pull station.
- I. Provide Notification power supply to drive the proposed annunciation equipment. Power supply shall be minimum 6 Amp, provide battery supporting calculation as part of submittal process.
- J. Provide Wireguards where indicated on the contract drawings 'WG'.

PART 3 EXECUTION

3.01 RACEWAY INSTALLATION

- A. Number of Raceways: Do not change number of raceways to less than the number indicated on the drawings.
 1. Each raceway shall enclose one circuit unless otherwise indicated on the drawings.
- B. Number of Raceways: Do not change number of raceways to less than the number indicated on the drawings except when appropriate for advantageous reuse of existing exposed and concealed raceways (The contract documents do not indicate location,

number, size or condition of existing raceways). Existing raceways may be reused if the following conditions are met:

1. The existing raceway must be of adequate size for the new conductors to be installed therein (NFPA 70 Chapter 9, Tables 1, 4, & 5; Appendix C, Tables C1-C12a). More circuits may be enclosed by existing raceways than the circuiting shown on the drawings provided conductor sizes are increased to compensate for derating (adjustment factors) and other considerations required by NFPA 70 Article 310-15.
2. Remove existing conductors.
3. Demonstrate to the Director's Representative that the existing raceway is clear of obstructions and in good condition.
4. Check ground continuity. When ground continuity of existing raceway is inadequate install insulated grounding bushings, grounding wedges, bonding straps, grounding jumpers or equipment grounding conductors to establish effective path to ground.
5. Install insulated bushings to replace damaged or missing bushings. Replace non-insulated bushings with insulated bushings on raceway sizes 1 inch and larger.
6. Install vertical conductor supports to replace existing or missing vertical conductor supports.
7. Install extension rings on existing boxes when the number of new conductors installed therein exceeds NFPA 70 requirements.
8. Furnish the Director's Representative with marked up drawings showing size and routing of existing raceways with number and size of new conductors installed therein. The drawings will be forwarded to the design engineer for verification of NFPA 70 compliance.

C. Conduit Installed Concealed:

1. Install conduit/MC Cabling concealed unless otherwise indicated on the drawings.
2. Existing Construction:
 - a. Run conduit in existing chases and hung ceilings.
 - b. If conduit cannot be installed concealed due to conditions encountered in the building, report such conditions and await approval in writing before proceeding.
3. New Construction:
 - a. Run conduit/MC Cabling in the ceilings, walls, and partitions.
4. If any portions of the conduit system cannot be installed concealed due to conditions encountered in the building, report such conditions and await approval in writing before proceeding.

D. Conduit Installed Exposed:

1. Install EMT conduit exposed where indicated on the drawings. If not indicated, conduit may be installed exposed, as approved, in:
 - a. Unfinished spaces, and finished spaces housing mechanical or electrical equipment that is generally accessible only to facility maintenance personnel.
 - b. Areas where existing conduits have been installed exposed.

- c. Areas where conduit cannot be installed concealed.
 - 2. Install conduit tight to the surface of the building construction. Exception:
 - a. Where otherwise indicated or directed.
 - 3. Install vertical runs perpendicular to the floor.
 - 4. Install runs on the ceiling perpendicular or parallel to the walls.
 - 5. Install horizontal runs parallel to the floor.
 - 6. Do not run conduits near heating pipes.
 - 7. Installation of conduit directly on the floor will not be permitted.

- E. Conduit Size: Not smaller than 1/2 inch electrical trade size.

- F. Raceway Schedule:
 - 1. Electrical Metallic Tubing:
 - a. May be installed concealed as branch circuit conduits above suspended ceilings where conduit does not support fixtures or other equipment.
 - b. May be installed concealed as branch circuit conduits in hollow areas in dry locations, including:
 - 1) Hollow concrete masonry units, except where cores are to be filled.
 - 2) Drywall construction with sheet metal studs, except where studs are less than 3-1/2 inches deep.
 - c. May be installed exposed as branch circuit conduits in dry non-hazardous locations at elevations over 10'-0" above finished floor where conduit does not support fixtures or other equipment.
 - 2. Flexible Metal Conduit – MC Cabling: Install equipment grounding conductor in the flexible metal conduit and bond at each box or equipment to which conduit is connected:
 - a. Use for final conduit connection to recessed lighting fixtures in suspended ceilings. Use 4 to 6 feet of flexible metal conduit (minimum size 1/2 inch) between junction box and fixture. Locate junction box at least 1 foot from fixture and accessible if the fixture is removed.
 - b. Use 1 to 3 feet of flexible metal conduit for final conduit connection to:
 - 1) Emergency lighting units.
 - 2) Dry type transformers.
 - 3) Motors with open, drip-proof or splash-proof housings.
 - 4) Equipment subject to vibration (dry locations).
 - 5) Equipment requiring flexible connection for adjustment or alignment (dry locations).
 - c. Use for concealed branch circuit conduits above existing non-removable suspended ceilings.
 - d. May be installed concealed as branch circuit conduits in drywall construction with sheet metal studs, except where studs are less than 3-1/2 inches deep.
 - 3. Liquid-tight Flexible Metal Conduit: Install equipment grounding conductor in liquid-tight flexible metal conduit and bond at each box or equipment to which conduit is connected:

- a. Use 1 to 3 feet of liquid-tight flexible metal conduit (UL listed and marked suitable for the installation's temperature and environmental conditions) for final conduit connection to:
 - 1) Motors with weather-protected or totally enclosed housings.
 - 2) Equipment subject to vibration (damp and wet locations).
 - 3) Equipment requiring flexible connection for adjustment or alignment (damp and wet locations).
- 4. Surface Metal Raceway: Use as exposed raceway system in finished spaces at locations indicated on the drawings.
 - a. Use surface metal raceway system of size required for number of wires to be installed therein. (Use specific size when indicated on the drawings).
 - b. Do not run raceway through walls that have a plaster finish nor through masonry walls or floors. Install a pipe sleeve, or a short length of conduit with junction boxes or adapter fittings for raceway runs through such areas. Run raceway along top of baseboards, care being taken to avoid telephone and other signal wiring. Where raceway crosses chair railing or picture molding, cut the chair railing or picture molding to permit the raceway to lie flat against the wall. Run raceway around door frames and other openings. Run raceway on ceiling or walls perpendicular to or parallel with walls and floors.
 - c. Secure one piece raceway every 30 inches alternately with 2 hole straps, and support clips (2 hole strap, support clip, 2 hole strap, etc.). Secure 2 piece raceway every 30 inches alternately with 2 hole straps and fasteners through back of raceway (2 hole strap, fastener through back, 2 hole strap, etc.).
 - d. Secure raceway at intervals not exceeding 36 inches.
 - e. Install separate equipment grounding conductor for grounding of equipment. The raceway alone will not be considered suitable for use as an effective path to ground.
 - f. Outlet box covers for pendant mounted fluorescent fixtures may be omitted if the fixture canopy is notched to receive the raceway and the canopy fits snugly against the ceiling.
 - g. Where equipment is mounted on an outlet box and the equipment base is larger than the outlet box, provide finishing collar around equipment base and outlet box or provide finishing collar/outlet box:
 - 1) Finishing Collar: Same finish and peripheral dimensions as the equipment base, including provisions for mounting, slots to fit over raceway and of depth to cover outlet box and extend back to ceiling or wall.
 - 2) Combination Finishing Collar/Outlet Box: Same finish and peripheral dimensions as the equipment base to be mounted thereon, gage or thickness of metal as required by National Electrical Code, including provision for mounting and knockouts for entrance of raceway.
- 5. Wireways: May be used indoors in dry locations for exposed raceway between grouped, wall mounted equipment.

- G. Fittings and Accessories Schedule:
1. General:
 - a. Use fittings and accessories that have a temperature rating equal to, or higher than the temperature rating of the conductors to be installed within the raceway.
 - b. Use zinc electroplate or hot dipped galvanized steel/malleable iron or cast iron alloy fittings and accessories in conjunction with ferrous raceways in dry and damp locations, unless otherwise specified or indicated on the drawings.
 - c. Use malleable iron or cast iron alloy fittings and accessories having hot dipped/mechanically galvanized finish or other specified corrosion resistant finish in conjunction with ferrous raceways in wet locations, unless otherwise specified or indicated on the drawings.
 - d. Use insulated grounding bushings or grounding wedges on ends of conduit for terminating and bonding equipment grounding conductors (when required) if cabinet or boxes are not equipped with grounding/bonding screws or lugs.
 - e. Use caps or plugs to seal ends of conduits until wiring is installed (to exclude foreign material).
 - f. Use insulated grounding bushings on the ends of conduits that are not directly connected to the enclosure (such as stub-ups under equipment, etc.), and bond between bushings and enclosure with equipment grounding conductor.
 - g. Use expansion fittings where raceways cross expansion joints.
 - h. Use deflection fittings where raceways cross expansion joints that move in more than one plane.
 - i. Use 2 locknuts and an insulated bushing on end of each conduit entering sheet metal cabinet or box in dry or damp locations.
 - 1) Plastic bushing may be used in lieu of insulated bushing on 1/2 and 3/4 inch conduit.
 - 2) Terminate conduit ends within cabinet/box at the same level.
 2. For Electrical Metallic Tubing: Use set screw style connectors and couplings.
 3. For Flexible Metal Conduit: Use flexible metal conduit connectors.
 4. For Liquid-tight Flexible Metal Conduit: Use liquid-tight connectors.
 5. For Surface Metal Raceway: Use raceway manufacturer's standard fittings and accessories.
 6. For Wireways: Use wireway manufacturer's standard fittings and accessories.

3.02 OUTLET, JUNCTION AND PULLBOX INSTALLATION

- A. Mounting Position of Wall Outlets for Wiring Devices: Unless otherwise indicated, install boxes so that the long axis of each wiring device will be vertical. Refer also to associated Mounting Details.
- B. Supplementary Junction and Pull Boxes: In addition to junction and pull boxes indicated on the drawings and required by NFPA 70, provide supplementary junction and pull boxes as follows:
1. When required to facilitate installation of wiring.

2. At every third 90 degree turn in conjunction with raceway sizes over 1 inch.
3. At intervals not exceeding 100 feet in conjunction with raceway sizes over 1 inch.

C. Box Schedule for Concealed Conduit System:

1. Non-Fire Rated Construction:
 - a. Depth: To suit job conditions and comply with NFPA 70 Article 370.
 - b. For Lighting Fixtures: Use galvanized steel outlet boxes designed for the purpose.
 - 1) For Fixtures Weighing 50 lbs. or Less: Box marked "FOR FIXTURE SUPPORT".
 - 2) For Fixtures More Than 50 lbs: Box listed and marked with the weight of the fixture to be supported (or support fixture independent of the box).
 - c. For Junction and Pull Boxes: Use galvanized steel boxes with flush covers.
 - d. For Switches, Receptacles, Etc:
 - 1) Plaster or Cast-In-Place Concrete Walls: Use 4 inch or 4-11/16 inch galvanized steel boxes with device covers.
 - 2) Walls Other Than Plaster or Cast-In-Place Concrete: Use type of galvanized steel box which will allow wall plate to cover the opening made for the installation of the box.
2. Recessed Boxes in Fire Rated (2 hour maximum) Bearing and Nonbearing Wood or Steel Stud Walls (Gypsum Wallboard Facings):
 - a. Use listed single and double gang metallic outlet and switch boxes. The surface area of individual outlet or switch boxes shall not exceed 16 square inches.
 - b. The aggregate surface area of the boxes shall not exceed 100 square inches per 100 square feet of wall surface.
 - c. Securely fasten boxes to the studs. Verify that the opening in the wallboard facing is cut so that the clearance between the box and the wallboard does not exceed 1/8 inch.
 - d. Separate boxes located on opposite sides of walls or partitions by a minimum horizontal distance of 24 inches. This minimum separation distance may be reduced when wall opening protective materials are installed according to the requirements of their classification.
 - e. Use wall opening protective material in conjunction with boxes installed on opposite sides of walls or partitions of staggered stud construction in accordance with the classification requirements for the protective material.
3. Other Fire Rated Construction: Use materials and methods to comply with the listing requirements for the classified construction.

D. Box Schedule for Exposed Conduit System:

1. Dry and Damp Locations: Use zinc electroplate or hot dipped galvanized threaded type malleable iron or cast iron alloy outlet, junction, and pullboxes or conduit bodies provided with a volume marking in conjunction with ferrous raceways unless otherwise specified or indicated on the drawings.

- a. Galvanized steel boxes may be used in conjunction with conduit sizes over 1 inch in non-hazardous dry and damp locations.
 - b. Galvanized steel boxes may be used in conjunction with electrical metallic tubing where it is allowed (specified) to be installed exposed as branch circuit conduits at elevations over 10'-0" above finished floor.
- 2. Wet Locations: Use threaded type malleable iron or cast iron alloy outlet junction, and pullboxes or conduit bodies (provided with a volume marking) with hot dipped galvanized or other specified corrosion resistant coating in conjunction with ferrous raceways unless otherwise specified or indicated on the drawings.
 - a. Use corrosion resistant boxes in conjunction with plastic coated rigid ferrous metal conduit.
- 3. Finishing Collar or Combination Finishing Collar/Outlet Box (Surface Mounted Equipment Used With Exposed Raceway):
 - a. Use finishing collar where surface mounted equipment is installed on an exposed raceway outlet box and the equipment base is larger than the outlet box.
 - b. Use combination finishing collar/outlet box where surface mounted equipment is not indicated to be installed on an exposed raceway outlet box, but raceway cannot be run directly into equipment body due to equipment design.
- E. Specific Purpose Outlet Boxes: Use to mount equipment when available and suitable for job conditions. Unless otherwise specified, use threaded type boxes with finish as specified for exposed conduit system, steel (painted) for surface metal raceway system and galvanized steel for recessed installations.

3.03 CONDUCTOR INSTALLATION

- A. Install conductors in raceways after the raceway system is completed.
- B. Do not change, group or combine circuits other than as indicated on the drawings.
- C. Do not change, group or combine circuits other than as indicated on the drawings except as permitted when reusing existing raceways.
- D. Common Neutral Conductor:
 - 1. Prohibited on this Project.
- E. Conductor Size: Install conductors of size shown on drawings. Where size is not indicated, the minimum size allowed is:
 - 1. For Electric Light and Power Branch Circuits: No. 12 AWG.
 - 2. For Class 1 Circuits:
 - a. No. 18 and No. 16 AWG may be used provided they supply loads that do not exceed 6 amps (No. 18 AWG), or 8 amps (No. 16 AWG).
 - b. Larger than No. 16 AWG: Use to supply loads not greater than the ampacities given in NFPA 70 Section 310-15.
 - 3. For Class 2 Circuits: Any size to suit application.

4. For Class 3 Circuits: No. 18 AWG.
- F. Color Coding:
1. Color Coding shall be per electrical industry standards for 240V single phase systems.
 2. Existing Color Coding Scheme: Where an existing color coding scheme is in use, match the existing color coding if it is in accordance with the requirements of NFPA 70.
 3. Color Code For Wiring Other Than Electric Light and Power: In accordance with ICEA/NEMA WC-30 "Color Coding of Wires and Cables". Other coding methods may be used, as approved.
- G. Identification: Use tags to identify feeders and designated circuits. Install tags so that they are easily read without moving adjacent feeders or require removal of arc proofing tapes. Attach tags with non-ferrous wire or brass chain.
1. Interior Feeders: Identify each feeder in pullboxes and gutters. Identify by feeder number and size.
- H. Use wire management products to bundle, route, and support wiring in junction boxes, pullboxes, wireways, gutters, channels, and other locations where wiring is accessible.
- I. Equipment Grounding Conductor:
1. Install equipment grounding conductor:
 - a. All raceway circuits/feeders.
 2. Equipment grounding conductor is not intended as a current carrying conductor under normal operating circumstances.
 3. Color Coding For Equipment Grounding Conductor:
 - a. Color Code: Green.
 - b. "Green" For sizes No. 6 AWG or Smaller:
 - 1) Continuous green outer finish, or:
 - 2) Continuous green outer finish with one or more yellow stripes, or:
 - 3) Bare copper (see exception below).
 - c. "Green" For Sizes Larger Than No. 6:
 - 1) Stripping the insulation or covering from the entire exposed length (see exception below).
 - 2) Marking the exposed insulation or covering with green color coding tapes.
 - 3) Identify at each end and at every point where the equipment grounding conductor is accessible.
 - d. Exception For use of Bare Copper: Not allowed for use where NFPA 70 specifically requires equipment grounding conductor to be insulated, or where specified in other Sections or indicated on the drawings to be insulated.
- J. Conductor Schedule - Types and Use:
1. Electric Light and Power Circuits:
 - a. THHN, THWN, THWN-2: Wiring in dry or damp locations (except

- where special type insulation is required).
2. Class 1 Circuits: Use Class 1 wiring specified in Part 2 (except where special type insulation is required).
 3. Class 2 Circuits: Use Class 2 wiring specified in Part 2 (except where special type insulation is required).
 4. Class 3 Circuits: Use Class 3 wiring specified in Part 2 (except where special type insulation is required).
- K. Connector Schedule - Types And Use:
1. Temperature Rating: Use connectors that have a temperature rating, equal to, or greater than the temperature rating of the conductors to which they are connected
 2. Splices:
 - a. Dry Locations:
 - 1) For Conductors No. 8 AWG or Smaller: Use spring type pressure connectors, indent type pressure connectors with insulating jackets, or connector blocks (except where special type splices are required).
 - 2) For Conductors No. 6 AWG or Larger: Use connector blocks or uninsulated indent type pressure connectors. Fill indentions in uninsulated connectors with electrical filler tape and apply insulation tape to insulation equivalent of the conductor, or insulate with heat shrinkable splices or cold shrink splices.
 - 3) Gutter Taps in Panelboards: For uninsulated type gutter taps fill indentions with electrical filler tape and apply insulation tape to insulation equivalent of the conductor, or insulate with gutter tap cover.
 - b. Damp Locations: As specified for dry locations, except apply moisture sealing tape over the entire insulated connection (moisture sealing tape not required if heat shrinkable splices or cold shrink splices are used).
 - c. Wet Locations: Use uninsulated indent type pressure connectors and insulate with resin splice kits, cold shrink splices or heat shrinkable splices. Exception: Splices above ground which are totally enclosed and protected in NEMA 3R, 4, 4X enclosures may be spliced as specified for damp locations.
 3. Terminations:
 - a. For Conductors No. 10 AWG or Smaller: Use terminals for:
 - 1) Connecting wiring to equipment designed for use with terminals.
 - b. For Conductors No. 8 AWG or Larger: Use compression or mechanical type lugs for:
 - 1) Connecting cables to flat bus bars.
 - 2) Connecting cables to equipment designed for use with lugs.
 - c. For Conductor Sizes Larger Than Terminal Capacity On Equipment: Reduce the larger conductor to the maximum conductor size that terminal can accommodate (reduced section not longer than one foot). Use compression or mechanical type connectors suitable for reducing connection.

3.04 WIRING DEVICE INSTALLATION

- A. Local Switches:
 - 1. Install switches indicated Sa, Sb, Sc, etc, for control of outlets, with corresponding letters on the same circuit.
 - 2. Where more than one switch occurs at same location in a 120 volt system, arrange switches in gangs and cover with one face plate.
 - 4. Install single and double pole switches so that switch handle is up when switch is in the "On" position.
- B. Receptacles:
 - 1. Install receptacles with ground pole in the up position.
- C. Wall Plates:
 - 1. Install wall plates on all wiring devices in dry locations, with finish to match hardware in each area.
 - 2. Install 5/8 inch bushed wall plates on telephone outlets.
- D. Weatherproof Covers: Install weatherproof covers on wiring devices in damp and wet locations.
- E. Nameplates: Install phenolic or embossed aluminum nameplate on each special purpose receptacle indicating phase, ampere and voltage rating of the circuit. Attach nameplate with rivets or vandal resistant fasteners to wall plate or to wall above receptacle. Wall plates may be engraved with required data in lieu of separate nameplates.

3.05 SUPPORTING DEVICE INSTALLATION

- A. Attachment of Conduit System:
 - 1. Wood Construction: Attach conduit to wood construction by means of pipe straps with wood screws or lag bolts.
 - 2. Masonry Construction: Attach conduit to masonry construction by means of pipe straps and masonry anchorage devices.
 - 3. Steel Beams: Attach conduit to steel beams by means of "C" beam clamps and hangers.
 - 4. Multiple Parallel Conduit Runs: Use channel support system.
 - 5. Conduit Above Suspended Ceiling: Do not rest conduit directly on runner bars, T-bars, etc. Support conduit from ceiling supports or from construction above suspended ceiling.
- B. Metal Stud Construction: Attach raceways and boxes to metal studs by means of supporting fasteners manufactured specifically for the purpose.
 - 1. Support and attach outlet boxes so that they cannot torque/twist. Either:
 - a. Use bar hanger assembly, or;
 - b. In addition to attachment to the stud, also provide far side box support.

- C. Support of Lighting Fixtures:
 - 1. General: Support fixtures with suitable accessories.
 - 2. Number of Supports (Fluorescent Fixtures):
 - a. Support individual fluorescent fixtures less than 2 feet wide at 2 points. Support continuous row fluorescent fixtures less than 2 feet wide at points equal to the number of fixtures plus one. Uniformly distribute the points of suspension over the row of fixtures.
 - b. Support individual fluorescent fixtures 2 feet or wider at 4 corners. Support continuous row fluorescent fixtures 2 feet or wider at points equal to twice the number of fixtures plus 2. Uniformly distribute the points of suspension over the row of fixtures.

3.06 SAFETY SWITCH INSTALLATION

- A. Install switches so that the maximum height above the floor to the center of the operating handle does not exceed 6'-6".
- B. Identify each safety switch, indicating purpose or load served:
 - 1. Attach nameplate to the cover using adhesive specifically designed for the purpose, or mount nameplate on wall or other conspicuous location adjacent to switch. Do not penetrate enclosure with fasteners.
- C. Paint switches used for oil burner emergency switch with red paint and identify "OIL BURNER".

3.07 MANUAL / AUTOMATIC TRANSFER SWITCH INSTALLATION

- A. Phase Relationship: Correctly phase emergency and normal service so that motor rotation will not reverse upon transfer from normal to emergency.
- B. Identify each switch, indicating purpose or load served. Also include instructions on the nameplate indicating operating procedure for safe manual transfer.
 - 1. NEMA 1 Enclosures: Rivet or bolt nameplate to the cover.
 - 2. NEMA 12 Enclosures: Rivet or bolt and gasket nameplate to the cover.
 - 3. NEMA 3R, 4, 4X Enclosures: Attach nameplate to the cover using adhesive specifically designed for the purpose, or mount nameplate on wall or other conspicuous location adjacent to switch. Do not penetrate enclosure with fasteners.

3.08 SWITCH BOARD INSTALLATION

- A. Install switchboards in accordance with NEMA Publication No. PB2.1 "Instructions for Proper Handling, Installation, Operation and Maintenance of Deadfront Distribution Switchboards".
 - 1. Set and program the switchboard devices in accordance with the approved coordinated selective scheme.
- B. Install foundation channels for anchoring and leveling of each switchboard.

- C. Identification:
 - 1. Install on the front of each circuit breaker, a phenolic nameplate indicating load served by circuit breaker.
 - 2. Stencil on front of each switchboard with white paint in 1/2 inch lettering "SB-1, etc." corresponding to switchboard designations on the drawings, and electrical parameters (phase, wire, voltage).

- D. Preliminary System Test:
 - 1. Preparation: Have the Company Field Advisor adjust the completed switchboard devices and then operate them long enough to assure that they are performing properly.
 - 2. Run a preliminary test for the purpose of:
 - a. Determining whether the switchboard is in a suitable condition to conduct an acceptance test.
 - b. Checking instruments and equipment.
 - c. Training facility personnel.

- E. System Acceptance Test:
 - 1. Preparation: Notify the Owner's Representative at least 3 working days prior to the test so arrangements can be made prior to the test to have a Facility Representative witness the test.
 - 2. Make the following tests:
 - a. Test devices which have ground fault protection in accordance with the approved information sheets and test form.
 - b. Test programmable solid state trip devices in accordance with the manufacturer's recommendations.
 - 3. Supply all equipment necessary for system adjustment and testing.
 - 4. Submit written report of test results signed by the Company Field Advisor and the Owner's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly in a conspicuous location on the switchboard.

3.09 GROUNDING AND BONDING

- A. Connections:
 - 1. Make grounding and bonding connections, except buried connections, with silicone-bronze hardware and ground clamps, ground lugs or compression connectors, to suit job conditions.
 - 2. For buried connections use exothermic type weld or compression connectors.

END OF SECTION

SECTION 263213

DIESEL ENGINE DRIVEN GENERATOR SET

PART 1 GENERAL

1.01 SUMMARY

- A This section includes the following items from a single supplier:
 - 1. Diesel Engine Driven Generator Set
 - 2. Enclosure
 - 3. Subbase fuel tank
 - 4. Related Accessories as specified

- B Related Requirements
 - 1. It is the intent of this specification to secure a Diesel engine-driven generator set that has been prototype tested, factory built, production-tested, and site-tested together with all accessories necessary for a complete installation as shown on the plans and drawings and specified herein.
 - 2. Any exceptions to the published specifications shall be subject to the approval of the engineer and submitted minimum 10 days prior to the closing of the bid with a line-by-line summary description of all the items of compliance, any items that have been omitted or have been taken exception to, and a complete description of all deviations.
 - 3. It is the intent of this specification to secure a generator set system that has been tested during design verification, in production, and at the final job site. The generator set will be a commercial design and will be complete with all of the necessary accessories for complete installation as shown on the plans, drawings, and specifications herein. The equipment supplied shall meet the requirements of the National Electrical Code and applicable local codes and regulations.
 - 4. All equipment shall be new and of current production by an international, power system manufacturer of generators, transfer switches, and paralleling switchgear. The manufacturer shall be a supplier of a complete and coordinated system. There will be single-source responsibility for warranty, parts, and service through a factory-authorized representative with factory-trained technicians.

1.02 SUBMITTALS

- A. Product Data: For each type of packaged engine generator indicated. Include rated capacities, operating characteristics, UL listing, and furnished specialties and accessories. In addition, include the following:
 - 1. Thermal damage curve for generator.
 - 2. Time-current characteristic curves for generator protective device.
 - 3. Alternator Data Sheet- indicate sub transient reactance value at specified operating temperature (p.u.).
 - 4. Engine Data Sheet.
 - 5. Manufacturer's Warranty Compliance Statement.

6. Specification Compliance Statement: Verify compliance with each specification section, where specification deviation exists, provide explanation and proposed resolution.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 1. Dimensioned outline plan and elevation drawings of engine-generator set and other components specified.
 2. Wiring Diagrams: Power, signal, and control wiring, and schematic diagrams.
 3. Interconnect Diagrams: Power, signal, and control wiring.
 - C. Qualification Data: For manufacturer
 - D. Source quality-control test reports.
 1. Certified Test Reports: For components and accessories that are equivalent, but not identical, to those tested on prototype unit.
 2. Certified Summary of Performance Tests:
 3. Report of factory test on units to be shipped for this Project, showing evidence of compliance with specified requirements.
 4. Report of sound generation.
 - E. Field quality-control test reports.
 - F. Operation and Maintenance Data: For packaged engine generators to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 1 Section "Operation and Maintenance Data," include the following:
 1. List of tools and replacement items recommended to be stored at Project for ready access. Include part and drawing numbers, current unit prices, and source of supply.
 - G. Warranty: Special warranty specified in this below.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
 1. Maintenance Proximity: Not more than four hours' normal travel time from Installer's place of business to Project site.
 2. Engineering Responsibility: Preparation of data for vibration isolators and seismic restraints of engine skid mounts, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Manufacturer Qualifications: A qualified manufacturer. Maintain, within 250 miles of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.
- C. Source Limitations: Obtain packaged generator sets and auxiliary components through one source from a single manufacturer.

- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- E. Comply with ASME B15.1.
- F. Comply with NFPA 37.
- G. Comply with NFPA 70.
- H. Comply with UL 2200.
- I. Engine Exhaust Emissions: Comply with applicable state and local government requirements, and EPA requirements.

1.04 PROJECT CONDITIONS

- A. Environmental Conditions: Engine-generator system shall withstand the following environmental conditions without mechanical or electrical damage or degradation of performance capability:
 - 1. Ambient Temperature: 100 °F
 - 2. Altitude : 1500 ft
 - 3. Relative Humidity: 95%

1.05 COORDINATION

- A. Coordinate size and location of concrete bases for package engine generators; coordinate conduct stub-up locations with unit manufacturer's recommendations. Cast anchor-bolt inserts into bases. Concrete pad to be installed by Contact #1.

1.06 WARRANTY

- A. A five year basic extended warranty for the generator set shall be included to guarantee against defective material and workmanship in accordance with the manufacturer's published warranty from date of start-up. Optional warranties shall be available upon request.
- B. The generator set manufacturer and its distributor shall maintain a 24-hour parts and service organization. This organization shall be regularly engaged in a maintenance contract program to perform preventive maintenance and service on equipment similar to that specified. A service agreement shall be available and shall include system operation under simulated operating conditions, adjustment to the generator set, transfer switch, and switchgear controls as required, and certification in the owner's maintenance log of repairs made and proper functioning of all systems.

1.08 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Fuses: One for every 10 of each type and rating, but no fewer than one set of three of each.
 - 2. Indicator Lamps: Two for every six of each type used, but no fewer than two of each.

3. Filters: Two sets each of lubricating oil, fuel, and combustion-air filters.
4. Two sets of all belts.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis-of-Design Product: REHLKO model 250REOZJE with a 4UA10 alternator. It shall provide 313 kVA and 250 kW when operating at 120/208 volts, 60 Hz, 0.80 power factor. The generator set shall be capable of a 130°C Standby rating while operating in an ambient condition of less than or equal to 100 °F and a maximum elevation of 1500 ft above sea level. The standby rating shall be available for the duration of the outage
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Discovery Energy, LLC (Rehlko)
 2. Caterpillar; Engine Div.
 3. Onan/Cummins Power Generation; Industrial Business Group.
 4. Baldor.

2.02 ENGINE

- A. The minimum 9.0-liter displacement engine shall deliver a minimum of 385 HP at a governed engine speed of 1800 rpm, and shall be equipped with the following:
 1. Electronic isochronous governor capable of 0.25% steady-state frequency regulation
 2. 24-volt positive-engagement solenoid shift-starting motor
 3. 60-ampere automatic battery charging alternator with a solid-state voltage regulation and negative ground polarity
 4. Positive displacement, full-pressure lubrication oil pump, cartridge oil filters, dipstick, and oil drain
 5. Dry-type replaceable air cleaner elements for normal applications
 6. The engine shall be fueled by #2 Diesel fuel.
 7. Fuel consumption at 100% load shall not exceed 17.6 gallons per hour when operating in standby configuration.
 8. The exhaust manifold shall be dry.
 9. Exhaust flow shall not exceed 1911 cubic feet per minute at rated kW.
 10. Exhaust temp shall not exceed 1157F at rated kW.
 11. The engine shall have a minimum of 6 cylinders in a inline configuration and be liquid-cooled.
- B. The engine shall be EPA certified from the factory
- C. The generator must accept rated load in one-step.

2.03 COOLING SYSTEM

- A. The engine shall be liquid-cooled by a closed loop, unit mounted radiator rated to operate the generator set at full load at an ambient temperature of 50 degrees C (122 degrees F). The radiator fan and other rotating engine parts shall be guarded against accidental contact.

- A Standard Air Cleaner
 - 1. The air cleaner shall provide engine air filtration which meets the engine manufacturer's specifications under typical operating conditions.

2.04 BATTERY

- A. Each genset requires two (2) maintenance free BCI group 24 batteries which must meet the engine manufactures' specifications for the ambient conditions specified in Part 1 Project Conditions and shall comply with the NFPA requirements for engine cranking cycles. This battery shall be rated according to SAE Standards J-537 with a minimum cold cranking amp of 925 amps. The battery plates shall be constructed of a Calcium-Lead alloy to provide long waterless operation and extended battery life. The battery must contain a handle to aid in lifting and the case must be constructed of polypropylene to resist breakage and extend service life.
- B. Battery rack and battery cables capable of holding the manufacturer's recommended batteries shall be supplied.

2.05 HOUSING

- A. Level 2 Sound Attenuated Enclosure
 - 1. The generator set shall be supplied with a Level 2 Sound Attenuated Enclosure, providing a sound level of 75 dB(A) while the generator is operating at 100% load at 7 meters (23 feet) using acoustic insulation and acoustic-lined inlet hoods, and constructed from high strength, low alloy 14 gauge galvanized steel. The acoustic insulation used shall meet UL 94 HF1 flammability classification. The enclosure shall be manufactured from bolted panels to facilitate service, future modifications, or field replacement. The enclosure shall use external vertical air inlet and outlet hoods with 90 degree angles to discharge air up and reduce noise. The enclosure shall have an integral rodent guard and skid end caps and shall have bracing to meet 241 kph (150 mph) wind loading.
 - 2. The enclosure components and skid shall be cleaned with a two-stage alkaline cleaning process to remove grease, grit, and grime from parts. Components shall then be subjected to a Zirconium-based conversion coating process to prepare the metal for electrocoat (e-coat) adhesion. All enclosure parts shall receive an 100% epoxy primer electrocoat (e-coat) with high-edge protection. Following the e-coat process, the parts shall be finish coated with powder baked paint for superior finish, durability, and appearance with a Power Armor™ industrial finish that provides heavy duty durability in harsh conditions, and is fade-, scratch- and corrosion-resistant.
 - 3. The enclosure must surpass a 3,000 hour salt spray corrosion test per ASTM B-1117.
 - 4. Enclosures will be finished in the manufacturer's standard color.
 - 5. The enclosures shall allow the generator set to operate at full load in an ambient temperature of 50°C with no additional derating of the electrical output of the generator set.
 - 6. Enclosures shall be equipped with sufficient side and end doors to allow access for operation, inspection, and service of the unit and all

options. Minimum requirements are two doors per side. When the generator set controller faces the rear of the generator set, an additional rear facing door is required. Access to the controller and main line circuit breaker shall meet the requirements of the National Electric Code.

7. Doors shall be fitted with hinges, hardware, and the doors shall be removable.
8. Doors shall be equipped with lockable latches. Locks shall be keyed alike. Door locks shall be recessed to minimize potential of damage to door/enclosure.
9. A duct between the radiator and air outlet shall be provided to prevent re-circulation of hot air.
10. The complete exhaust system shall be internal to the enclosure.
11. The critical silencer shall be fitted with a tailpipe and rain cap.

2.06 SUBBASE FUEL TANK

- A. Generator set to be provided with subbase fuel tank.
 1. The above-ground rectangular secondary containment tank mounts directly to the generator set, below the generator set skid (subbase).
 2. Fuel tank volume shall be a minimum of 845 gallons to meet or exceed 2 days of continuous operation.
 3. Fuel tank shall be provided with epoxy based rubberized coating.
 4. The secondary containment generator set base tank meets UL 142 tank requirements. The inner (primary) tank is sealed inside the outer (secondary) tank. The outer tank contains the fuel if the inner tank leaks or ruptures.
 5. Tank and interstitial space shall be vented.
 6. NFPA compliant. Designed to comply with the installation standards of NFPA 30 and NFPA 37.
 7. Emergency pressure relief vents. Vents ensure adequate venting of the inner and outer tank under extreme pressure and/or emergency conditions.
 8. Low fuel level switch. Annunciates a 50% low fuel level condition at generator set control.
 9. Leak detection switch. Annunciates a contained primary tank fuel leak condition at generator set control.

2.07 CONTROL AND MONITORING

- A. Advanced Power Management 402 (APM402) Generator Set Controller
 1. The generator set controller shall be a microprocessor-based control system that will provide automatic starting, system monitoring, and protection. The controller system shall also provide local monitoring and remote monitoring. The control system shall be capable of PC based updating of all necessary parameters, firmware, and software.
 2. The controller shall be mounted on the generator set and shall have integral vibration isolation. The controller shall be prototype and reliability tested to ensure operation in the conditions encountered.
- B. Codes and Standards

1. The generator set controller shall meet NFPA 110 Level 1 requirements and shall include an integral alarm horn as required by NFPA.
 2. The controller shall meet NFPA 99 and NEC requirements.
 3. The controller shall be UL 508 listed.
- C. Applicability
1. The controller shall be a standard offering in the manufacturer's controller product line.
 2. The controller shall support 12-volt and 24volt starting systems.
 3. The controller's environmental specification shall be: -40°C to 70°C operating temperature range and 5-95% humidity, non-condensing.
 4. The controller shall mount on the generator or remotely within 40 feet with viewable access.
- D. Controller Buttons, Display and Components
1. The generator set controller shall include the following features and functions:
 - a. Push button Master Control buttons. The buttons shall be tactile-feel membrane with an indicator light to initiate the following functions:
 - 1.) Run Mode: When in the run mode the generator set shall start as directed by the operator.
 - 2.) Off/Reset Mode: When in the Off/Reset mode the generator set shall stop, the reset shall reset all faults, allowing for the restarting of the generator set after a shutdown.
 - 3.) Auto Mode: When in Auto the mode the generator set shall be ready to accept a signal from a remote device.
 - b. Emergency Stop Switch. The remote stop switch shall be red in color with a "mushroom" type head. Depressing the stop button will immediately stop the generator set and lockout the generator set for any automatic remote starting.
 - c. Push Button/Rotary Selector dial. This dial shall be used for selection of all Menus and sub-menus. Rotating the dial moves you through the menus, pushing the dial selects the menu and function/features in that menu. Pushing the button selects the feature/function and sub-menus.
 - d. Digital Display. The digital display shall be alphanumeric, with 2 lines of data and approximately 24 characters. The display shall have back lighting for ease of operator use in high and low light conditions. The display shall display status of all faults and warnings. The display shall also display any engine faults. While the generator set is running, the display shall scroll all-important information across the screen for ease of operator use. The scroll can be stopped by pushing the rotary dial. The display shall fall asleep when the generator set is not running and will wake-up when the generator set starts, or the

- rotary dial is depressed.
- e. Fault Light. The controller shall have an annunciator fault light that glows red for faults and yellow for warnings. These faults and warnings shall be displayed in the digital display. The fault light will also glow yellow when not in AUTO.
- f. Alarm Horn. The controller shall provide an alarm horn that sounds when any faults or warnings are present. The horn shall also sound when the controller is not in the AUTO mode.
- g. Alarm Silence/Lamp Test Button. When this button is depressed, it shall test all controller lamps. This button will also silence the alarm horn when the unit is not AUTO.
- h. USB Connection. The controller shall have a USB connection on the face of the controller. This connection shall allow for updating of all software and firmware. This port shall also allow for all servicing of generator set parameters, fault diagnostics and viewing of all controller information via use a laptop computer.
- i. Dedicated user inputs. The controller shall have dedicated inputs for remote emergency stop switch, remote 2-wire star for transfer switch and auxiliary shutdown.
- j. The controller shall have auto resettable circuit protection integral on the circuit board.

E. System Controller Monitoring and Status Features and Functions

1. The generator controller shall display and monitor the following engine and alternator functions and allow adjustments of certain parameters at the controller:
 - a. Overview menu
 - 1.) Active shutdowns and warnings shall be displayed if present and without the need of operator interface
 - 2.) Engine runtime with total hours
 - 3.) Average line to line voltage
 - 4.) Coolant temperature
 - 5.) Fuel level or pressure
 - 6.) Oil pressure
 - 7.) Battery voltage
 - 8.) Software version
 - 9.) Frequency
 - 10.) Average current
 - b. Engine metering menu.
 - 1.) Engine speed
 - 2.) Oil pressure
 - 3.) Coolant temperature
 - 4.) Battery voltage
 - c. Generator metering menu.
 - 1.) Total power in VA
 - 2.) Total power in W
 - 3.) Rated power % used
 - 4.) Voltage L-L and L-N for all phases
 - 5.) Current L1, L2, L3

- 6.) Frequency
 - d. Generator set information.
 - 1.) Generator set model number
 - 2.) Generator set serial number
 - 3.) Controller set number
 - e. Generator set run time.
 - 1.) Engine run time total hours
 - 2.) Engine loaded total hours
 - 3.) Number of engine starts
 - 4.) Total energy in kW
 - f. Generator set system
 - 1.) System voltage
 - 2.) System frequency 50/60Hz
 - 3.) System phase, single/three phase
 - 4.) Power rating kW
 - 5.) Amperage rating
 - 6.) Power type standby/prime
 - 7.) Measurement units, metric/English units adjustable
 - 8.) Alarm silence, always or auto only
 - g. Generator set calibration, the following are adjustable at the controller.
 - 1.) Voltage L-L and L-N all phases
 - 2.) Current L1, L2, L3
 - 3.) Reset all calibrations
 - h. Voltage regulation, +/-0.5% regulation, the following is adjustable at the controller.
 - 1.) Voltage Adjustable +/- 10%
 - i. Digital and Analog Inputs and outputs
 - 1.) Displays settings and status
 - j. Event Log
 - 1.) Stores event history, up to 1000 events
- F. Controller Engine control features and functions
- 1. Automatic restart - the controller has automatic restart feature that initiates the start routine and re-crank after a failed start attempt.
 - 2. Cyclic cranking - the controller shall have programmable cyclic cranking
 - 3. Engine starting aid - the controller shall have the capability of providing control for an optional engine starting aid.
 - 4. The control system shall include time delays for engine start and cool down.
 - 5. The control system shall interface with the engine ECM and display engine fault codes and warnings. The ECM shall also include sender failure monitoring to help distinguish between failed senders and actual failure conditions.
 - 6. The controller shall monitor and display engine governor functions with include steady state and transient frequency monitoring
- G. Controller Alternator control features and functions
- 1. Integrated hybrid voltage regulator. The system shall have integral microprocessor-based voltage regulator system that provides +/- 5% voltage regulation, no-load to full load with three phase sensing. The system is prototype tested and control variation of voltage to frequency. The voltage

- regulator shall be adjustable at the controller with maximum +/- 10% adjustable of nominal voltage.
2. AC output voltage regulator adjustment. The system shall allow for adjustment of the integral voltage regulator with maximum of +/- 10% adjustment of the system voltage.
 3. Alternator thermal overload protection. The system shall have integral alternator overload and short circuit protection matched to each alternator for the particular voltage and phase configuration.
 4. Power metering. The controller digitally displays power metering of kW and kVA.
- H. Other control features and functions
1. Event logging. The controller keeps a record of up to 1000 events, for warning and shutdown faults. This fault information becomes a stored record of systems events and can be reset.
 2. Historical data logging. The controller total number of generator set successful start shall be recorded and displayed.
 3. Programmable access. The control system shall include a USB port that gives service technicians the ability to provide software and firmware upgrades. The system shall also be capable of allowing setting of all critical parameters using the service software and a laptop computer. All parameters and setting should be capable to being stored on a laptop for future upgrades of printing for analysis.
- I. Generator Set Warning, Shutdown Alarm and Status
1. The generator set shall have alarms and status indication lamps that show non-automatic status and warning and shutdown conditions. The controller shall indicate with a warning lamp and or alarm and on the digital display screen any shutdown, warning or engine fault condition that exists in the generator set system. The following alarms and shutdowns shall exist as a minimum:
 - a. Engine functions
 - 1.) Critical high fuel level (alarm)
 - 2.) ECM communication loss (shutdown)
 - 3.) ECM diagnostics (alarm & shutdown)
 - 4.) Engine overspeed (shutdown)
 - 5.) Engine start aid active
 - 6.) Engine under speed (shutdown)
 - 7.) Fuel tank leak (alarm & shutdown)
 - 8.) High DC battery voltage (alarm)
 - 9.) High coolant temperature (alarm & shutdown)
 - 10.) High fuel level (alarm)
 - 11.) Low DC battery voltage (alarm)
 - 12.) Low coolant level (shutdown)
 - 13.) Low coolant temperature (alarm)
 - 14.) Low cranking voltage (alarm)
 - 15.) Low engine oil level (alarm & shutdown)
 - 16.) Low fuel level (alarm & shutdown)
 - 17.) Low fuel pressure (alarm)
 - 18.) Low oil pressure (alarm & shutdown)
 - 19.) No coolant temperature signal (shutdown)
 - 20.) No oil pressure signal (shutdown)

- 21.) Overcrank (shutdown)
- 22.) Speed sensor fault (alarm)
- b. Generator functions
 - 1.) AC sensing loss over & under current (alarm & shutdown)
 - 2.) Alternator protection (shutdown)
 - 3.) Ground fault input (alarm)
 - 4.) kW overload (shutdown)
 - 5.) Locked rotor (shutdown)
 - 6.) Over-frequency (shutdown)
 - 7.) Over AC voltage (shutdown)
 - 8.) Under-frequency (shutdown)
 - 9.) Under AC voltage (shutdown)
 - 10.) Emergency stop (shutdown)
- c. Other General functions
 - 1.) Battery charger fault (alarm)
 - 2.) Common fault (shutdown)
 - 3.) Common warning (alarm)
 - 4.) Master switch not in auto (alarm)
 - 5.) Generator running
 - 6.) Input/output fault (alarm)
- d. The generator set controller shall also be capable of meeting all necessary NFPA 110 level 1 requirements that include several of the above along with; EPS supplying load, Master switch “not in auto”, and contacts for local and remote common alarm.

J. Communications

- 1. If the generator set engine is equipped with an ECM (engine control module), the controller shall communicate with the ECM for control, monitoring, diagnosis, and meet SAE J1939 standards
- 2. Kohler proprietary RBUS communication shall be available.
- 3. A RBUS shall be able to monitor and alter parameters and start or stop a generator.
- 4. The controller shall have the capability to communicate to a personal computer (IBM or compatible) and appropriate application software
- 5. A variety of connections shall be available based on requirements:
 - a. A single control connection to a PC via USB
 - b. Internet connection via Ethernet
- 6. Generator and transfer switch controls shall be equipped with communications modules capable of connecting to the same communication network.

2.08 GENERATOR OVERCURRENT AND FAULT PROTECTION

- A. The generator shall be provided with a factory installed, 80% rated line circuit breaker rated at 125.00 amperes that is UL489 listed. Line circuit breakers shall be sized for the rated ampacity of the loads served by the breaker per the NEC.
- B. The circuit breaker(s) shall incorporate a thermo-magnetic trip unit.
- C. Load side lugs shall be provided from the factory.

- D. When GFI is required per the NEC, additional neutrals shall be factory installed, and the alarm indication shall be integrated with the other generator-set alarms.
- E. Barriers to provide segregation of wiring from an emergency source to emergency loads from all other wiring and equipment, if required by the NEC, shall be provided.

2.09 ALTERNATOR

- A. The alternator shall be salient-pole, brushless, 2/3-pitch, with 4 bus bar provision for external connections, self-ventilated, with drip-proof construction and amortisseur rotor windings, and skewed for smooth voltage waveform. The ratings shall meet the NEMA standard (MG1-32.40) temperature rise limits. The insulation shall be class H per UL1446 and the varnish shall be a vacuum pressure impregnated, fungus resistant epoxy. Temperature rise of the rotor and stator shall be limited to 130°C Standby. The PMG based excitation system shall be of brushless construction controlled by a digital, three phase sensing, solid- state, voltage regulator. The AVR shall be capable of proper operation under severe nonlinear loads and provide individual adjustments for voltage range, stability and volts-per-hertz operations. The AVR shall be protected from the environment by conformal coating. The waveform harmonic distortion shall not exceed 5% total RMS measured line-to-line at full rated load. The TIF factor shall not exceed 50.
- B. The alternator shall have a maintenance-free bearing, designed for 40000 hour B10 life. The alternator shall be directly connected to the flywheel housing with a semi-flexible coupling between the rotor and the flywheel.
- C. The generator shall be inherently capable of sustaining at least 300% of rated current for at least 10 seconds under a 3-phase symmetrical short circuit without the addition of separate current-support devices.
- D. Motor starting performance and voltage dip determinations shall be based on the complete generator set. The generator set shall be capable of supplying 59.00 LRVVA for starting motor loads with a maximum instantaneous voltage dip of 35%, as measured by a digital RMS transient recorder in accordance with IEEE Standard 115. Motor starting performance and voltage dip determination that does not account for all components affecting total voltage dip, i.e., engine, alternator, voltage regulator, and governor will not be acceptable. As such, the generator set shall be prototype tested to optimize and determine performance as a generator set system.
- E. Vibration Isolation
 - 1. Vibration isolators shall be provided between the engine-alternator and heavy-duty steel base.

2.10 ACCESSORIES

- A. Block Heater - The block heater shall be thermostatically controlled, 2,500 watt, 110-120 VAC - single phase, to maintain manufacturers recommended

engine coolant temperature to meet the start-up requirements of NFPA 99 and NFPA 110, Level 1.

- B. Battery rack and battery cables capable of holding the manufacturer's recommended batteries shall be supplied.
- C. The generator set shall be supplied with a 10-ampere automatic float/equalize battery charger capable of charging both lead-acid and ni-cad type batteries, with the following features:
 - 1. Automatic 3-stage float to equalization charge
 - 2. Voltage regulation of 1% from no to full load over 10% AC input line voltage variations
 - 3. Battery charging current Ammeter and battery voltage voltmeter with 5% full-scale accuracy
 - 4. LED lamp for power ON indication
 - 5. Current limited during engine cranking, short circuit, and reverse polarity conditions
 - 6. Temperature compensated for ambient temperatures for -40°C to 60°C
 - 7. UL 1012 Listed
 - 8. CSA Certified
- D. Supply flexible fuel lines to provide a flexible connection between the engine fuel fittings and the fuel supply tank piping and for the fuel return lines from the injector pump per engine manufacturer's recommendations. Flex line shall have a protective steel wire braid to protect the hose from abrasion.
- E. The engine exhaust silencer shall be temperature and rust resistant, and rated for critical applications. The silencer will reduce total engine exhaust noise by 25-35 db(A).
- F. The exhaust piping shall be gas proof, seamless, stainless steel, flexible exhaust bellows and includes the flex exhaust tube and the mounting hardware.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine-generator performance.
- B. Examine roughing-in of piping systems and electrical connections. Verify actual locations of connections before packaged engine-generator installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Equipment shall be installed by the contractor in accordance with final submittals and contract documents. Installation shall comply with applicable state and local codes as required by the authority having jurisdiction. Install

equipment in accordance with manufacturer's instructions and instructions included in the listing or labeling of UL listed products

- B. Comply with packaged engine-generator manufacturers' written installation and alignment instructions and with applicable NFPA and local code requirements.
- C. Equipment shall be permanently fastened to the pad in accordance with manufacturer's instructions and seismic requirements of the site.
- D. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.
- E. Install packaged engine generator with restrained spring isolators having a minimum deflection of 1 inch on 4-inch-high concrete base. Secure sets to anchor bolts installed in concrete bases.
- F. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.

3.03 CONNECTIONS

- A. Piping installation requirements are specified in Manufacturer Installation Requirements. Drawings indicate general arrangement of piping and specialties.
- B. Connect fuel, cooling-system, and exhaust-system piping adjacent to packaged engine generator to allow service and maintenance.
- C. Connect cooling-system water piping to engine-generator set and heat exchanger with flexible connectors.
- D. Connect engine exhaust pipe to engine with flexible connector.
- E. Connect fuel piping to subbase tank.
- F. Ground equipment according to the Drawings and per NEC A.250.
- G. Connect wiring according to Section 26 0519.

3.04 IDENTIFICATION

- A. Identify system components according to Section 26 0553.

3.05 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- B. Perform tests and inspections and prepare test reports.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- C. Tests and Inspections:

1. Full load bank test:
 - a. Engage a factory authorized representative to perform NFPA 110 level 1 testing in accordance with NFPA testing guidelines. Loadbank shall be provided as required for testing.
 2. Battery Tests: Equalize charging of battery cells according to manufacturer's written instructions. Record individual cell voltages.
 - a. Measure charging voltage and voltages between available battery terminals for full-charging and float-charging conditions. Check electrolyte level and specific gravity under both conditions.
 - b. Test for contact integrity of all connectors. Perform an integrity load test and a capacity load test for the battery.
 - c. Verify acceptance of charge for each element of the battery after discharge.
 - d. Verify that measurements are within manufacturer's specifications.
 3. Battery-Charger Tests: Verify specified rates of charge for both equalizing and float-charging conditions.
 4. System Integrity Tests: Methodically verify proper installation, connection, and integrity of each element of engine-generator system before and during system operation. Check for air, exhaust, and fluid leaks.
 5. Exhaust-System Back-Pressure Test: Use a manometer with a scale exceeding 27-inch wg. Connect to exhaust line close to engine exhaust manifold. Verify that back pressure at full-rated load is within manufacturer's written allowable limits for the engine.
- D. Where applicable, coordinate tests with tests for transfer switches and run them concurrently.
 - E. Test instruments shall have been calibrated within the last 12 months, traceable to standards of NIST, and adequate for making positive observation of test results. Make calibration records available for examination on request.
 - F. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - G. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
 - H. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - I. Remove and replace malfunctioning units and retest as specified above.
 - J. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.
 - K. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component indicating satisfactory completion of tests.

3.06 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain packaged engine generators.

END OF SECTION

SECTION 263623

AUTOMATIC TRANSFER SWITCH

PART 1 GENERAL

1.01 SUMMARY

- A. Provide complete factory assembled automatic power transfer equipment with field programmable digital electronic controls designed for fully automatic operation and including: surge voltage isolation, voltage sensors on all phases of both sources, linear operator, permanently attached manual handles, positive mechanical and electrical interlocking, and mechanically held contacts for both sources

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, weights, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: Dimensioned plans, elevations, sections, and details showing minimum clearances, conductor entry provisions, gutter space, installed features and devices, and material lists for each switch specified.
 - 1. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 - 2. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- C. Qualification Data: For manufacturer.
- D. Field quality-control test reports.
- E. Operation and Maintenance Data: For each type of product operation and maintenance manuals, include the following:
 - 1. Features and operating sequences, both automatic and manual.
 - 2. List of all factory settings of relays; provide relay-setting and calibration instructions, including software, where applicable.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Maintain a service center capable of providing training, parts, and emergency maintenance repairs within a response period of less than eight hours from time of notification.
- B. Source Limitations: Obtain automatic transfer switches through one source from a single manufacturer.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. Factory Testing. The transfer switch manufacturer shall perform a complete operational test on the transfer switch prior to shipping from the factory. A

certified test report shall be available on request. Test process shall include calibration of voltage sensors.

- E. Comply with NEMA ICS 1.
- F. Comply with NFPA 70.
- G. Comply with NFPA 110 for Level 1 Systems.
- H. Comply with UL 1008 unless requirements of these Specifications are stricter.

1.05 PROJECT CONDITIONS

- A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service:
 - 1. Notify Owner, in writing, no fewer than Ten days in advance of proposed interruption of electrical service.
 - 2. Do not proceed with interruption of electrical service without construction project manager's written permission.

1.04 WARRANTY

- A. A five year basic extended warranty for the automatic transfer switch shall be included to guaranteed against defective material and workmanship in accordance with the manufacturer's published warranty from date of start-up. Optional warranties shall be available upon request.
- B. The automatic transfer switch manufacturer and its distributor shall maintain a 24-hour parts and service organization. This organization shall be regularly engaged in a maintenance contract program to perform preventive maintenance and service on equipment similar to that specified. A service agreement shall be available and shall include system operation under simulated operating conditions, adjustment to the generator, transfer switch, and switchgear controls as required, and certification in the owner's maintenance log of repairs made and proper functioning of all systems.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design is Rehlko model KUS-1200. Some accessories as noted herein may pertain to the Rehlko series switch only. If substitutions are selected contractor shall provide comparable accessories.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Contactor Transfer Switches:
 - a. Emerson; ASCO Power Technologies, LP.
 - b. Caterpillar Power Systems
 - c. Onan Transfer Products
 - d. GE Zenith Controls.

2.02 GENERAL TRANSFER-SWITCH PRODUCT REQUIREMENTS

A. Equipment

1. Furnish and install a service rated automatic transfer switch system with 3-Pole / 4-Wire, Solid Neutral, 1200 Amps, 120/208V/60Hz 3Phase. Each automatic transfer shall consist of an inherently double throw power transfer switch mechanism and a microprocessor controller to provide automatic operation. All transfer switches and controllers shall be the products of the same manufacturer.

B. Construction

1. The transfer switch shall be electrically operated and mechanically held with double throw construction and operated by a momentarily energized solenoid-driven mechanism.
2. All transfer switch sizes shall use only one type of main operator for ease of maintenance and commonality of parts.
3. The switch shall be positively locked and unaffected by momentarily outages, so that contact pressure is maintained at a constant value and contact temperature rise is minimized for maximum reliability and operating life.
4. All main contacts shall be silver composition. Switches rated 600 amperes and above shall have segmented, blow-on construction for high withstand and close-on capability and be protected by separate arcing contacts.
5. Inspection of all contacts shall be possible from the front of the switch without disassembly of operating linkages and without disconnection of power conductors. Switches rated 800 amperes and higher shall have front removable and replaceable contacts. All stationary and moveable contacts shall be replaceable without removing power conductors and/or bus bars.
6. Designs utilizing components of molded-case circuit breakers, contactors, or parts thereof, which are not intended for continuous duty, repetitive switching or transfer between two active power sources, are not acceptable.
7. For two and three pole switches, where neutral conductors are to be solidly connected as shown on the plans, a neutral conductor plate with fully rated AL-CU pressure connectors shall be provided.
8. For four pole switches with a switching neutral, where neutral conductors must be switched as shown on the plans, the contactor shall be provided with fully rated switched neutral transfer contacts. Overlapping neutral contacts may be used as an alternative.

C. Enclosure

1. The ATS shall be furnished in a NEMA 4 enclosure.
2. All standard door mounted switches and indicating LEDs shall be integrated into a flush-mounted, interface membrane or equivalent in the enclosure door for easy viewing & replacement. The panel shall be capable of having a manual locking feature to allow the user to lockout all membrane mounted control switches to prevent unauthorized tampering. This cover shall be mounted with hinges and have a latch that may be padlocked. The membrane panel shall be suitable for mounting by others when furnished on open type units.

2.04 OPERATION

- A. A four line, 20 character LCD display and dynamic 4 button keypad shall be an integral part of the controller for viewing all available data and setting desired operational parameters. Operational parameters shall also be available for viewing and control through the communications interface port or USB. The following parameters shall only be adjustable via a password protected programming on the controller:
1. Nominal line voltage and frequency
 2. Single or three phase sensing
 3. Operating parameter protection
 4. Transfer operating mode configuration (Standard transition, Programmed transition, or Closed transition)

B. Voltage and Frequency

1. Voltage (all phases) and frequency on both the normal and emergency sources shall be continuously monitored. Voltage on both normal and emergency sources and frequency on the emergency sources shall be adjustable with the following pickup, dropout, and trip setting capabilities (values shown as % of nominal unless otherwise specified):

Parameter	Dropout/Trip	Pickup/Reset
Under voltage	75 to 98%	85 to 100%
Over voltage	06 to 135%	95 to 100% of trip
Under frequency	95 to 99%	80 to 95%
Over frequency	01 to 115%	105 to 120%
Voltage unbalance	5 to 20%	3 to 18%

2. Repetitive accuracy of all settings shall be within $\pm 0.5\%$ over an operating temperature range of -20°C to 70°C .
3. An adjustable dropout time for transient voltage and frequency excursions shall be provided. The time delays shall be 0.1 to 9.9 seconds for voltage and .1 to 15 seconds for frequency.
4. Voltage and frequency settings shall be field adjustable in 1% increments either locally with the display and keypad, remotely via the communications interface port or USB.
5. The controller shall be capable of sensing the phase rotation of both the normal and emergency sources. The source shall be considered unacceptable if the phase rotation is not the preferred rotation selected (ABC or BAC). Unacceptable phase rotation shall be indicated on the LCD; the service required LED and the annunciation through the communication protocol and dry contacts. In addition, the phase rotation sensing shall be capable of being disabled, if required.
6. The controller shall be capable of detecting a single phasing condition of a source, even though a voltage may be regenerated by the load. This condition is a loss of phase and shall be considered a failed source.
7. Source status screens shall be provided for both normal & emergency to provide digital readout of voltage on all 3 phases (phase to phase and phase to neutral), frequency, and phase rotation.

C. Time Delays

1. An adjustable time delay of 0 to 6 seconds shall be provided to override momentary normal source outages and delay all transfer and engine starting signals. Capability shall be provided to extend this time delay to 60 minutes by providing an external 12 or 24 VDC power supply.

2. A time delay shall be provided on transfer to the emergency source, adjustable from 0 to 60 minutes, for controlled timing of transfer of loads to emergency.
3. A time delay shall be provided on re-transfer to normal. The time delays shall be adjustable from 0 to 60 minutes. Time delay shall be automatically bypassed if the emergency source fails and the normal source is acceptable.
4. A time delay shall be provided on shut down of engine generator for cool down, adjustable from 0 to 60 minutes.
5. A time delay activated output signal shall also be provided to drive external relay(s) for selective load disconnect and reconnect control. The controller shall be capable of controlling a maximum of 9 individual output time delays to step loads on after a transfer occurs. Each output may be individually programmed for their own time delay of up to 60 minutes. Each sequence shall be independently programmed for transferring from normal to emergency and transferring from emergency to normal.
6. All time delays shall be adjustable in 1 second increments.
7. All time delays shall be adjustable by using the display and keypad, with a remote device connected to the communications interface port or USB.
8. Each time delay shall be identified and a dynamic countdown shall be shown on the display. Active time delays can be viewed with a remote device connected to the communications interface port or USB.

D. Additional Features

1. The controller shall have 3 levels of security. Level 1 shall allow monitoring of settings and parameters only. The Level 1 shall be capable of restricted with the use of a lockable cover. Level 2 shall allow test functions to be performed and Level 3 shall allow setting of all parameters.
2. The display shall provide for the test functions, allowed through password security. The test function shall be load, no load or auto test. The auto test function shall request an elapsed time for test. At the completion of this time delay the test shall be automatically ended and a retransfer sequence shall commence. All loaded tests shall be immediately ended and retransfer shall occur if the emergency source fails and the normal source is acceptable.
3. A contact closure shall be provided for a low-voltage engine start signal. The start signal shall prevent dry cranking of the engine by requiring the generator set to reach proper output, and run for the duration of the cool down setting, regardless of whether the normal source restores before the load is transferred.
4. Auxiliary contacts shall be provided consisting of a minimum of two contacts, closed when the ATS is connected to the normal source and two contacts closed, when the ATS is connected to the emergency source.
5. LED indicating lights shall be provided; one to indicate when the ATS is connected to the normal source (green) and one to indicate when the ATS is connected to the emergency source (red).
6. LED indicating lights shall be provided and energized by controller outputs. The lights shall provide true source availability of the normal (green) and emergency sources (red), as determined by the voltage, frequency and phase rotation sensing trip and reset settings for each source.

7. A membrane switch shall be provided on the membrane panel to test all indicating lights and display when pressed.
8. Provide the ability to select "commit/no commit to transfer" to determine whether the load should be transferred to the emergency generator if the normal source restores before the generator is ready to accept the load.
9. Terminals shall be provided for a remote contact which opens to signal the ATS to transfer to emergency and for remote contacts which closes to inhibit transfer to emergency and/or retransfer to normal. Both of these inhibit signals can be activated through the keypad, communications interface port or USB. A "not-in-auto" LED shall indicate anytime the controller is inhibiting transfer from occurring.
10. An in-phase monitor shall be a standard feature in the controller. The monitor shall control transfer so that motor load inrush currents do not exceed normal starting currents, and shall not require external control of power sources. The in-phase monitor shall be specifically designed for and be the product of the ATS manufacturer. The in-phase monitor shall be capable of being enabled or disabled from the user interface, communications interface port or USB.
11. A time based load control feature shall be available to allow the prioritized addition and removal of loads based during transfer. This feature may be enabled for either or both sources. The user shall be able to control up to nine loads with independent timing sequences for pre and post transfer delays in either direction of transfer.
12. The controller shall provide 2 inputs for external controls that can be programmed from the following values:
 - a. Common fault, Remote test, Inhibit transfer, Low battery voltage, Peak shave, Time delay bypass, Load shed forced to OFF position (Programmed transition only)
13. The controller shall provide two form "C" contact outputs rated for up to 12A @ 240VAC or 2A @ 480VAC that can be programmed from the following values:
 - a. Aux switch open, Transfer switch aux contact fault, Alarm silenced, Alarm active, I/O communication loss, Contactor position, Exercise active, Test mode active, Fail to transfer, Fail to acquire standby source, Source available, Phase rotation error, Not in automatic mode, Common alarm, In phase monitor sync, Load bank control active, Load control active, Maintenance mode active, Non-emergency transfer, Fail to open/close, Loss of phase, Over/under voltage, Over/under frequency, Voltage unbalance, Start signal, Peak shave active, Preferred source supplying load, Standby source supplying load
14. The controller shall be capable of expanding the number of inputs and outputs with additional modules.
15. Optional input/output modules shall be furnished which mount on the inside of the enclosure to facilitate ease of connections.
16. Engine Exerciser - The controller shall provide an internal engine exerciser. The engine exerciser shall allow the user to program up to 21 different exercise routines based on a calendar mode. For each routine, the user shall be able to:
 - a. Enable or disable the routine
 - b. Enable or disable transfer of the load during routine.

- c. Set the start time, time of day, day of week, week of month (1st, 2nd, 3rd, 4th, alternate or every)
 - d. Set the duration of the run.
 - e. At the end of the specified loaded exercise duration the switch shall transfer the load back to normal and run the generator for the specified cool down period. All loaded exercises shall be immediately ended and retransfer shall occur if the standby source fails. The next exercise period shall be displayed on the main screen with the type of exercise, time and date. The type of exercise and the time remaining shall be display when the exercise is active. It shall be possible of ending the exercise event with a single button push.
17. Date and time - The date shall automatically adjust for leap year and the time shall have the capability of automatically adjusting for daylight saving and standard times.
18. System Status - The controller shall have a default display the following on:
- a. System status
 - b. Date, time and type of the next exercise event
 - c. Average voltage of the preferred and standby sources
 - d. Scrolling through the displays shall indicate the following:
 - 1. Line to line and line to neutral voltages for both sources
 - 2. Frequency of each source
 - 3. Load current for each phase
 - 4. Single or three phase operation
 - 5. Type of transition
 - 6. Preferred source
 - 7. Commit or no commit modes of operation
 - 8. Source/source mode
 - 9. In phase monitor enable/disable
 - 10. Phase rotation
 - 11. Date and time
19. Controllers that require multiple screens to determine system status or display "coded" system status messages, which must be explained by references in the operator's manual, are not permissible.
20. Self-Diagnostics - The controller shall contain a diagnostic screen for the purpose of detecting system errors. This screen shall provide information on the status input signals to the controller which may be preventing load transfer commands from being completed.
21. Communications Interface - The controller shall be capable of interfacing, through a standard communication with a network of transfer switches and generators. It shall be able to be connected via an RS-485 serial communication (up to 4000 ft. direct connect or multi-drop configuration). This module shall allow for seamless integration of existing or new communication transfer devices and generators.
22. The transfer switch shall also be able to interface to 3rd party applications using Modbus RTU open standard protocols utilizing Modbus register maps. Proprietary protocols shall not be acceptable.
23. The controller shall contain a USB port for use with a software diagnostic application available to factory authorized personnel for

- downloading the controller's parameters and settings; exercise event schedules; maintenance records and event history. The application can also adjust parameters on the controller.
24. Data Logging - The controller shall have the ability to log data and to maintain the last 2000 events, even in the event of total power loss. The following events shall be time and date stamped and maintained in a non-volatile memory. The controller shall be able to display up to the last 99 events. The remaining events shall be accessible via the communications interface port or USB.
- a. Event Logging
 1. Data, date and time indication of any event
 - b. Statistical Data
 1. Total number of transfers*
 2. Total number of fail to transfers*
 3. Total number of transfers due to preferred source failure*
 4. Total number of minutes of operation*
 5. Total number of minutes in the standby source*
 6. Total number of minutes not in the preferred source*
 7. Normal to emergency transfer time
 8. Emergency to normal transfer time
 9. System start date
 10. Last maintenance date
 11. * The statistical data shall be held in two registers. One register shall contain data since start up and the second register shall contain data from the last maintenance reset.
25. External DC Power Supply - An optional provision shall be available to connect up to two external 12/24 VDC power supply to allow the LCD and the door mounted control indicators to remain functional when both power sources are dead for extended periods of time. This module shall contain reverse battery connection indication and circuit protection.

2.06 SOURCE QUALITY CONTROL

- A. Prior to Shipping - Factory test and inspect components, assembled switches, and associated equipment. Ensure proper operation. Check transfer time and voltage, frequency, and time-delay settings for compliance with specified requirements. Perform dielectric strength test complying with NEMA ICS 1.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Design each fastener and support to carry load of transfer switch. See Division 26 Section "Electrical Supports."
- B. Mounting Switch: Anchor to wall by bolting.
- C. Identify components according to Division 16 Section "Electrical Identification."

- D. Set field-adjustable intervals and delays.
 - 1. Transfer from normal to emergency shall be set to 10 seconds.
 - 2. Transfer from emergency to normal shall remain at the default setting.

3.02 CONNECTIONS

- A. Wiring to Remote Components: Match type and number of cables and conductors to control and communication requirements of transfer switch as recommended by manufacturer. Increase raceway sizes at no additional cost to Owner if necessary to accommodate required wiring.
- B. Ground equipment according to Division 26 Section "Grounding and Bonding."
- C. Connect wiring according to Division 26 Section "Low Voltage Conductors and Cables."

3.03 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- B. Perform tests and inspections and prepare test reports.
 - 1. After installing equipment and after electrical circuitry has been energized, test for compliance with requirements.
 - 2. Measure insulation resistance phase-to-phase and phase-to-ground with insulation-resistance tester. Include external annunciation and control circuits. Use test voltages and procedure recommended by manufacturer. Comply with manufacturer's specified minimum resistance.
 - a. Check for electrical continuity of circuits and for short circuits.
 - b. Inspect for physical damage, proper installation and connection, and integrity of barriers, covers, and safety features.
 - c. Verify that manual transfer warnings are properly placed.
 - d. Perform manual transfer operation.
 - 3. After energizing circuits, demonstrate interlocking sequence and operational function for switch at least two times.
 - a. Simulate power failures of normal source to automatic transfer switches and of emergency source with normal source available.
 - b. Verify time-delay settings.
 - c. Verify pickup and dropout voltages by data readout or inspection of control settings.
 - d. Test manual bypass switch functionality in accordance with manufacturers recommendations.
 - e. Perform contact-resistance test across main contacts and correct values exceeding 500 microhms and values for 1 pole deviating by more than 50 percent from other poles.
 - f. Verify proper sequence and correct timing of transfer time delay, retransfer and time delay on restoration of normal power.
 - g. Ground-Fault Tests: Coordinate with testing of ground-fault protective devices for power delivery from both sources.
 - 4. Verify grounding connections and locations and ratings of sensors.

- C. Report results of tests and inspections in writing to the engineer. Record adjustable relay settings and measured insulation and contact resistances and time delays.
- D. Remove and replace malfunctioning units and retest as specified above.

3.04 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain transfer switch. Provide the owners representative with a copy of the warranty certificate and explain all aspects pertaining the equipment warranty purchased.

END OF SECTION

SECTION 310101

SITE RESTORATION

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. The Electrical Contractor (Contract No. 1) shall restore the project site to the same conditions he found before commencing his operations, or he shall notify and develop the site to the finished conditions shown on the drawings.
- B. All landscape work, including transplanting, planting and maintenance of trees, bushes, shrubs, ground covers and lawns, shall be done by or under the supervision of an experienced practicing landscape gardener.
- C. All lawns dug up and/or damaged shall be restored as described in the General Requirements of this section, including fine grading, topsoil, fertilizing, seeding, planting, mulching, protection and maintenance.

1.02 QUALITY ASSURANCE

- A. Provide prepackaged seed readily available to the public with a high quality and high purity rate. On-the-job or made-to-order mixes will not be accepted.
- B. The intent of this selection is to provide lawns and landscaped areas of high quality. This section is; therefore, somewhat general in nature, in that the requirements specified herein are the minimum requirements necessary for lawns, sod, and ground cover.

1.03 DELIVERY STORAGE AND HANDLING

- A. Deliver fertilizer in manufacturer's standard size bags or cartons showing weight, analysis, and the name of the manufacturer. Store as approved by Owner's Representative.
- B. Store all seed at the site in a cool dry place as approved by the Owner's Representative. Replace any seed damaged during storage.

1.04 SCHEDULING

- A. Time For Permanent Seeding: Sow grass seed between April 1 and May 15th or between August 15th and October 15th, except as otherwise approved in writing by the Owner Representative.

PART 2 PRODUCTS

2.01 TOPSOIL

- A. Source: Provide topsoil from existing stockpiles stripped from the project site for field and roadside restorations.
- B. Provide topsoil for lawn restoration conforming to the following:
 - 1. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
 - 2. Containing not less than 4 percent nor more than 20 percent organic matter in that portion of a sample passing a 1/4 inch sieve when determined by the wet combustion method on a sample dried at 105 degrees C.
 - 3. Containing a Ph value within the range of 4.5 to 7 on that portion of the sample that passes a 1/4 inch sieve.
 - 4. Containing the following gradations:

SIEVE DESIGNATION	PERCENT PASSING
1 inch	100
1/4 inch	97 - 100
No. 200	20 - 65 (of the 1/4 inch sieve)

2.02 FERTILIZER

- A. Fertilizer: Mixed commercial fertilizers shall contain total nitrogen, available phosphoric acid and soluble potash in the ratio of 10-6-4 (50% N/UF). 50% of total nitrogen shall be derived from ureaform furnishing a minimum of 3.5% water insoluble nitrogen (3.5% WIN). The balance of the nitrogen shall be present as methylene urea, water-soluble urea, nitrate and ammoniacal compounds.
- B. Other fertilizers meeting DOT Specification Section 713-03 Fertilizer can be used.

2.03 SEED

- A. Furnish fresh, clean, new-crop seed mixed in the proportions specified for species and variety, and conforming to Federal and State Standards.
- B. Acceptable material in a seed mixture other than pure live seed consists of nonviable seed, chaff, hulls, live seed of crop plants and inert matter. The percentage of weed seed shall not exceed 0.1 percent by weight.
- C. All seed will be rejected if the label indicates any noxious weed seeds.

- D. Seed Mix: Fresh, clean, from current season’s crop, delivered in original packages, unopened, bearing guaranteed analysis. Seed shall meet New York State standards of germination and purity.
- E. In existing grass areas, mixtures shall be comparable to existing grasses and, when established, shall match as nearly as practicable the existing undisturbed grass.
- F. Lawn seed mix will be comprised of the following:

SEED MIXTURE			
AMOUNT BY WEIGHT IN MIXTURE	SPECIES OR VARIETY *	PERCENTAGE	
		PURITY	GERMINATION
30 PERCENT	FENWAY RED FESCUE	97 PERCENT	80 PERCENT
30 PERCENT	ABBEY KENTUCKY BLUEGRASS BLEND	95 PERCENT	80 PERCENT
20 PERCENT	DEVINE PERENNIAL RYE	98 PERCENT	85 PERCENT
20 PERCENT	ENCHANTED PERENNIAL RYE	98 PERCENT	85 PERCENT
100 PERCENT			

*Variety may be altered depending on availability of seed from manufacturer and site conditions and locations.

2.04 HYDRO-SEEDING MULCH

- A. Acceptable Products:
 - 1. Turf-Fiber by Weyerhaeuser Co.
 - 2. Or approved equal.
- B. Materials:
 - 1. Wood Cellulose fiber with green vegetable oil dye.

2.05 MULCH

- A. Dry Application, Straw: Stalks of oats, wheat, rye or other approved crops that are free of noxious weed seeds. Weight shall be based on 15 percent moisture content.

PART 3 EXECUTION

3.01 GRADING

- A. Rough Grading: Trim and grade lawn areas within the Contract Limit to a level of 4 inches below the finish grades indicated unless otherwise specified herein

or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.

- B. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:
 - 1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.

3.02 SPREADING TOPSOIL

- A. Perform topsoil spreading operations only during dry weather.
- B. To insure a proper bond with the topsoil, harrow or otherwise loosen the subgrade to a depth of 3 inches before spreading topsoil.
- C. Spread topsoil directly upon prepared subgrade to a minimum depth measuring 4 inches after natural settlement in areas to be seeded. Smooth out unsightly variations, bumps, ridges, and depressions that will hold water. Remove stones, litter, or other objectionable material. Finished surfaces shall conform to the contour lines and elevations indicated on the drawings or fixed by the Owner's Representative.

3.03 PREPARATION FOR SEEDING

- A. Seed Bed: Scarify soil to a depth of 2 inches in compacted areas. Smooth out unsightly variations, bumps, ridges, and depressions that will hold water. Remove stones, litter, or other objectionable material.

3.04 FERTILIZING

- A. Apply 10-6-4 fertilizer evenly at the rate of 40 pounds per 1000 sq ft.

3.05 SEEDING

- A. Assume all risks when seed is sowed before approval of seed analysis.
- B. Do not seed when the wind velocity exceeds 5 miles per hour.
- C. Application Rate: 8 pounds per 1000 sq ft.
- D. Dry Application: Sow seed evenly by hand or seed spreader on dry or moderately dry soil.

3.06 HYDRO SEEDING, FERTILIZING AND MULCHING

- A. Apply seed, fertilizer and mulch uniformly over the entire area, as visually determined by the intensity of the green vegetable dye.

- B. Apply hydro-seeder at the following mix per acre:
 - 1. Seed: As recommended by the manufacturer.
 - 2. Fertilizer: As recommended by the manufacturer.
 - 3. Mulch: 1200 pounds.
 - 4. Water: 1000 pounds.
- C. All overspray from application of hydro-seed mix to pavements, building facades, and site amenities is to be cleaned off immediately before material is allowed to dry.

3.07 MULCHING

- A. Dry Application: Within 3 days after seeding, cover the seeded areas with a uniform blanket of straw mulch at the rate of 50 pounds per 1000 sq ft of seeded area.

3.08 MAINTENANCE

- A. The Contractor shall be responsible for the seeded areas for one complete growing season and shall protect, maintain and irrigate as required to produce a durable uniform stand of grass.
- B. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing.
- C. Neatly trim edges and hand clip where necessary.
- D. Water to prevent grass and soil from drying out. The Contractor shall provide at a minimum 1/4 inch of water per every 2 days during germination period and 1 inch per week for 8 weeks. The Contractor shall be responsible for providing the water necessary for irrigation. The Contractor shall not obtain water from the Owner for irrigation purposes unless written authorization from the the Owner is obtained.
- E. Roll surface to remove minor depressions or irregularities.
- F. Control growth of weeds. Apply broadleaf herbicides and fertilizer combination in accordance with turf field specialist.
- G. Immediately reseed areas which show bare spots.
- H. Areas which have been damaged through any cause prior to final inspection, and areas failing to receive a uniform application at the specified rate, shall be reseeded, refertilized and remulched at the Contractor's expense. The maintenance procedures as outlined above will continue for defective areas until all work is deemed satisfactory and accepted.
- I. Protect seeded areas with warning signs during maintenance period.

3.09 FINAL ACCEPTANCE

- A. Final acceptance of seeded areas will be granted when a uniform stand of acceptable grass is obtained, with a minimum of 95 percent coverage. Portions of the seeded areas may be accepted at various times at the discretion of the Owner's Representative.
- B. Unacceptable seeded areas, dry application: Reseed as specified and fertilized at one-half the specified rate.
- C. Once accepted, the Town will assume all maintenance responsibilities.

END OF SECTION

SECTION 312200

GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Removal of topsoil.
- B. Rough grading the site for site structures, building pads, and roadways.
- C. Finish grading.

1.02 RELATED REQUIREMENTS

- A. Section 312316.13 - Trenching: Trenching and backfilling for utilities.
- B. Section 312323 - Fill: Filling and compaction.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with State of New York, Department of Transportation standards.
 - 1. Maintain one copy on site.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Topsoil: See Section 312323.
- B. Other Fill Materials: See Section 312323.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.

3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.

- B. Stake and flag locations of known utilities.
- C. Locate, identify, and protect from damage above- and below-grade utilities to remain.
- D. Notify utility company to remove and relocate utilities.
- E. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
- F. Protect plants, lawns, rock outcroppings, and other features to remain as a portion of final landscaping.
- G. Permission to interrupt any existing utility service shall be requested in writing a minimum of seven calendar days in advance. The request for any outage shall state the date and duration of the outage.

3.03 ROUGH GRADING

- A. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
- B. Do not remove topsoil when wet.
- C. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
- D. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
- E. When excavating through roots, perform work by hand and cut roots with sharp axe.
- F. Benching Slopes: Horizontally bench existing slopes greater than 1:4 to key fill material to slope for firm bearing.
- G. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.

3.04 SOIL STOCKPILING

- A. Stockpile topsoil to be re-used on site; topsoil not used on site shall be stockpiled for the Owner at a designated location on the Owner's property.

- B. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet; protect from erosion.

3.05 FINISH GRADING

- A. Before Finish Grading:
 - 1. Verify building and trench backfilling have been inspected.
 - 2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products.
- C. Where topsoil is to be placed, scarify surface to depth of 3 inches.
- D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 3 inches.
- E. Place topsoil in areas where seeding and planting are indicated.
- F. Place topsoil where required to level finish grade.
- G. Place topsoil to the following compacted thicknesses:
 - 1. Areas to be Seeded with Grass: 6 inches.
 - 2. Shrub Beds: 18 inches.
 - 3. Flower Beds: 12 inches.
- H. Place topsoil during dry weather.
- I. Topsoil shall be screened to remove roots, weeds, rocks, and foreign material while spreading.
- J. Near plants spread topsoil manually to prevent damage.
- K. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
- L. Lightly compact placed topsoil.

3.06 TOLERANCES

- A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) from required elevation.
- B. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch).

3.07 CLEANING

- A. Remove unused stockpiled topsoil. Grade stockpile area to prevent standing water.
- B. Leave site clean and raked, ready to receive landscaping.

END OF SECTION

SECTION 312316

EXCAVATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Excavating for building volume below grade, footings, slabs-on-grade, paving, site structures, utilities within the building, and site improvements.
- B. Trenching for utilities outside the building to utility main connections.

1.02 RELATED REQUIREMENTS

- A. Section 312200 - Grading: Grading.
- B. Section 312317 - Trenching: Excavating for utility trenches outside the building to utility main connections.
- C. Section 312323 - Fill: Fill materials, filling, and compacting.

1.03 PROJECT CONDITIONS

- A. Verify that survey benchmark and intended elevations for the Work are as indicated.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. See Section 312200 – Grading for additional requirements.
- C. Locate, identify, and protect utilities that remain and protect from damage.
- D. Notify utility company to remove and relocate utilities, provide request to interrupt any utility in writing a minimum seven (7) days in advance.
- E. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- F. Protect plants, lawns, rock outcroppings, and other features to remain.

- G. Grade top perimeter of excavation to prevent surface water from draining into excavation. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by the Engineer.

3.02 EXCAVATING

- A. Excavate to accommodate new structures and construction operations.
- B. Strip existing topsoil and existing fills from the structure area and proof-roll subgrade. Proof-rolling shall be completed with five (5) passes of a five (5) ton, smooth drum compactor operating in its vibratory mode followed by another five (5) passes in a direction perpendicular to the first. Areas of subgrade which become unstable shall be undercut and backfilled in accordance with Section 312323 – Fill
- C. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
- D. Slope banks of excavations in accordance with OSHA Standards or provide shoring. Contractor is responsible for excavation safety.
- E. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.
- F. Do not interfere with 45 degree bearing splay of foundations.
- G. Cut utility trenches wide enough to allow inspection of installed utilities.
- H. Hand trim excavations. Remove loose matter.
- I. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.
- J. Correct areas that are over-excavated and load-bearing surfaces that are disturbed; see Section 312323.
- K. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- L. Determine the prevailing groundwater level prior to excavation. If the proposed excavation extends less than 1 foot into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by the Architect. If the proposed excavation extends more than 1 foot into the excavation, control groundwater intrusion with a comprehensive dewatering procedures, or as directed by the Geotechnical Engineer.
- M. All excavation subgrades and structural fill surfaces shall be crowned or sloped to direct precipitation, runoff or ground water which enter the excavation to its periphery. Excavations shall be maintained dry.

- N. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.
- O. Protect excavations by shoring, bracing, sheet piling, underpinning or other methods required to prevent cave-in or loose soil from falling into excavation.
- P. Remove excavated material that is unsuitable for re-use from site.
- Q. Remove excess excavated material from site.

3.03 BUILDING AND ROADWAY LIMITS

- A. Excavate as required to proper subgrade elevations as indicated on the Contract Drawings. Excavate only that area which can be completely backfilled during the day. Excavation shall be performed with backhoe type equipment. All construction equipment other than the excavating equipment shall be confined to areas where backfill operations have been completed. Building and Roadway limits are established for the purpose of this paragraph as five feet (5'-0") beyond the building and/or edge of pavement.

3.04 EXCAVATION FOR FOOTINGS

- A. All footing excavations shall be to elevations as indicated on the Contract Documents. Cut bottom of trenches level and remove all loose soil. Backfill to proper lines and grades with select granular fill as specified in Section 312323 Fill.

3.05 OTHER AREAS

- A. Excavate to grades shown on drawings. Where excavation grades are not shown on the drawings, excavate as required to accommodate the installation.

3.06 FIELD QUALITY CONTROL

- A. Provide for visual inspection of load-bearing excavated surfaces before placement of foundations.

3.07 PROTECTION

- A. Divert surface flow from rains or water discharges from the excavation.
- B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
- C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
- D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

- E. Keep excavations free of standing water and completely free of water during concrete placement.
- F. Protect survey benchmarks, the Contractor shall replace any benchmarks or monuments disturbed as a result of his Work at his expense.

END OF SECTION

SECTION 312317

TRENCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Excavating trenches for utilities.
- B. Compacted fill from top of utility bedding to subgrade elevations.
- C. Backfilling and compaction.

1.02 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

1.03 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Requirements for submittals.
- B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan. Plan shall be designed and sealed by the Contractor's employed NYS Licensed Professional Engineer.
- C. Provide calculation of all sheeting, shoring, and bracing materials provided by the Contractor's employed NYS Licensed Professional Engineer.
- D. Samples: Submit, in air-tight containers, 50 lb sample of each type of fill to testing laboratory.
- E. Materials Source: Submit name of imported fill materials suppliers.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with the Standard Specifications.

1.05 QUALIFICATIONS

- A. Prepare excavation protection plan under direct supervision of Professional Engineer experienced in design of this Work and licensed in the State of New York.

1.06 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.08 COORDINATION

- A. General Conditions: Coordination and project conditions.
- B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. See Section 312323.
- B. Flowable Fill: As per the Standard Specifications.

PART 3 EXECUTION

3.01 LINES AND GRADES

- A. Lay pipes to lines and grades indicated on Drawings.
 - 1. Engineer reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.02 PREPARATION

- A. Contact Local Utility Line Information service at "Dig Safely New York" (www.digsafelyny.org) not less than five working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
 - 2. When located beyond "Dig Safely New York" jurisdiction (i.e., private property), contract locating service (at Contractor's expense) to identify underground utilities beyond "Dig Safely New York" jurisdiction.
- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns, and other features remaining as portion of final landscaping.
- D. Protect benchmarks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.

- F. Establish temporary traffic control and detours when trenching is performed in public right-of way. Relocate controls and reroute traffic as required during progress of Work.

3.03 TRENCHING

- A. Excavate subsoil required for utilities to utility service or existing structure connection point.
- B. Remove lumped subsoil, boulders, and rock up to 1-1/2 cubic yard, measured by volume. Remove rock larger than 1 1/2 cubic yards at the direction of the Engineer.
- C. Perform excavation (60) inches within existing utility service in accordance with utility's requirements.
- D. Do not advance open trench more than (20) feet ahead of installed pipe.
- E. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- F. Excavate bottom of trenches maximum 2 feet wider than outside diameter of pipe.
- G. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and pipe utilities.
- H. Do not interfere with 45 degree bearing splay of foundations.
- I. When Project conditions permit, slope side walls of excavation starting 2 feet above top of pipe. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this section
- J. When subsurface materials at bottom of trench are loose or soft, excavate to greater depth as directed by Engineer until suitable material is encountered.
- K. Cut out soft areas of subgrade not capable of compaction in place. Backfill with NYS DOT #2 stone (unless directed otherwise by Owner's Engineer) and compact to density equal to or greater than requirements for subsequent backfill material.
- L. Trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
- M. Correct over excavated areas with compacted backfill as specified for authorized excavation or with flowable fill, as directed by Engineer.
- N. Remove excess subsoil not approved for reuse from site.

- O. Stockpile excavated material in area designated on site or haul off-site.

3.04 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work.
- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage (to the satisfaction of the Owner) to new and existing Work from settlement, water or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.05 BACKFILLING

- A. Backfill trenches to contours and elevations with unfrozen fill materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place fill material in continuous layers and compact in accordance with schedule at end of this section.
- D. Employ placement method that does not disturb or damage foundation perimeter, utilities in trench, and other utilities and/or site structures or buildings.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Do not leave any trench open at end of the working day unless protected and approved by RPR.
- G. Protect open trench to prevent danger to Owner and the public.

3.06 TOLERANCES

- A. Top Surface of Backfilling Under Paved Areas: Plus or minus 1 inch from required elevations.

- B. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.

3.07 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D1557, ASTM D698, AASHTO T180, as applicable.
- B. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D1556, ASTM D2167, or ASTM D2922, as applicable.
 - 2. Moisture Tests: ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.
- D. Frequency of Tests: As required by the Engineer

3.08 PROTECTION OF FINISHED WORK

- A. Reshape and re-compact fills subjected to vehicular traffic during construction.

END OF SECTION

SECTION 312323

FILL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Filling, backfilling, and compacting for footings, slabs-on-grade, paving, site structures, and utilities within the building.
- B. Backfilling and compacting for utilities outside the building to utility main connections.

1.02 RELATED REQUIREMENTS

- A. Section 312200 - Grading: Removal and handling of soil to be re-used.
- B. Section 312316 - Excavation: Removal and handling of soil to be re-used.
- C. Section 312316.13 - Trenching: Excavating for utility trenches outside the building to utility main connections.

1.03 REFERENCE STANDARDS

- A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials; 2015
- B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012.
- C. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2015.
- D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN m/m³)); 2012.
- E. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- F. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.
- G. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2010.

1.04 SUBMITTALS

- A. See Section 013300 - Submittal Procedures, for submittal process.
- B. Samples: 10 lb sample of each type of fill; submit in air-tight containers to testing laboratory.
- C. Materials Sources: Submit name of imported materials source.
- D. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used. Test results must be taken within a twelve month period.
- E. Compaction Density Test Reports.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where designated by Owner.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.

PART 2 PRODUCTS

2.01 FILL MATERIALS

- A. General Fill: Subsoil excavated on-site and/or imported off-site.
 - 1. General Fill material shall be used for fill in non-load bearing and lawn areas.
 - 2. General Fill used outside of building footprint shall not have more than 20 percent, by weight, of the particles passing the No. 200 sieve and must be approved for use before starting backfill operations.
 - 3. Free of lumps larger than 6 inches, rocks larger than 6 inches, debris, and organic matter.
- B. Granular Fill: Pit run washed stone, sand and gravel or blends of these materials; free of shale, clay, friable material and debris.
 - 1. Granular fill material shall be used as subgrade fill. The granular fill material shall be composed of sound durable material that does not contain deleterious materials, topsoil, organics, construction debris etc. The material shall have a Plasticity Index (PI) of 5 or less for the fraction passing the No. 40 sieve.
 - 2. Graded in accordance with the New York State Department of Transportation, Item 304.05, Type 4.
 - a. 2 inch sieve: 100 percent passing.
 - b. 1/4 inch sieve: 30 to 65 percent passing.
 - c. No. 40: 5 to 40 percent passing.

- d. No. 200: 0 to 10 percent passing.
 - 3. Not more than 30 percent, by weight, of the particles retained on the 3/4 inch sieve shall consist of flat or elongated particles having a length more than 3 times the width. The material shall be uniformly graded with the limit specified, gap graded material being unsuitable.
- C. Select Granular Fill: Well graded crushed rock, free of shale, clay, friable material and debris.
 - 1. Select Granular fill shall be as subbase material below foundations, and floor slabs, and below exterior finished concrete such as sidewalks. Subgrades shall be sloped and graded to promote drainage.
 - 2. Select Granular Fill: Select Granular Fill shall meet all of the material and additional requirements as set forth for granular fill except that no more than 3 percent by weight be finer than 0.02 mm or roughly 8 percent by weight finer than the number 200 sieve.
 - 3. Graded in accordance with the New York State Department of Transportation, Item 304.03, Type 2.
 - a. 2 inch sieve: 100 percent passing by dry unit weight.
 - b. 1/4 inch sieve: 25 to 60 percent passing by dry unit weight.
 - c. No. 40: 5 to 40 percent passing by dry unit weight.
 - d. No. 200: 0 to 10 percent passing by dry unit weight.
 - 4. Select granular fill to be placed within 2'-0" of final exterior grade shall be subject soundness requirements. Soundness requirements shall be less than 30 percent based upon a four-cycle magnesium sulfate soundness test.
 - 5. Select granular fill shall have a well defined moisture density relationship curve.
- D. Underdrain Filter: Material shall consist of crushed stone, sand, gravel and screened gravel. Underdrain filter material shall be utilized at perimeter foundation.
 - 1. Underdrain Filter Material shall be Type II and graded in accordance with the New York State Department of Transportation Standard Specifications.
 - a. 1/2 inch: 100 percent passing.
 - b. 1/4 inch: 20 -100 percent passing.
 - c. No. 10: 0 - 15 percent passing.
 - d. No. 20: 0 - 5 percent passing.
- E. Topsoil: Topsoil excavated on-site and/or imported off-site.
 - 1. Description: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for vegetation growth. Material shall be original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
 - 2. Organic Content: Containing not less than 4 percent nor more than 20 percent organic content in that portion of a sample passing a 1/4 inch sieve, when determined by the wet combustion method on a sample dried at 105 degrees C.
 - 3. pH: Containing a Ph value within the range of 4.5 to 7 on that portion of the sample passing a 1/4 inch sieve.
 - 4. Comply with the gradation requirement specified below:

Sieve Size	Percent Passing
1 inch	100
1/4 inch	97 - 100
No. 200	20 - 65 (of the 1/4 inch sieve)

- F. Pipe Bedding: Shall be Select Granular Fill.
- G. Coarse Aggregate: Crushed rock, free of shale, clay, friable material and debris.
1. Graded as follows:
 - a. No. 1A Stone:
 - 1) 1/2": 100 percent passing.
 - 2) 1/4": 90 - 100 percent passing.
 - 3) 1/8": 0 - 15 percent passing.
 - 4) No. 200: 0 - 1.0 percent passing.
 - b. No. 1B Stone:
 - 1) 1/4": 100 percent passing.
 - 2) 1/8": 90 - 100 percent passing.
 - 3) No. 80: 0 - 15 percent passing.
 - 4) No. 200: 0 - 1.0 percent passing.
 - c. No. 1 Stone:
 - 1) 1": 100 percent passing.
 - 2) 1/2": 90 - 100 percent passing.
 - 3) 1/4": 0 - 15 percent passing.
 - 4) No. 200: 0 - 1.0 percent passing.
 - d. No. 2 Stone:
 - 1) 1-1/2": 100 percent passing.
 - 2) 1": 90 - 100 percent passing.
 - 3) 1/2": 0 - 15 percent passing.
 - 4) No. 200: 0 - 1.0 percent passing.
 - e. 50-50 Mix No. 1 and No. 2 Stone (ASTM No. 57 Stone):
 - 1) 1-1/2": 100 percent passing.
 - 2) 1": 95 - 100 percent passing.
 - 3) 1/2": 25 - 60 percent passing.
 - 4) No. 4: 0 - 10 percent passing.
 - 5) No. 200: 0 - 1 percent passing.
- H. Coarse Sand: Material shall consist of crushed stone, sand, gravel, and screened gravel.
1. Graded as follows:
 - a. 1/4": 100 percent passing.
 - b. No. 40: 50 - 100 percent passing.
 - c. No. 80: 10 - 50 percent passing.
 - d. No. 200: 0 - 10 percent passing.
- I. Stone Mulch: Natural rounded river stone ranging in size from 1/2" to 2" in diameter. Stone coloration shall be a mix of natural earth tones, including reds, browns, and tans.

1. Property: Type VIII
2. Density: 1.15
3. Thermal Resistance: 3.8 @ 75 degrees F; 4.2 @ 40 degrees F
4. Compressive Strength: 13.0
5. Flexural Strength: 30.0
6. Water Vapor Permeance: 3.5
7. Water Absorption: 3.0
8. Oxygen Index: 24.0

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the Work are as indicated.
- B. Identify required lines, levels, contours, and datum locations.
- C. See Section 312200 for additional requirements.
- D. Verify areas to be filled are not compromised with surface or ground water.

3.02 PREPARATION

- A. Scarify subgrade surface to a depth of 6 inches to identify soft spots.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.03 FILLING

- A. Fill to contours and elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.

- F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.
- G. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
- H. Correct areas that are over-excavated.
 - 1. Other areas: Use general fill, flush to required elevation, compacted to minimum 95 percent of maximum dry density.
- I. Compaction Density Unless Otherwise Specified or Indicated:
 - 1. Under pipe bedding and all trench backfill under pavement, under paving, slabs-on-grade, and below footings and pipe lines, under and around structures: Proctor Test - Modified Method A; 95 percent of maximum dry density.
 - 2. At other locations, including trenches under lawns or gardens, and rough site grading outside pavement and building areas: Proctor Test - Standard Method A; 90 percent of maximum dry density.
 - 3. Expressed as a percentage of the maximum dry weight of material compacted in the laboratory. Field density tests of materials determined by Nuclear Density Methods.
 - 4. The Architect/Engineer reserves the right to order additional "In-Place Density" tests to ascertain consistent conformance and maintenance of the compaction requirements for each situation as indicated above. Payment for these tests will be made by the Contractor. The Contractor shall cooperate by digging test holes at no additional cost to the Owner.
- J. Reshape and re-compact fills subjected to vehicular traffic.
- K. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.04 FIELD QUALITY CONTROL

- A. Perform compaction density testing on compacted fill in accordance with ASTM D1556, ASTM D2167, ASTM D3017, or ASTM D6938.
- B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 ("standard Proctor"), ASTM D 1557 ("modified Proctor"), or AASHTO T 180.
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- D. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

3.05 CLEANING

- A. Leave unused materials in a neat, compact stockpile.

- B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
- C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION

SECTION 321123

AGGREGATE BASE COURSE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aggregate base course.

1.02 RELATED REQUIREMENTS

- A. Section 312200 - Grading: Preparation of site for base course.
- B. Section 312316.13 - Trenching: Compacted fill over utility trenches under base course.
- C. Section 312323 - Fill: Topsoil fill at areas adjacent to aggregate base course.
- D. Section 312323 - Fill: Compacted fill under base course.
- E. Section 321216 - Asphalt Paving: Binder and finish asphalt courses.

1.03 REFERENCE STANDARDS

- A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; 2010.
- B. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.
- C. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2008.
- D. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
- E. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.
- F. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2010.
- G. The New York State Department of Transportation, Standard Specification Construction and Materials.

1.04 SUBMITTALS

- A. See Section 013300 - Submittal Procedures, for submittal process.

- B. Materials Sources: Submit name of imported materials source.
- C. Aggregate Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- D. Compaction Density Test Reports.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. When necessary, store materials on site in advance of need.
- B. Aggregate Storage, General:
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Base Course, Type 4: Well Graded Crushed Rock, conforming to New York State Department of Transportation standards.
 - 1. Graded in accordance with ASTM C136/C136M, within the following limits:
 - a. 2 inch sieve: 100 percent passing.
 - b. 1/4 inch sieve: 30 to 65 percent passing.
 - c. No. 40: 5 to 40 percent passing.
 - d. No. 200: 0 to 10 percent passing.
- B. Geotextile: Synthetic Fabric, Mirafi 500X.
- C. Asphalt Millings: Cold milled on-site recovered asphalt pavement produced in accordance with NYS DOT specifications. To be used in areas indicated on site plans or as otherwise directed by the Engineer.

2.02 SOURCE QUALITY CONTROL

- A. Where aggregate materials are specified using ASTM D2487 classification, test and analyze samples for compliance before delivery to site.
- B. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that survey bench marks and intended elevations for the work are as indicated.

- B. Verify subgrade has been compacted, inspected, gradients and elevations are correct, and is dry.
- C. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.02 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place aggregate on soft, muddy, or frozen surfaces.
- C. Proofrolling of pavement subgrades shall be performed using a ten (10) ton vibratory compactor completing a minimum of eight (8) passes. Any unstable areas detected shall be undercut and replaced.

3.03 INSTALLATION

- A. The subgrade for the subbase course under bituminous concrete pavement shall be shaped to line and grade as shown on the drawings with the finish surface not more than 1/2" above or 1/2" below the required subgrade elevation, unless otherwise specified herein, compacted and prepared as specified.
- B. Prior to placing subbase course, debris from construction, vegetation or rubbish shall be grubbed or raked as necessary and removed from the site. Preparation of subgrade for the subbase course shall follow the grading and leveling operation. The procedure for preparation of subgrade shall be as specified below:
 - 1. Under bituminous concrete paved areas:
 - a. Following the finish grading of the subgrade, the ground surface shall be densified. Prior to densification, the density of the soil shall be checked. Following the initial rolling the soil density shall be determined again. If the percent compaction has increased by 2% or more, the area shall be rolled again. If the percent compaction has remained the same or increased by less than 2% additional rolling shall not be required. This procedure shall be repeated until the increase in percent compaction is less than 2%. The resulting compaction shall be at least 95% of the maximum dry density as determined by ASTM D1557-78, Method D.
 - b. Finished subgrade resulting from excavations or fills shall be uniformly smooth-graded and not vary more than 1/2" from the established grade and cross section. Upon completion of compaction place a geotextile as indicated herein.
 - c. The base course shall be dumped and spread to a uniform line and grade in a compacted thickness of 12", plus or minus 1/2". The crushed stone subbase shall not be placed on surfaces that are muddy, frozen or contain frost. Compaction shall be accomplished by rolling with tamping rollers, vibratory rollers, pneumatic tired rollers, or other equipment suited to the material being compacted and the work area location.
 - d. The crushed stone subbase and base course shall be dumped and spread to a uniform line and grade in a compacted thickness of 6", plus or minus 1/2".

The crushed stone subbase shall not be placed on surfaces that are muddy, frozen or contain frost. Compaction shall be accomplished by rolling with tamping rollers, vibratory rollers, pneumatic tired rollers, or other equipment suited to the material being compacted and the work area location.

- e. Compaction shall be at least 95% maximum dry density as determined by the modified Proctor test, ASTM D-1557.
- C. Place aggregate in maximum 6 inch layers and roller compact to specified density.
- D. Level and contour surfaces to elevations and gradients indicated.
- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for general requirements for field inspection and testing.
- B. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556, ASTM D2167, ASTM D2922, or ASTM D3017.
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

3.05 CLEANING

- A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

END OF SECTION

SECTION 321216

ASPHALT PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Double course bituminous concrete paving.

1.02 RELATED REQUIREMENTS

- A. Section 312323 - Fill: Compacted subgrade for paving.
- B. Section 321123 - Aggregate Base Courses: Aggregate base course.

1.03 REFERENCE STANDARDS

- A. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types; 1997.
- B. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction; 2009a.
- C. NYS Department of Transportation, STANDARD SPECIFICATIONS, latest revision.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with New York State Department of Transportation, STANDARD SPECIFICATIONS.
- B. Mixing Plant: Conform to New York State Department of Transportation.
- C. Obtain materials from same source throughout.

1.05 SUBMITTALS

- A. In accordance with Section 013300, submit the following:
 - 1. Material Samples:
 - a. Submit manufacturer's data for the following:
 - 1) Asphalt Cement, PG 64-22 (702-02).
 - 2) Aggregate for all asphalt mixes to be used.
 - 3) Tack Coat, Asphalt Emulsions
 - 4) Line paint.

1.06 FIELD CONDITIONS

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Asphalt Cement: ASTM D 946.
- B. Aggregate for Base Course: Shall conform to Section 32 1123 - Aggregate Base Courses.
- C. Aggregate for Binder Course: conform to the New York State Department of Transportation standards.
 - 1. Driveways, streets, roadways, and parking areas: Binder Course, Type 19.0 mm.
- D. Aggregate for Wearing Course: shall conform to the New York State Department of Transportation standards.
 - 1. Driveways: Wearing course, Type 7.
 - 2. Parking areas: Wearing course, Type 9.5 mm.
 - 3. Streets and roadways: Wearing course, Type 12.5 mm.
- E. Tack Coat: Tack coat shall be equal to New York State Department of Transportation H SMS - 2H (702-3401).
- F. Asphalt Sealer: Rubberized asphalt sealer with high solids content and high surface friction meeting or exceeding the Federal Specifications. Easy Stir by Agway or approved equal.
 - 1. Surface preparation and application shall be in accordance with sealant manufacturer's written recommendations.

2.02 ASPHALT PAVING MIXES AND MIX DESIGN

- A. Use dry material to avoid foaming. Mix uniformly.
- B. Bituminous Concrete mixes for Binder Course and Top Course shall be proportioned to generally agree with NYS DOT requirements.
- C. Submit proposed mix design of each class of mix for review prior to beginning of work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that compacted subgrade is dry and ready to support paving and imposed loads.
- B. Verify sub-base compaction and correct unsatisfactory sub-base conditions. Do not begin paving work until deficient sub-base areas have been corrected and are ready to receive paving.

- C. Existing paving: Saw-cut abutting edges of existing paving clean and straight. Cut and remove minimum 12 inches of existing paving to ensure firm, clean, tight joint. Coat cut edges of abutting pavement with tack coat.
- D. Verify gradients and elevations of base are correct.

3.02 BASE COURSE

- A. See Section 321123 Aggregate Base Course.

3.03 PREPARATION - TACK COAT

- A. Apply tack coat in accordance with manufacturer's instructions.
- B. Apply tack coat on asphalt or concrete surfaces at uniform rate of 0.05 to 0.15 gal/sq yd.
 - 1. Allow to dry to proper condition to receive paving.
 - 2. Exercise care in applying bituminous materials to avoid smearing adjoining concrete surfaces. Remove and clean damaged surfaces.

3.04 PLACING ASPHALT PAVEMENT - DOUBLE COURSE

- A. Place asphalt top course within 24 hours of applying tack coat.
- B. Place to compacted thickness as shown on the contract drawings.
- C. Place asphalt concrete mixture on prepared surface, spread and strike-off. Spread mixture at minimum temperature of 225 degrees F. Place inaccessible and small areas by hand. Place each course to required grade, cross-section and compacted thickness.
- D. The bituminous concrete pavement shall be placed with paving machine in accordance with NYS DOT, Section 402. At all times, pavement shall be placed to provide positive drainage. Any areas of ponding or puddling will be repaired by the Contractor upon identification.
- E. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- F. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.05 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
- B. Compacted Thickness: Within 1/4 inch of specified or indicated thickness.
- C. Variation from True Elevation: Within 1/2 inch.

3.06 FIELD QUALITY CONTROL

- A. The following tests shall be made on each 500 tons of bituminous concrete placed, or a minimum of 1 set of tests per day:
 - 1. Select and sample pavement course in accordance with ASTM D979-74, or ASTM D3665-78, whichever is applicable.
 - 2. Core test to determine in-place field densities (paraffin method) and/or ASTM D2950-74 and thickness of pavement course (ASTM D3549-77), if required by Architect/Engineer.
 - 3. Determine asphalt cement content and aggregate gradation in accordance with ASTM D2172-75.
 - 4. Establish application rate of bituminous distributor (tack coat) in accordance with ASTM D2995-71, prior to tack coating operation.

- C. Provide field inspection and testing. Take samples and perform tests in accordance with AI MS-2.

3.07 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury for 2 days or until surface temperature is less than 140 degrees F.

END OF SECTION

SECTION 347115

STEEL PIPE BOLLARDS

PART 1 GENERAL

1.01 SUMMARY

- A. Bollards and sleeves

1.02 SUBMITTALS

- A. Product Data: Manufacturer's name, specifications, and installation instructions, for each item specified.
- B. Shop Drawings: Show installation details.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel Pipe: Standard weight, Schedule 40, black or galvanized; ASTM A 53 or ASTM A 135.
- B. Concrete: Normal weight 4000 psi, air entrained 6 percent plus or minus 1 percent. Mix in accordance with Method No. 1, 6 bags per cu yd min, allowable slump 2 to 4 inches.
- C. Bumper Post Sleeve: Model 1737 by Eagle Manufacturing Company, 2400 Charles Street, Wellsburg, WV 26070, (304) 737-3171, www.eagle-mfg.com. Or approved equal.
 - 1. Color: Yellow.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Set pipe in center of hole and brace plumb.
- B. Fill annular space around pipe with concrete.
- C. Remove braces after concrete has set.
- D. Install bumper post sleeve in accordance with the manufacturer's printed instructions.

- E. Install two Torx center pin security machine screws at the base of the bumper post sleeve to fasten sleeve to steel pipe.

END OF SECTION